■ Turning Trembleurs ■ Richard Raffan ■ Inlaying Stone ■ Turning Ornaments ■

American Woodturner

The Journal of the American Association of Woodturners Winter 2002 $7.50 Vol. 17, No. 4

Finishing In A Flash

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

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New Board Members and School Mentoring Program

I want to thank all 2,860 of you who took the time to vote for directors and return your ballots. The number of votes cast was 300 to 400 more than last year, but I would like to have seen more of you have a voice in choosing the leadership of the AAW. Congratulations to Linda VanGehuchten on being re-elected. Linda is a very capable director and presently serves as chairperson of the Exhibition Committee and is busy at work on the show titled "PUT A LID ON IT" that will open in Pasadena at the 2003 Symposium. (See page 5 for more information about the show and the back of the Journal for entry forms.) Linda also serves on the Educational Opportunity Grant, Internet and Publication Committees and we're glad to have her back. I would like to welcome Dave Hout as our newest Director. Dave's experience and interest in teaching woodworking will fit in very well with our emphasis on education. And, as many of you know, he is pretty good turner of wood and spinner of metal.

I also thank you for re-electing me for a second term.

Welcoming a new Director means we will be losing a familiar face. Norm Hinman has served so very capably as our Secretary, chairman of the Educational Opportunity Grant and Chapters and Membership Committees, as well as coordinator of the Instant Gallery and Chapter Collaborative Challenge. We will miss him. Thanks Norm for all your efforts for the AAW.

Last issue I asked if anyone could donate a color printer. THANK YOU HELMUT WOLF for donating a brand new Epson printer to the office in St Paul. We may from time to time ask our members for help like this, either as a donation or a discounted price.

I want to remind everyone to get their membership renewals in as soon as possible (by the first of January) to make sure that their names appear in the 2003 Resource Directory. We are going to add a new section next year. The section will list the web sites of all members that we know about. We think this will make the Directory even more valuable.

After holding the ad rates for three years, we are going to have to increase them for both the Journal and the Directory. Contact the administrative office in Shoreview, MN, if you need more information.

Journal news

We are close to having a new Editor in place, but not in time to meet this issue's print deadline. It is not an easy task to fill the shoes of one as capable as Dick.

Beginning with this issue, we will be initiating something new for the President's column. A different Director will write a portion of this column and will discuss the workings of their committees and any other issue they might consider important. Be sure to read Lee Carter's report on education issues below.

The Holiday Season is here again, and many of us are busy in our shops turning those special gifts for family and friends or trying to get the Christmas orders completed for our customers and galleries.

It's also a good time to drop hints to our loved ones about those new turning toys that we would like to find under the Christmas tree. The Board and I wish you the best for the Season and a very fruitful 2003.

— Bobby Clemons is president of AAW

Chapter Mentoring Program

As chairman of the Educational Opportunity Grant (EOG) program, I am pleased to report that the AAW Board of Directors recently approved a Chapter Mentoring Program, which will help chapters take a more active role in helping students and promoting woodturning programs in their local schools, beginning in the 2003-2004 school year.

This recognition program also allows local chapters to nominate a school for an AAW Partnership Award, which could bring recognition and publicity to programs that are too often forgotten or neglected by administration and school boards.

Another nice feature of the program is that a chapter and its partner school can apply for an EOG award, which could mean new equipment for schools, additional training for teachers and other benefits.

The AAW will also develop a web site for schools and local chapters to share information related to this program and produce videotapes promoting woodturning and encourage teachers and school officials to include turning in programs.

Local chapters would also be encouraged to sponsor programs on "Teaching Woodturning" and to provide programs/demonstrations for local, regional and state technology education/vocational conferences.

I am deeply indebted to Jack Grube, instructor at Pinkerton Academy in Derry, NH, for his help and inspiration in recommending such a worthy endeavor to the board.

The board appointed an "Education Committee" to help implement the mentoring program, identify chapters and schools worthy of a Partnership Award, develop ways to promote woodturning in our schools, and assist in developing educational materials.

The committee also will advise the board on education issues and provide technical assistance to chapters planning educational programs for local, regional, and state educational conferences.

The members of the first AAW Educational Committee are:

Mark St. Leger — Virginia
Jack Grube — New Hampshire
Jerry Brownrigg — Oklahoma
Kip Christensen — Utah
Wally Jacobson — Minnesota
Doug Schneiter — Colorado
Dale Lemons — Texas

— Lee Carter, EOG chairman

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A Note about your 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.

On the cover: Phil Brennion specializes in Southwest-style vessels, and has long searched for a way to give his turned work the texture and patina of the ancient Pueblo vessels he admires. He's mastered an explosive method , but doesn't recommend anyone try it. Story on Page 39.

Submissions to *American Woodturner* are encouraged. Please contact the editor with articles or proposals.

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A Special Instant Gallery Section for Newer Turners?

When I received my info packet for my first symposium, 2001 in St. Paul, MN, there was an instruction to bring up to three pieces of work for the Instant Gallery. Since I frequently (but not always) follow instructions, I brought my best bowl, box and hollow form. I arrived early and was told to go down the escalator and put them on any table. Wow! The few works that were already there were incredible! My novice work did not belong here. I sheepishly shared this opinion with Linda VanGehuchten, but she assured me that there would be more basic work and encouraged me to include mine. So I went to a far off corner table and put out my work — as luck would have it so did Johannes Michelsen (the Hat Man) — so much for being inconspicuous!

I feel that many novice/intermediate woodturners who attend the symposiums do not bring their works because they are so intimidated by the incredible works of the advanced/professional/artist woodturners that are displayed in the Instant Gallery.

After attending my second symposium in Providence, RI, my feelings concerning this issue are strengthened. The fabulous works were even more fabulous, but very little novice/intermediate work was displayed — except, of course, for mine. Please see Andi Wolfe's site to see just what I'm speaking of: http://www.biosci.ohio-state.edu/~awolfe/COW/AAW2002/andiwolfe.html.

While I'm incredibly pleased to be included in her symposium photos, I think that you can clearly see the contrast of advanced to novice (my work compared to any of the others).

I feel that those of us who do not turn as our "day jobs," nor have any intention of doing so are the backbone of woodturning today. We purchase lathes, tools, equipment, supplies and frequently the works of other better turners — thereby supporting the burgeoning woodturning industry. We take lessons, join the AAW, go to symposiums and buy more and more things "essential" for our hobby/craft/ obsession. We give our "stuff" away as gifts and as a result the recipients, people who never before looked at woodturning as a craft or art form, start to notice woodturnings in galleries, museums and shops.

Eileen Duffy's work, at left and on pedestal, at the Providence, RI, Instant Gallery. Photo: Andi Wolfe

In the fall 2001 *American Woodturner* there was an article on the Ohio Valley Woodturners Annual BBQ. This club developed three categories: Master Turner, Advanced Turner and Novice Turner. They had criteria for each category which they developed "to sharpen the competition and encourage all members to participate."

It is not my intention to fuel the fire of "art vs. craft". I think the AAW Symposium Instant Gallery is fabulous, informative and inspirational. But, how about thinking about giving us a far off corner to inconspicuously display novice/intermediate work at the next AAW Symposium? A place where we novices can get some ideas about work that we might actually be able to return to our little shops and garages and replicate?

— Eileen Duffy
St. John, US Virgin Islands

Avoiding exploding bulbs

Pat Matranga's letter in the Fall Journal about exploding lamp bulbs brought out the danger I have thought about for too long.

Lowe's and Home Depot stock tube protectors for this purpose. The protectors are of plastic and slide over the tube and have caps at each end. I bought the last four foot protector at Lowe's for under three dollars. Lowe's said they were discontinuing the guards. Home

Time for Membership Renewal and Resource Guide.

AAW membership cycles with the new year. Membership renewal packets have already been sent to current members. If you did not receive one, you have already renewed for 2002. The Administrative office will send out reminders to those who don't send in forms, but renewing now will save that expense. Address changes, the addition of an e-mail address or 'host' status, or inclusion in the demonstrator list (must be a current member) are needed now.

Advertising Deadline

The advertising deadline for inclusion in the Resource Directory is Dec. 15, 2002. You must be an AAW member to be listed in the Directory. Information must be received on time, so the Directory can be mailed to members in early April.

Letters edited for clarity and space.

Depot stocked only the eight foot model. Both companies would special order the item by the case of 15 guards.

Guards would also be available from electrical supply distributors.

I found 14 lamps in the shop and four in the house. I will order the guards now. The cost is small and the danger is great.

I would like to thank Pat for sharing this hazard: she made me do something about it.

— J. J. Gilvey, High Shoals, GA.

(Editor's Note: After her letter went to press, Pat Matranga wrote us saying that she also found protective sleeves for the florescent bulbs and was using them in her shop.

Members of the Ozark Woodturners offer some more tips for safer woodturning in the article on Page 50.)

Turning Magic Wands

With the great popularity of Harry Potter and the many turners wishing to make magic wands, I offer the following specifications and cautions.

A lot depends on what kind of magic you have in mind. "Black Magic" would need to be made from wood like ebony or black walnut. Drill a hole $^2/_3$ down the center of the blank, after you've turned the wand, pour the magic in the hole and, immediately glue a plug in the hole. You don't want Black Magic seeping out and floating around your shop.

It's not food safe and just might settle on a bowl blank. Do not apply a sealer finish, it takes the magic too long to penetrate when the owner wishes to use its power.

If you want a stardust, pumpkin-changing magic wand, you can use almost any wood. The magic is poured into a pre-drilled hole, same as above. This magic wand can have a sealer finish because you will drill very very small holes around the top so when the owner waves the wand, the magic floats out like a spray of stars. This magic is food safe so no disclaimer is needed.

The length of any wand must be in proportion to the owner's height. (whenever you are making anything for children, you must be careful that you do everything you can to prevent them from hurting themselves). A 15" magic wand is your standard length for users over 10 years of age.

It's not a good idea to turn a lot of beads and coves on the upper $^2/_3$ of the wand, as the "magic" prefers to be the dominating feature. This is especially important when using Black Magic as it has been known to turn spells upside down if it must compete with too many turned ornamental features.

If you have further technical questions, please refer them to any child who has read a minimum of 3 Harry Potter books.

Happy Turning!

— Ruth Niles

AAW EOG Grants Awarded

Twenty-two AAW Educational Opportunity grants (EOG) grants were awarded this past summer for a total of $18,450.00. Forty-seven grants were submitted to the EOG committee for consideration.

Chapters and individuals who were awarded grants in the Summer of 2002 are:.

- Antelope Valley Woodturners Association — Brad Stave
- Bay Area Woodturners Association — Bill Small
- CNY Woodturners — Peter Fedrigon
- Central Texas Woodturners Association — Gary Roberts
- Nick Cook
- Seven Hills School — Tim Farrow
- Purchase College - School of Arts— Dennis FitzGerald
- Georgia Association of Woodturners — Harvey Henson
- Barbara Gill
- Bruce Hoover
- Van Johnson
- Foothills Composite High School — Jim Jones
- Matthew and Marissa Kubinyak — Greg Kubinyak
- Las Vegas Woodturners Association — Bob Cranley
- Ruth Niles
- Galveston College - Craftsman Institute — Kim Page
- Pembroke Woodturners Guild — Lance Kanaby
- Andrew Potocnik
- Tennessee Association of Woodturners — Charles R. Putnam
- South Puget Sound Chapter — Stephen Hatcher
- Space Coast Woodturners — Wynn Arnold
- Ted Weiberg

I would like to thank each of the following members of the EOG committee for the time and effort they put forth in reading and selecting the recipients for the 2002 summer grants. Willard Baxter, Phil Brennion, Norm Hinman, Mark St. Leger and Linda VanGehuchten.

— Lee Carter, EOG Committee Chairman

EDISON'S HOME BRINGS OPPORTUNITY TO SW FLORIDA TURNERS

"When opportunity knocks, you must open the door!" Opportunity has knocked for the Woodturners of Southwest Florida.

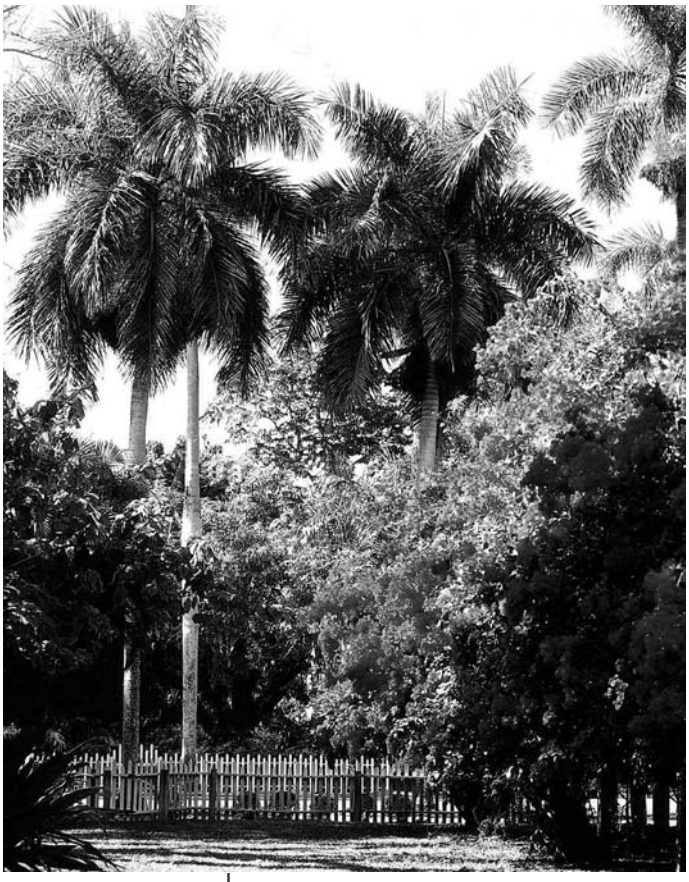
In 1885, while traveling throughout Florida, Thomas Alva Edison happened upon Fort Myers. Enchanted with its warm, balmy climate and unspoiled natural beauty, Edison quickly claimed this quiet little town as his haven. Within hours, he purchased just over thirteen acres of river front property and set out to design an inviting vacation home nestled in the midst of a lush botanical garden.

After the estate was completed, Mr. Edison invited many of his friends to visit his splendid winter home. Henry Ford so enjoyed his visits to the Edison estate that he purchased the house next door.

During the 35 years Edison wintered in Fort Myers, he personally planted hundreds of exotic plants from all over the world. The majority of these plants still are there today. When you enter the Edison-Ford Botanical Gardens, you may feel that you have stepped back in time. Shaded by a canopy of trees that Edison planted himself, one can truly appreciate the history that took place here so long ago.

One of the things that drew Thomas Edison to Fort Myers was the abundance of bamboo on the property. He even tested bamboo for use as light bulb filaments. Later, he and Ford became interested in finding a source for synthetic rubber. Many varieties of trees were imported and planted on the grounds for use in his experiments. The garden hosts several of Florida's Champion trees.

What does this have to do with the Woodturners of Southwest Florida you ask? The club has formed a bond with the estate. During a recent art showing of the club's woodturnings, I was introduced to Chris Pendleton, Director of the Edison-Ford Estates. She liked our turnings and suggested the club might find a use for some of the tree trimmings going to waste. Being somewhat familiar with the value of historically significant wood, (American Woodturner, Spring 2000, page 9.) I jumped at the chance to see what the estate had to offer. Robin Brown and I soon met with the estate arborist, Bob McGuire.



Mr. McGuire welcomed us with open arms. We discussed the botanical garden and the possibilities at our fingertips. Robin and I were ecstatic. We found ourselves in the middle of this lush canopy, and much like two kids in a candy store, let our eyes enjoy the botanical feast. Bob offered us all the wood we could store. We found a huge log of Queen Myrtle 12-ft.-long and 3-to-4-ft. in diameter. Other trimmings were Cinnamon tree, Mango, Zulu Fig, Camphor, Dinner Plate tree, Candle tree, Golden Shower, and a variety of strange sounding names. Bob admits that even after six years at the estate he is still unfamiliar with some of the species numbering over 400.

Since there are many species of trees that were imported by Mr. Edison for his experiments, we must be very selective in the trees we use for woodturning as many are toxic and some are extremely poisonous. For instance, Coral Plant (Jatropha multifida) native to tropical America, has very toxic seeds. The ingestion of one seed can cause 7-to-8 hours of violent vomiting. The flowers of the Angel Trumpet (Brugmansia) native to Peru and Chile, can be deadly if ingested. Even the common Mango tree (Mangifera indica) with its delicious fruit is an irritant to some and can cause the skin to blister.

Researching, cataloging and documenting will be as much fun as turning the wood. I promised to share my findings with Bob McGuire and keep a journal before, during, and after turning the wood.

The current plan is to distribute the wood to our membership at monthly meetings so everyone in the club will have the opportunity to participate in this project.

One can only imagine our attendance will increase substantially.

As the data is collected and documented I will endeavor to report it to the Journal in a future article.

For more information on the Edison-Ford Botanical Garden: www.Edison-Ford-Estates.com

—Bill Sullivan , Ft. Meyers,FL

VOLUNTEER NEWS AND PLANS FOR SYMPOSIUM 2003

Featured Demonstrators At the Pasadena Symposium

The AAW Board of Directors has announced the featured demonstrators for the 2003 National AAW symposium to be held at the Pasadena, CA, Convention Center June 27-29.

The four featured international demonstrators are Eli Abuhatzira, Israel; Ciaran Forbes, Ireland; Johannes Rieber, Norway and Vic Wood, Australia.

The featured demonstrator from Canada will be Stephen Hogbin.

The national demonstrators will be David Ellsworth, Pennsylvania, Luke Mann, Vermont; and Craig Nutt, Tennessee.

Applications for local demonstrators for the symposium are now being evaluated. A full roster will be in the Spring Journal.

In addition to a full rotation of great demos, and our usual features —the Instant Gallery, Chapter Collaborative competition, a trade show devoted exclusively to tools and other items for woodturners, and activities for the non-turners among us, this year's symposium again will be working to help a local charity. See the box at the top right of this page. Another feature will be the opening of the "Put A Lid On It" juried show. More information is at right.

For more details on the symposium, check out future issues of the Journal or contact the AAW administrative office.

Speaking of Volunteers

The AAW is what it is largely due to the efforts of many volunteers. The Board and staff would like to recognize several members for outstanding contributions this year: Willard Baxter; Phil Brown; Blake Hickerson; Charlie Hoffman; and Larry Mart.

Have a Real Ball, All for a Good Cause

An important part of each AAW symposium is our "Return To The Community" program which benefits a worthy charity in the city that host's our annual meeting.

Last year it was turned tops for Meeting Street, a Providence, RI, organization that works with children. The tops are not only fund raisers, but the children loved playing with them and Meeting House officials said they would also be great teaching aids.

This year the topic is balls, any size, any purpose, from games to massage rollers, hanging curtains to wheels for funky vehicles, decorative objects, spheres, globes, anything --- let your imagination roll away with you. What local charity will benefit from the efforts of AAW members hasn't been decided, but most likely it will be a group helping children.

If you decide the balls aren't your thing, make a top or three, a wooden toy, anything that would make a good item for a fund raiser. For more information, contact the AAW Administrative Office in Shoreview, MN.

Put A Lid On It

"PUT A LID ON IT" will be the theme of the AAW's next juried show, which will premier at the 17th annual Symposium in Pasadena, CA, next summer.

Entry forms, information on jurors and other details are listed on the insert pages in the back of this Journal

— AAW Exhibition Committee: Linda VanGehuchten, chair; Mark St. Leger; and Norm Hinman.

Nature Takes a Turn draws to a close

After appearing in four locations around the country, the Nature exhibition wrapped up in September at the Neuberger Museum at the University of New York, Purchase. We would like to thank the many folks who assisted with the show at the Minnesota Museum of American Art in St. Paul (co-sponsor of the show), University of California at Davis, Arrowmont School of Arts and Crafts in Gatlinburg, TN, and the University of New York at Purchase. Thanks to the many turners who submitted work for jurying, those participating with pieces in the show, the collectors who loaned pieces for the exhibition, and local AAW chapters that assisted with the show. We are also grateful to our two jurors, Sandy Blain and David Ellsworth.

As this was a costly show to organize and administer, we greatly appreciate the financial support from the following individuals and organizations: Marc Adams School of Woodworking; John and Robyn Horn; Norty Rockler; 3M Corporation.

A very special thanks to three individuals whose volunteer work behind the scenes contributed greatly to the show's success: Ron Layport, Charles Brownold and Andy Barnum.

My personal thanks to the AAW Board of Directors for their support and guidance in such a major undertaking.

– Alan Lacer, Exhibition Coordinator

A TRIBUTE TO A FRIEND: LEONARD "FLETCHER" HARTLINE

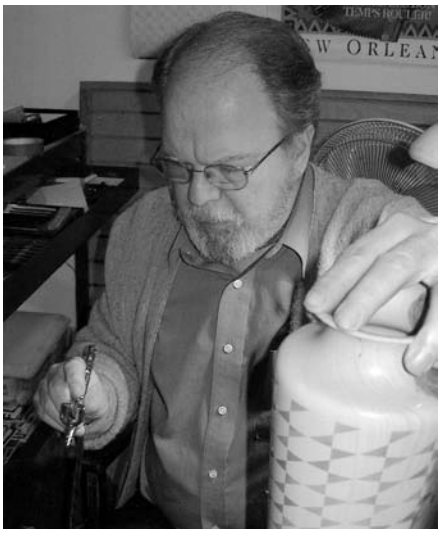
Ten years ago in the summer of 1992, I was desperately looking for a local woodturning instructor and went to the Woodcraft store in St. Louis looking for a class.

I did not have much of a choice: there was one four-hour class on "Introduction to Woodturning." The Instructor was Leonard F. Hartline, who was so nervous in front of the crowd that he was shaking like a leaf. I sat quietly in the back row and watched him, but did not ask any questions because I knew exactly what I wanted. After class I asked him for a private lesson, one on one, at his shop in Carbondale, IL He became my mentor. Little did I know then, but I had come half way around the world to meet my best friend.

We did a lot together after that. He got me to join AAW and the Woodturners of St. Louis, a local chapter of AAW. We never missed a single symposium from 1993 to 2001, but for some strange reason, we both decided not to go to the Providence symposium this year. We did not realize that would be our last chance to be together at an AAW symposium. Fletcher and I also were in the first ever mini-symposium, organized by Alan Lacer in 1991. On the way I learned my friend had never flown on an airplane before; of course, just like a little kid, he wanted to sit by the window. We were on our way to Akron, OH, where I met Del Stubbs, and learned grinding techniques from him.

We went to Arrowmont together, three years in a row. We took classes together in the Spring and normally stayed up in the wood studio until mid night every night, driving the Assistant crazy because he had to stay up with us. Our most fun class was with Frank Sudol who later became part of our group and family.

In the Summer of 1997, I was sad to tell Fletcher that my employer



had promoted me. but I had to relocate to Chicago. I did not realize how close we were until it was time to leave. Looking in his eyes, I saw the sadness, but we promised that we wouldn't be strangers because of the short distance between Chicago and Carbondale. This was one promise we were able to keep — 385 miles was not an obstacle. We still got together two or three times a year and at every AAW symposium. There were many good times until his death last summer.

Ten wonderful years — A truck load of memories and we filled hundred of acres with wood chips. What else could we ask for? As his Minister said during the funeral service, Fletcher had an appointment with God, so he went a step ahead of us. At his wake, my last words to Fletcher were: "Save me a spot up there, and pick out a good lathe. You know what I like."

Fletcher was a wonderful man with wit, was a friend to many, always knew his own limitations, and always had the last word in most conversations. I bet his last words would have been: "Remember — Love One Another."

I want to borrow chapter 33 of Lao Tsu's philosophy to close my sad note.

Knowing others is wisdom;
Knowing the self is enlightenment.
Mastering others requires force;
Mastering the self needs strength.

He who knows he has enough is rich.
Perseverance is a sign of will power.
He who stays where he is endures.
To die but not to perish is to be eternally present.

— Binh Pho, Maple Park, IL.

Wayne Knuteson, owner of One Good Turn, dies

Wayne Albert Knuteson passed away Sept 27, 2002 in Murray, Utah. He and his wife Marion had many happy years together. Wayne always appreciated the finer things in life. He could discern quality in anything from a good tool to a fishing hole. He was an avid hunter and fisherman. He loved the outdoors and taught his children to love and respect it also. He grew beautiful roses and a lovely garden. Some of his best times were spent among the flowers and vegetables in his garden. His knowledge of wood and timber was vast and unequaled. He made friends in many countries and continents as he traveled the world over due to his business, One Good Turn, importing and exporting exotic woods. He never met a stranger, on any of his journeys. In addition to his wife, Wayne is survived by his children and their spouses, Tawny and Norman Boyd, Price, Darren and Sarah Jo Knuteson, Willard, Guy and Teasha Knuteson, Salt Lake; brothers and their wives, Dick and Gaye Knuteson, Gene and Judy Knuteson; eight grandchildren; and two step grandchildren. Also surviving is his much beloved Harley, the meanest wiener dog in town.

MAKING PLATTERS TAKES A HIGH TECH TURN

The Ohio Valley Woodturners Guild in Cincinnati has two different club contests each year. Last winter the contest was to make a platter 16-in. or less in diameter. As always the competition was tough. Turning a platter is a pretty straight forward exercise, so being competitive required making a unique and striking platter more than exhibiting purely skillful turning.

I chose to make the 16-in. Eagle Platter shown here. It was a natural theme for me shortly after 9-11-01 and given my former life in the U.S. Air Force for 23 years. This platter was not especially difficult to turn (with one small exception I'll discuss), but its fabrication was a bit different and may be of interest to some.

I told club members that I had raised the bar in the "tool wars." As we all know, most of us are tool nuts and enjoy (if not possess) a wide variety of tools and equipment to pursue (enhance?) our enjoyment of woodturning. In this case the new tool belongs to my son David, who last year started his own business cutting laminated glass to specific shapes and sizes for a variety of customers. "How does one cut laminated glass since you can't score and break it?" The answer is a marvelous piece of equipment called an abrasive waterjet. My son's machine was built by Omax in Kent, WA, weighs some 4000 pounds and is clearly beyond the means of most woodturners. Whether using this machine is "fair" or not will be left to the reader's judgment or some other discussion. But using it was an interesting and ultimately rewarding endeavor.

A 40,000 psi water jet

The waterjet works by directing a stream of water at 40,000 psi through a very small ruby orifice accelerating it to a velocity of about twice the speed of sound or 2200 feet per second. The stream of water then picks

The author's high-tech platter. Photos by Lowell Converse

up 120-grit garnet abrasive from a gravity fed tube due to the suction around the jet of water. The high speed stream of water and the abrasive combine to provide the capability to cut any material from high-speed steel to glass to foam rubber, cleanly and crisply to a repeatable tolerance of .003 inch. Amazingly, steel up to 2 or more inches thick can be cut. In fact the only substance that it can't cut is tempered glass which is made to shatter. The kerf left by the waterjet is about $^{1}/_{32}$-in. and tends to flare near the bottom of the cut, but this can be reduced by adjusting the rate of cut. The speed and direction of cut are computer numerically controlled (CNC). "Fairness" issue again?

My son and I cut the stars and the eagle, and the cutouts for them on the waterjet. It took more than five hours to get it done right. The job no doubt would have been easier and likely as well done by a good scroll sawyer! But then where's the fun?

The segments for the curly maple center section were cut and glued up, and then the eagle and sun openings were cut out on the waterjet. The eagle was cut from a slab of walnut and the stars cut from a piece of curly maple. The machine allowed us to cut to the line, or to the inside or the outside of a line. We found that cutting to the line left a small gap between the inserts and the openings with just enough interference for glueing. The star opening in each precut walnut outer segment was cut separately (before glueing the segments) with the segment held in a fixture which centered the star opening. These segments were then glued into a circle and the stars glued in with Titebond II. The yellowheart sun was turned and the part for the eagle cut from it. The sun and the eagle were then glued into the curly maple center ring.

The two pieces, outer ring and center piece, were run through a drum sander and then glued together. I turned each side of the platter secured by the opposite side to a 6-in. faceplate by double-sided tape with the tailstock in place. The tailstock was backed off to finish the center and for sanding. The hooker here was that the wood, even though rinsed well with water, retained enough of the garnet abrasive to almost instantly dull my tools. Hindsight says, "Of course!", but isn't that how we learn? So there was more sharpening than turning, a lot more sharpening than turning! After turning and sanding, the kerf surrounding the eagle and slight gaps around the stars were filled with black dyed epoxy. The epoxy gives enough to allow for the slight movement of the different pieces. After final sanding several coats of General bowl finish were applied, sanding between each coat, and the final coat buffed. Oil- based finish was used to accentuate the curl in the maple.

This was essentially a one time deal to see how it would work. I doubt I'll use the process again, I'd rather turn. But who knows, another contest, another challenge.

All of the entries and winners in the contest can be seen at the OVWG website at w3.one.net/~ovwg/

—Lowell Converse, Beaver Creek, OH

STEAM ENGINE BRINGS RI HERITAGE TO LIFE

In preparing for the AAW Symposium at the Rhode Island Convention Center last June, the Ocean Woodturners decided to undertake a woodturning project that would be historically representative of Rhode Island. It was agreed that we would construct a steam engine out of wood that would run on air pressure rather than steam.

In 1875, Rhode Island was the world center for the stationary industrial steam engine. The most famous of the Rhode Island steam engine manufacturers was the Corliss Steam Engine Company.

The crowning glory of the Corliss company was the gigantic steam engine that was built for the 1876 Centennial Exposition held in Philadelphia. The engine was 70 feet tall and towered over the Machinery Hall. The engine weighed more than 650 tons and had an output of 1500 horsepower. The flywheel alone weighed 56 tons and was 30 feet in diameter. This steam engine powered the entire Machinery Hall at the exposition and symbolized the growing industrial might of the United States.

The notable steam engine manufacturers from Rhode Island included: Armington and Sims Engine Company, Providence

Corliss Steam Engine Company, Providence

Grande Foundry and Machine Company, Providence

Herreshoff Manufacturing Company, Bristol

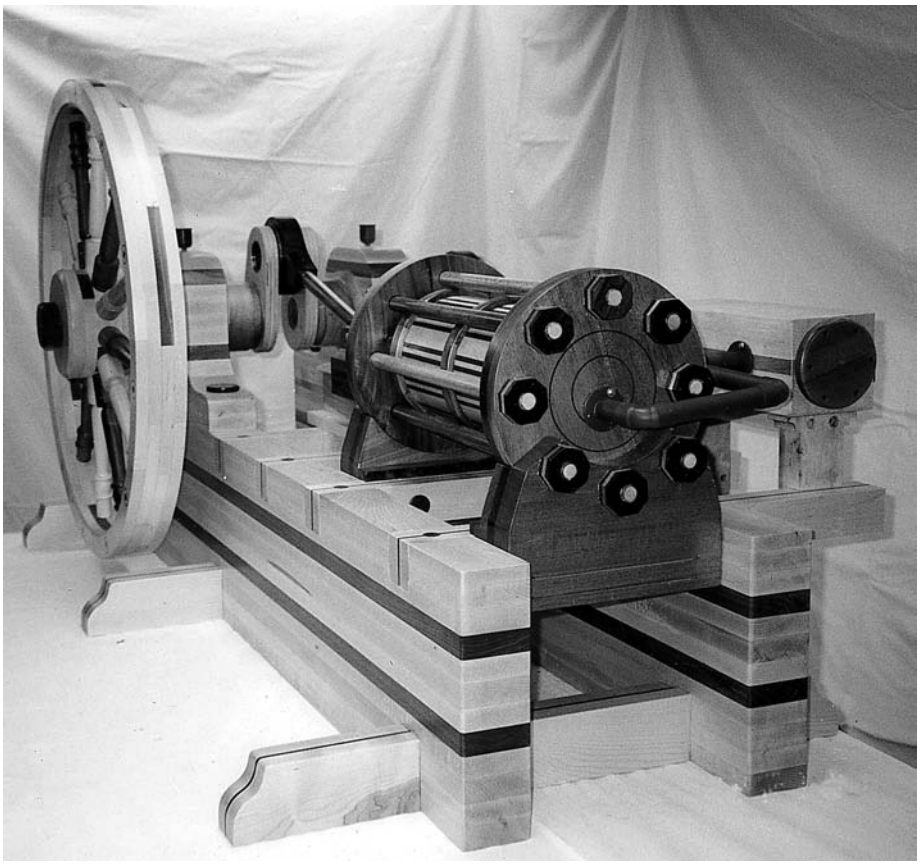
Nichols and Langworthy, Hope Valley

Providence Engineering Works, Providence

Providence Steam Engine Company, Providence

William A. Harris Steam Engine Company, Providence

Club members then visited the New England Wireless and Steam Museum in East Greenwich, RI. This museum contains many of the steam engines built in Rhode Island and other parts of New England. Bob Merriam, Director of the museum, gave us invaluable advice on the various steam engine concepts and he later reviewed our preliminary plans for additional advice.



The Corliss Steam engine, reproduced in wood by members of the Ocean Woodturners.

We decided to construct a single piston engine with a double stroke, where air is supplied to each side of the piston. The engine would have a 4-in. inch power piston, an 8-in. stroke and a 30-in. diameter flywheel. The overall size of the engine would be approximately 5-ft.- long, 3-ft.-high, and $2^{1}/_{2}$-ft. wide. Club members realized that the sheer size of this project would make it ineligible for competition at the symposium, but we felt that, as host club, we wanted our project to be impressive in size.

Design and Fabrication

At the June 2000 meeting, the club nominated George Nazareth to lead the steam engine project. The design of the engine and the development of hand drawings for all the components was assigned to Tom Schwab. The design phase took approximately six months and resulted in more than thirty hand drawings detailing all of the components, including air valve timing. These hand made drawings were then converted to full scale CAD (computer aided design) drawings by Jeff Mee and Angelo Iafrate. After finishing the CAD drawings, a presentation of the final design was made to the club at the May 2001 general meeting. This occurred approximately one year from the original undertaking.

At the June 2001 meeting the personnel were assigned to the various

The Ocean Woodturners' Steam engine crew.

components of the steam engine for fabrication. These major components and their makers were:

Bedplate – George Nazareth

Power piston assembly – George Nazareth

Air valve assembly – John Chakuroff and Larry Dunklee

Flywheel and shaft assembly – John Chakuroff

Slide blocks and I-beam – Tom Schwab

Power piston tie rods – Basil DeWolf

At the next meeting in July, 2001, George Nazareth had made the entire bedplate from maple and black walnut. This inspired other people to start working on their components. Shortly after this, John Chakuroff started to bring pieces of the flywheel to the meetings and George started making the power piston and cylinder. At each meeting new pieces of the steam engine would arrive. It was decided that the parts of the steam engine would be assembled at John Chakuroff's workshop. This site was chosen because he had a metal lathe that was required to make many of the interconnecting pieces with very close tolerances. For example, the power piston with "O" ring seals that slide within a PVC cylinder which is encased in a segmented wood cylinder, and also the air valve that slides in a wood-encased copper tube. The piston and connecting rod shafts were also turned on a metal lathe because of their interface with the cylinder endplate.

In December 2001, the steam engine was essentially complete with the exception of air piping between the air valve and the power piston. The club had its December, 2001 meeting at John Chakuroff's workshop to show the nearly completed engine to the membership. In April and May, 2002 the air delivery system and timing were fine tuned, allowing the successful running of the engine on high volume low pressure air.

This event was video taped and shown to the membership at the May 2002 meeting.

A cart to transport the engine was fabricated by Woodcraft Store in Greenwich, and a table was built by Eastern Butcherblock to support the steam engine at the symposium.

The wooden steam engine is now being displayed at various museums, libraries, schools and malls throughout Rhode Island.

– George Nazareth,Cumberland, RI

Virginia Chapter Raises Money For Sick Teenager

Curls and shavings of cedar and maple covered the parking lot of Tom's Market at a fund raiser earlier this year as the Apple Valley Woodturners demonstrated their work and raised funds to help pay Jason Rafferty's medical expenses.

The Frederick County teenager was stricken with meningitis last winter and required special medical aid at the University of Virginia in Charlottesville to save his life. His family had no medical insurance. Spearheaded by AVW president Dick Krehling eight club members set up their lathes beside the market on Back Mountain Road. Saturday morning May 25th and spent six hours turning items for sale to passers-by.

The items included one of a kind bowls, tops and whistles for the children, ring boxes and pens

Club member Stefan Raab took a turn at the lathe with a rectangular block of wood. " I have no idea what it will turn out to be," Raab said with a smile. As a round knob on a circular neck began to emerge, he told an onlooker they would both have to wait to see what final shape the wood would take.

Visitors learned about the different types of exotic and domestic wood, examined various grain patterns and asked questions about the techniques involved in turning wood into such everyday items as light pulls and bottle stoppers. By the end of the day the club had raised $900.00. The money was turned over to the North Mountain Fire and Rescue, which will convey it to the Rafferty family

The Apple Valley Woodturners is a new club formed by Dick Krehling at the beginning of this year and was accepted as the 173rd chapter of the AAW. – *Newsletter editor Robert Van Meter*

Boosting your Vacuum Power

Green wood bowls often warp out of round and this causes problems with the seal when vacuum chucking. If the seal on the chuck doesn't have enough give, there is a loss of vacuum. I took a square sheet of the white closed cell material used to wrap electronics and computers and cut a 1-in. hole in the center.

Then I placed the material between the bowl and chuck. The material sealed nicely and took care of the low vacuum reading. I left the corners on the material so that it could be adjusted if it slips while moving the bowl when centering.

— Richard Preston, Richmond, VA

One-person log loader designed by Carl Schneider.

One Person Log Loader

Lifting logs into the back of a pick up truck can be quite a chore.I designed a log loader that enables one person to load heavy logs with much less effort.

To position the log loader, stand it upright tilted slightly forward, so it's leaning against the truck bed. Now lay it flat on the ground. A log can then be rolled on from the tapered end or placed on the loader above the ledge. A cross member on the bottom 12-in. above the ledge causes the leader to tip forward to help prevent the log from rolling back. Lifting the leader from the tapered end raises the log, which then rolls into the truck bed.

There is a lot of stress on the parts. so use long screws for assembly. I also used heavy duty strap hinges so my loader would fold to fit in the back of my truck.

— Carl Schneider,Boca Raton, FL

Green Wood Sealer

The best green wood sealer I have ever tried is "Liquid Nails." You can purchase this at your local lumber yard. I use the kind recommended for wet wood and treated wood. I put it on and spread it with a putty knife. It's a little more expensive than Anchor Seal, but I think it works better and is easier to find locally.

— Vernon Leibrant,Everson, WA

Cheap Easy Metal Powder

Get a piece of brass or copper tube and put it against your belt or disc sander. The powder goes into the tube and can be poured out into a container. You control the size by the grit of the belt. I find that 120 - grit works well.

—Miles Lehmann, Lakeridge, VA

Editors note: I tried this with a piece of copper. I pushed it into the disc sander and then poured the contents out in a neat pile. Then I threw the copper tube across the room. Heat travels really rapidly up a 1-in. piece of copper. It worked great but next time I'll wear gloves.

Scroll Chuck tips

1. Round over the outer corners on the bottom of the jaws with your grinder. This helps save your knuckles, left photo, next page.

2. It's hard to remember which way to turn the chuck key to open or close the jaws. I used an engraver to mark the chuck near the hole where

Tip of the Hat for a Good Idea

Best Tip Award

The hat for the Tips editor's favorite tip in Winter issue goes to Jamie Donaldson, Georgetown, KY, for his tips on using scroll chuck.s, above. We all like turing tips and learn a great deal from what others have discovered. How about sending in some of your favorites?

Nova Chuck with rounded corners. Photos: Jamie Donaldson

O (open) to C (close directions) engraved on chuck.

the key goes. I used a "O" then an arrow, and a "C." Now it's easy to remember, above right.

3. To improve the leverage on the Stronghold key, replace the original lever with a longer one. Make a groove near the lever ends with a Dremel and put an "O" ring in the groove. This modification has great benefit for Arthritic hands.

— *Jamie Donaldson*
Georgetown, Ky

Send In Your Tips

Share the ideas you have discovered in your shop. And become eligible for our Best Tip Award and a free AAW ball cap. Send your tips with your name and hometown to:

John Lucas
Tips Editor

John Lucas
PO Box 1292,
Cookeville, TN
38503.
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Adjustable Shaker Pegs

I built a showcase for my friend's antique pistols. We marked the location of all the pistols but it was going to be very hard to get them perfectly level by just drilling and installing pegs. I came up with an off-center shaker peg.

I mounted the blank $^{1}/_{8}$- in. off-center between centers and turned the tenon for the peg. Then I remounted the blank on centers and turned the rest of the peg. This gave a full $^{1}/_{4}$-in of adjustment for each peg.

I drilled a hole for a screw in the end of the tenon and cut them a little shorter than the thickness of the wood.

By loosening the screw on the back of the cabinet the customer was able to align each pistol perfectly.

—*John Lucas, Cookeville, TN*

Bait Saver ornament hangers

Bait saver fish hooks have barbs that face toward the eye. These make great hangers for wooden ornaments. I buy the Eagle Claw brand in Gold model #165 in 1/0 size. Cut the curved part off and drill a hole in the top finial of the ornament. I find that a #53 drill works great in hardwoods but a $^{1}/_{16}$-in. would probably work with CA glue.

— *Norris Hall, Murfreesboro, TN*

RICHARD RAFFAN

A Gentleman With Strong Opinions

KEN KEOUGHAN

UGLY! LOUD! INCORRIGIBLE! Awful! These are the adjectives that came from the guys in the class I took with Richard Raffan at the Woodworkers Club in Norwalk, CT last July. No they weren't a description of Richard Raffan, they described his socks. A cursory inspection that day revealed socks with the coloration of a lemon-lime Slurpee and the texture of adolescent bread mold. The adjectives applied. And Richard acknowledges with gentle pride that his ugly socks are important to him. This was day Four of the workshop and I have to admit that I hadn't noticed his socks prior to that. This too is descriptive of the quiet, yet definite anomalies that apply to Richard Raffan.

Raffan's mother said of her young son, "He never stops running." He's 59 years old, possibly young by AAW standards, but a sufficient age to have grown up, whatever that means, reached maturity, and achieved success to warrant universal recognition in his chosen field. He has written six books (Turning Wood 2nd Edition is totally rewritten), innumerable magazine articles, taped six instructive videos, and by 2001 had turned about 22,000 scoops and 22,000 bowls. And he travels around the world to teach. He did spend some time last summer home in Australia, but was also in Connecticut, in Utah and Calgary in September; and had already spent another five weeks this year teaching in England, Finland and Texas.

As I see it, his mother was right. He's never stopped running. He capitalizes on three means of generating income: turning, teaching and writing. Some of us have had only one. He only sells his work, never consigns it. "I'm not a bank providing working capital in the form of stock to inefficient galleries," he says. More important than how Raffan makes a living is that he is a very interesting human being.

Richard Raffan, one of the most popular and influential turners in the world

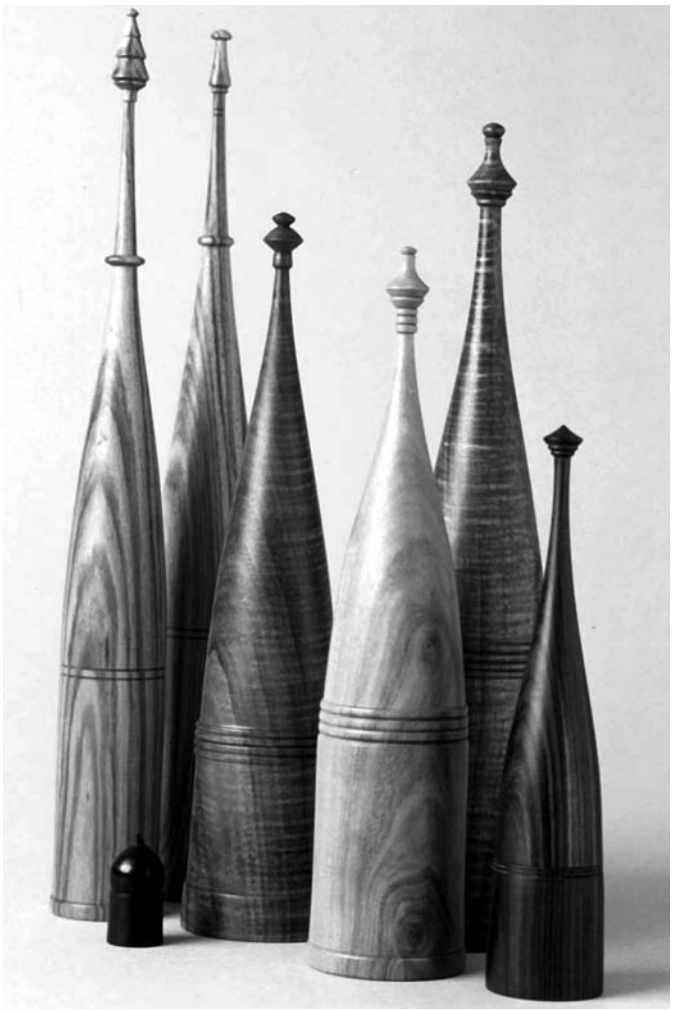
You want to know how honest he is? He came up to me on Tuesday or Wednesday during the class and said, "I woke up at 3 AM last night and know why you broke the bottom out of the box you were making. (I was cutting it off with a thin parting tool and with about $^1/_8$-in. left to go, I accidentally broke it off, tearing that little $^1/_8$-in. post out through the bottom.). "You'd already marked the depth on the outside," he said, "so when I came over and cleaned up the inside and the bottom area the depth was increased and I forgot to mark that on the outside. So we probably had an $^1/_8$th of an inch or so less depth than you had marked and it was fairly thin by then anyhow." That is exactly how it happened. But he didn't have to worry about it, to acknowledge any of those things, or even bring it up. Yet he did and to me his doing so exquisitely expresses Raffan's decency and integrity.

Richard really needed some good old-fashioned chutzpa to embark on his turning career. When Richard was six, his father, an artist — a portrait painter — died. The family had recently moved to Sydney, Australia. His mother, on assessing the situation took her three children, Richard was the oldest, back to South West England, where she was raised, and started over. The kids went to private schools. "You can be upper middle-class in England and not have much money, you know." After leaving boarding school, he went to art college. He had loved drawing all through childhood, "mostly boats and buildings."

The art school had one of those "experimental" years we've all heard about. And as is often the case with experiments in education, it failed, precipitating young Richard out and eventually into the world of commerce. He ended up in the big city ... London.

In London he hit the bricks (or should I say cobble stones?) with his feet running. He had to. He knew that he wasn't going to live past the age of 40 because his father had died at the age of 36 and his grandfather had had a similar fate, or so he thought at the time. That was one of the reasons that he had to run. The other was that he was a driven man whether he knew it or not. By age 26 he had built a successful career in the wine merchandising business, but was, "on top of the job and bored."

"On January 1, 1970, I removed myself from London's big-city life and a well-paid job that exercised the nebulous skills of middle management. Watching the encroachment of technology on the business world, I concluded that the sooner I had



Raffan's Spillikins set, above, is made from African Blackwood. The sticks are $7^{1}/_{8}$-in. long; the box is $1^{7}/_{8}$-in. in diameter. The three Tower boxes, right, are tulipwood, boxwood and orange wood. They are $1^{3}/_{4}$-in in diameter and made in 2002.

learned to do something more practical, the better. I chose woodturning not because of a long-standing love affair with wood or with trees, but because I felt I could learn the basics of turning more quickly than I could learn almost any other hand skill. And a small internal voice told me that it was the right thing to do." (*Introduction to Turning Wood*; 1985 edition)

He went to work in a small country shop where there was one skilled turner, Rendal Crang, employed to do the production turnery. Here Richard was happy to sweep up at the end of the day so that he could compare his shavings with Crang's shavings. He also learned to "listen to the wood." He could differentiate between the noises he made and those of Rendal Crang. If there was harmony, all was well. If there was dissonance, look out!

He makes heavy use of these skills today when he is teaching a class. During class he listens to all of the lathes that are operating. If he hears dissonance, he moves to that part of the room immediately.

But no matter how much he was learning, his income had dropped 90 %. As he puts it, "I dropped a zero off my income." In fact, he had anticipated seeing no discernible income for up to three years. He had also made provision for it by owning his own home and car. "I was debt free and I changed gears. I ceased to dine out or spend money on entertainment. I drove around hawking my wares off the back of my car." He found he could sell enough small bowls, egg cups, lamp bases to "begin to cobble together a livelihood."

He would go to craft and gift shops – "there were no craft galleries then" and offer them pieces made of maple and cherry. "I purchased some 3-in.-thick boards of cherry with beautiful green streaks, and some highly figured English sycamore (maple in the US). Both made a very favorable contrast to the teak that was standard fare in the British Isles at that time."

His big break came in1973 when he was the only woodturner represented in *The Craftsman Art*, a seminal exhibition at the Victoria and Albert Museum in London. Following that "I was lucky enough throughout the 1970s to be included in just about every major crafts exhibition in Britain and got very good exposure."

By 1979 Richard was even better

known and had been invited to attend a meeting of The Worshipful Company of Turners in London. He was not happy with what he saw. In fact, he was aghast. On his way home he stopped by Parnham House where John Makepeace, the Wendell Castle of Great Britain, made furniture and ran a woodworking school. "I've just had an horrific experience," he blurted out. "I've never been exposed to so much bad turning and revolting stuff in one place at one time in my life. I think you should run a turning symposium."

Three eucalypt calabash bowls, all about 8-in. in diameter. Made, from left in 1990, 1987 and 1990.

Makepeace knew what to do. The result, about 18 months later in 1981 (modest drum roll, please) was the first International Woodturning Symposium to be held in England.

It was at this gathering that Richard met David Ellsworth. Richard faced a terrible quandary. He had to give a half-hour talk. All his life he'd been so adept at fading into the woodwork that he had never spoken to a group for more than two minutes, and that was back in his school days. He was really rattled about it. He had a bunch of slides, but they were only tangentially relevant to his talk. He had worried over his talk for five months. He asked Ellsworth, "Should I use the slides?" Ellsworth without hesitation popped a, "Hell yes! Never look 'em in the eyeball!" It turned out to be wonderful advice and he's never forgotten it. What did Raffan talk about? About running his business as a craftsperson. He was "quite open, very uninhibited. I told them what I turned over, what I made, what the costs were and what my profit was. I was probably too candid." It was indeed about the business of being a craftsperson.

In 1979 a major event took place in the world of turning. That event reverberated to America reasonably soon thereafter. Nick Davidson started Craft Supplies in England, and was soon offering a range of chucks, in addition to a broader range of tools than had been readily available previously. Before that you couldn't buy much of anything. You made your own chucks and stayed very close to the traditional.

In September 1981 Albert LeCoff held his last symposium in Philadelphia. "Ray Key and I came over. Aside from us there were only two people there with gouges. One was Dale Nish. He knew how to use it, but was still wanting a little bit more experience to become really proficient. We, Ray and I, were by our own reckoning professionally adept at using the gouge. We'd start showing someone how to use a gouge," he reflected, "then look up to see 50 people round the lathe."

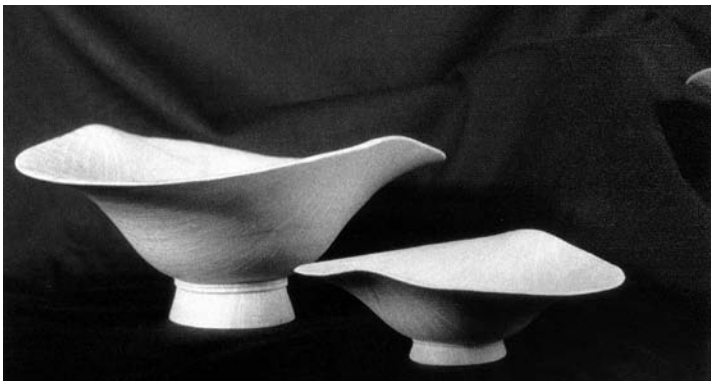
"Not knowing who was who, we had the temerity to criticize a Bob Stocksdale bowl. We didn't think the finish was very good and we weren't convinced that the shape was much better. Worse yet to those who overheard, we said so aloud." If it wasn't heresy, it should have been.

He says of Ray Key and himself, "We were fearlessly supercilious about American techniques because they were using big bars with little cutters in them and doing a lot of scraping and power standing. Whereas we were doing everything 'properly' with a gouge. But from this 1981 Philadelphia Symposium we took away the value of power sanding techniques and the Americans took away the value of using gouges. The coming together of these two techniques was a landmark event. By the time I came back to the States a couple of years later, gouges were well in evidence here and power sanding had caught on in England. In addition Craft Supplies USA had opened in Utah, so tools were suddenly much more available on both sides of the Atlantic."

All of this, of course, signaled a quantum leap in the high-speed evolution of woodturning in the early 1980s; fostered the founding of the AAW in 1986 led by Ellsworth and LeCoff and, in fact, set the stage for what is emerging today and in which we are all participating. Today we have the wonderful luxury of being able to debate what is or is not Art. There are probably as many schools of thought as there are thoughtful people who think about Art versus Craft, one-off versus production turning, utilitarian versus non-utilitarian objects and function versus form. Finding a chuck or a gouge or another turner or a mentor isn't a problem today. They are all readily available. Technology has exploded with mushroom-cloud impact. So we can afford the luxury of sturdy little debates about Art and artists.

In this arena Richard Raffan has a well-thought-out opinion, or six, with which you or I may or may not agree. Whether we do or don't is a matter of stolid indifference to Raffan. He didn't come to his opinions on his way to the men's room.

"Although I make one-off bowls



Wavy bowls: casuarina. 180 and 150 mm in diameter.

and boxes, I'm frequently dismissed as a 'production' turner. In my opinion what I turn is as much art as anything studio turners turn. But anyway aren't we all production turners when we're making stuff for money? That's the definition of a 'production' turner. It's just that one sort of production is a little more esoteric than another. If a turner makes only hollow vessels and produces only one or two a year but with the purpose of selling them, that turner is a 'production' turner, just the same as if he's making salad bowls and selling 300 a year. Each piece is still a 'one-off' and each is much less a 'production' piece than a piece of Orefors glass for which people are willing to pay huge sums of money because they consider Orefors glass Art with a capital A."

"But should everything of the hand or one-off be considered Art?,"I asked. "Was your father a production painter'? Did he expect to sell what he painted?"

"Absolutely," Raffan replied.

Thinking about it I looked up the word "esoteric." According to Merriam Webster's Collegiate Dictionary "esoteric" means, "designed for or understood by the specially initiated alone." Another definition, same source: "of or relating to knowledge that is restricted to a small group, limited to a small circle."

This of course leads us to the advent of the collectors. The wood 'collectors' are, from Raffan's perspective, "a uniquely American" phenomenon. In the rest of the world people buy objects, even buy several of the same type of thing, but they are not necessarily called 'collectors.' They are not perhaps as"esoteric."

I asked Richard what pitfalls turners who are trying to make a living encounter. "Today," he said, "it's the competition. Everything is intensely competitive. Thankfully, I didn't have quite so much when I started out, not from turners anyway. Potters were my competition then. Now there is competition for gallery space, competition to get into shows that promise good sales. Competition is a factor at every stage and I'm especially glad I don't have to compete on the American market."

"As you work your way up to the elite levels that are handled by, say, a del Mano Gallery, other specters rear their ugly heads. It's easy to saturate the market so everyone who wants one (or 6 or 60) of your work has them. Then where do you go, especially if you've been easing your prices up? Your audience won't pay higher prices and the worst part is that you can't lower your prices because that would undercut the value of pieces already sold.

"Another specter. The market won't pay more than it has been paying; your target audience seems a bit indifferent to your wares or Art. So you do the right thing and come up with a new design, new stuff. Now the risk is that 'they,' whoever 'they' are have grown accustomed to your face. They're taken aback by seeing you doing something that is significantly different to what you've been doing for several years. And, not quite sure what to make of it, they adopt a wait-and-see attitude. None of this need be deadly, but it's often very painful."

Well, what are all these anomalies we spoke of up front?

Raffan is gentle yet tough as nails. He learns by teaching. He is soft-spoken but usually means exactly what he says. He has generated thousands of pieces yet insists that to be aggressive is counter-productive. "You must let the wood come to the tool!!!" He would far rather fade into the woodwork than be up front. Yet his is one of the best-known faces in turning today. He loves games and sports but doesn't care if he wins. Winning is all right, but finishing a "distant last" is quite unacceptable. Among his favorite games today is Scrabble; it was athletics when he was younger. He makes his living ostensibly with his hands, but possesses and uses an extraordinary vocabulary with stiletto accuracy. He really doesn't enjoy aggressive or selfish behavior in himself or others, yet he attracts controversy with almost animal magnetism. While he is a giant in his own world, he knows that he's a big fish in a small pond. He enjoys Americans and the American world of woodturning, yet is very careful to cling to, preserve and maintain his Anglo/Australian heritage.

Here is what he said in the conclusion of the "Introduction to Turning Wood" in the 1985 Edition: "If you've never turned wood before I am sure you'll enjoy it. Shapes develop in seconds as the shavings fly away. And I have a hunch that the ability to remove so much wood so quickly satisfies some basic destructive urge and gratifies the vandal in us all." Perhaps that is the ultimate anomaly. Now go on out there and vandalize a chunk of wood.

Ken Keoughan is a turner and writer in Friendship, Me, and contributing editor at American Woodworker.

EOG Helps NY Demos

Spreading the word about turning

PETER FEDRIGON

The CNY Woodturners received an AAW Educational Opportunities Grant (EOG) to buy a new lathe for various outreach and demonstration programs.

Our club was formed some two years earlier and was having difficulties getting active members and surviving. In the year 2000 the club was asked to do a lathe demonstration at the New York State Fair, which is held in Syracuse and has over one million in attendance.

We had to borrow a lathe from a club member. The fair runs for 10 days and the club learned that this was a very good way to find new members. The members had a really good time demonstrating; they could express their skills and learn from the experience. In the process of helping the State Fair we obtained a great place to hold our monthly meetings. The club now meets monthly at the State Fairgrounds at no charge. The members were very supportive and willing to continue with this type of activity. The club took on some new members and awareness of our club in the Syracuse area continues to grow. We needed our own club lathe to do what we had started so we applied for a grant. The club did not have the funds for a new lathe, especially the mini Oneway, which we knew would be just right for our needs. We received the grant money and within two weeks ordered a new Oneway mini-lathe. We checked around to see if we could find one without waiting the three months for Oneway to build it. We found this was not possible, so we waited the three months.

The Central New York Woodturners used their grant to buy a lathe, which has helped them spread the word about woodturning, especially to youngsters, and recruit new members. **An application for AAW grants is in the front of this Journal.**

Getting ready for demos

When the lathe was received, we went right to work to get it ready for demonstrations. We installed a safety shield and had to do some wiring to make it somewhat portable. The unit worked out very well and we were now ready, just in time.

The first place we used the lathe was at the annual Towpath Days Fair. This is a yearly event held at the Central New York's Erie Canal History Site. It was a nice opportunity and we did a great job with the demonstrations. We signed up some new members and started to realize how interested the kids were in learning about the lathe. We got some great pictures for our club album. It is said that a picture is worth a thousand words and from seeing the pictures of these children watching the demonstrations, you can believe it. The Towpath Days Fair was a two-day weekend and gave us a chance to shake out any problems and helped our club to further learn how to work together.

Soon after that weekend we were again at the annual New York State Fair. We were more prepared than the year before and we had our new Oneway. It was a bigger lathe than the one we borrowed before and we could do many different and bigger demonstrations. We had a very active and successful ten days. We continued to sign up new members, lined up more demonstrations with local schools and charitable organizations, and took more pictures for our club album.

The State Fair was, by far, our biggest event of the year and we have made commitments for future fairs. In October 2001 we did a two-day demonstration with the Fair personnel for the schools in Syracuse. The schools bus the kids, fourth and fifth graders, to the Fairgrounds, divide them into small groups and take them to seven different demonstrations. Our club demonstrated making toys. It was a very successful two days.

Peter Fedrigon is a turner in Cleveland, NY, and a member of the Central New York Woodturners.

How To turn A trembleur

Unique, Unusual and A Ton Of Fun

GLENN MCMURRAY

To me, the best thing about turning is the variety of things you can do — bowls, of course, boxes, pens, lace bobbins, platters, ornaments, hollow vessels, baseball bats — the range is almost endless. So when the challenge comes up to try something new, like a trembleur, I love it!

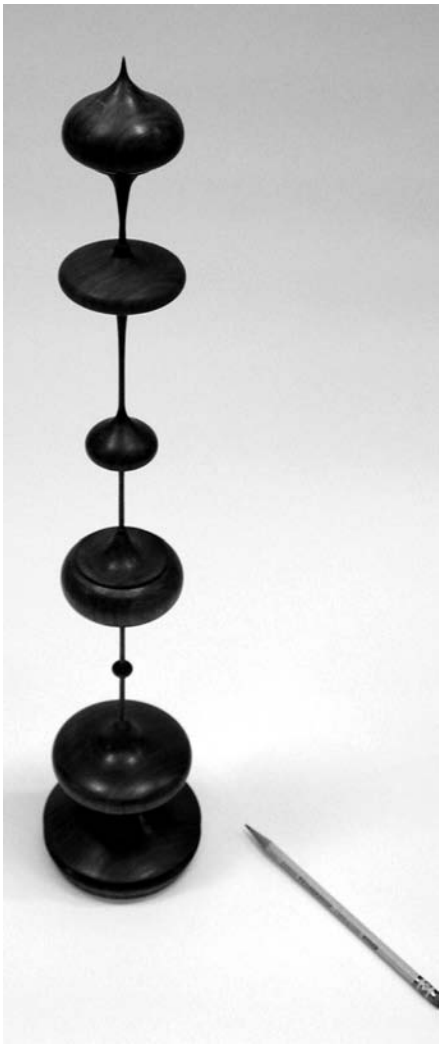
What's a trembleur? It's a long spindle with beads separated by very thin sections.The thin sections must be consistent along the whole length. When done properly, a trembleur is a marvel to observe and play with as it will shake and tremble with the slightest touch.

Turning a trembleur is not only technical exercise to improve your turning skill — you can create a beautiful piece of art. These objects are unique, unusual and are a ton of fun to make, and involve some interesting devices, such as the string steady rests I discuss later. To me, the challenge of turning something just beyond my skill level is a big part of the joy of turning.

French woodturner Jean Francois Escoulen introduced me to turning the trembleur. He discovered these objects by reading old books about turning. It has been said that this is the turning that will elevate you to the level of master craftsman, if your work is judged acceptable by master turners.

Design ideas

In designing your trembleur, you must remember that the beads must be well formed and well turned. They should balance each other. Repeat the shapes in different sizes along the trembleur, but keep the thin sections consistent. Transitions from the beads to the thin sections should flow smoothly. Your eye should follow the lines gracefully from the bead to the spindle and back again.



One of the author's trembleurs. A color photo is on Page 31.

Equipment needed

To do your first trembleur, you'll need the following:

- A variable speed lathe with a good roller steady rest.
- String steady rest(s), one for every 6-in. or so along the bed of the lathe.
- Spindle stock at least 3-x-3-in. square by the length you dare. Woods with long interlocked grains are best. Old baseball bats are great because they're ash, which is exceptionally strong.
- A roughing gouge
- A good chuck.
- A detail gouge with a "pointy" grind.
- A 5mm X 9mm bedan, which a popular turning tool in France, but less know in this country.
- Cotton string and paste wax.

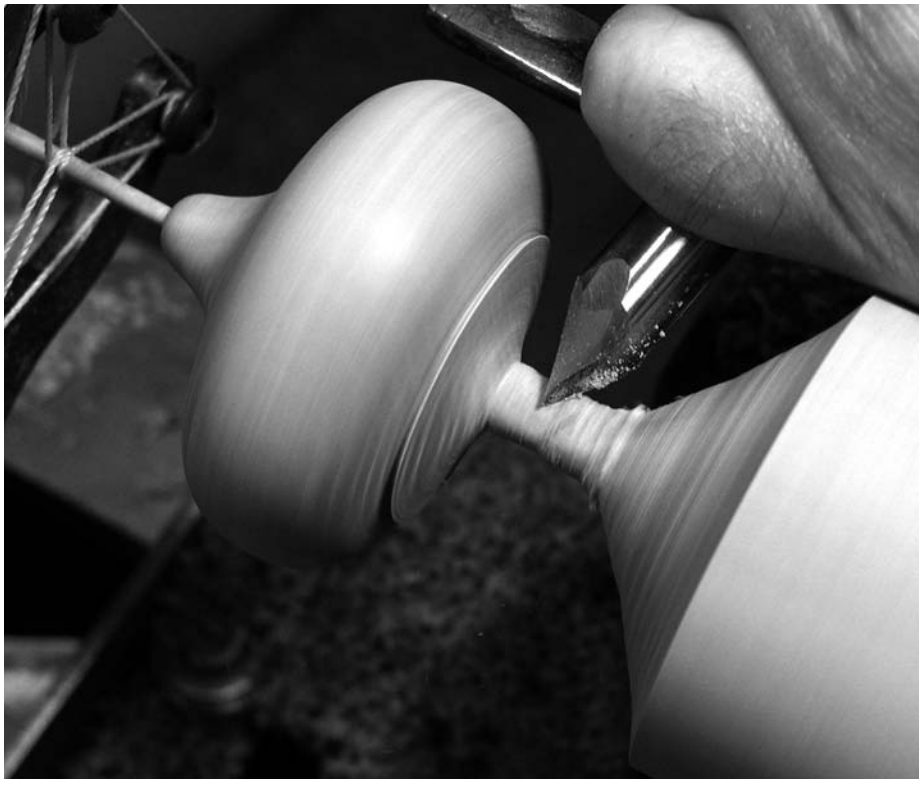
Overview of the process:

To make a trembleur, start with a long, cleanly roughed out cylinder, mounted between your chuck and the tailstock. Once the piece is roughed out, you can set up a roller steady rest up about 4-to-6-in. from the tailstock and remove the tailstock. For now, the steady rest is the only support of what was the tailstock end of the cylinder. The cylinder section protruding past the steady rest will become the top of your trembleur.

In turning a trembleur, you work from the tailstock end of the lathe toward the headstock. You're turning the top of the trembleur first, then down to the base. Lathe speed is pretty slow, maybe 150 rpm. Use the variable speed knob to start and stop the lathe slowly, gently, otherwise you could twist the thin sections off. Turn and sand each section to its final form and size before moving on. Once you've turned and sanded a section, **YOU CANNOT GO BACK.** I went back just to sand a little bit one time and lost 6-in. off of a beautiful walnut piece.

Let's get started!

Having a spindle blank that is at least 2-X-2-in. is critical. If you try to work stock much thinner than that, the section of wood between the roller steady rest and the headstock will



McMurray's pointy gouge plays an important role in turning his trembleur. A close up of the cutting edge is shown above. At right, you can see how the gouge can be used upside down, Note the string arrangement on the left side of the photo. The knots for the string steady are shown on Page 19. Guides for using the bedan McMurray recommends are on page 20.

flex, leaving you fighting chatter. In addition, the large beads contrasted against the thin spindle gives your trembleur a dramatic effect. Plus, the base on a trembleur must be big enough so it won't topple over in the breeze caused by the hordes of admirers streaming past your work. If you work with thinner stock, you can create a fine trembleur, but you'll need to turn a separate base.

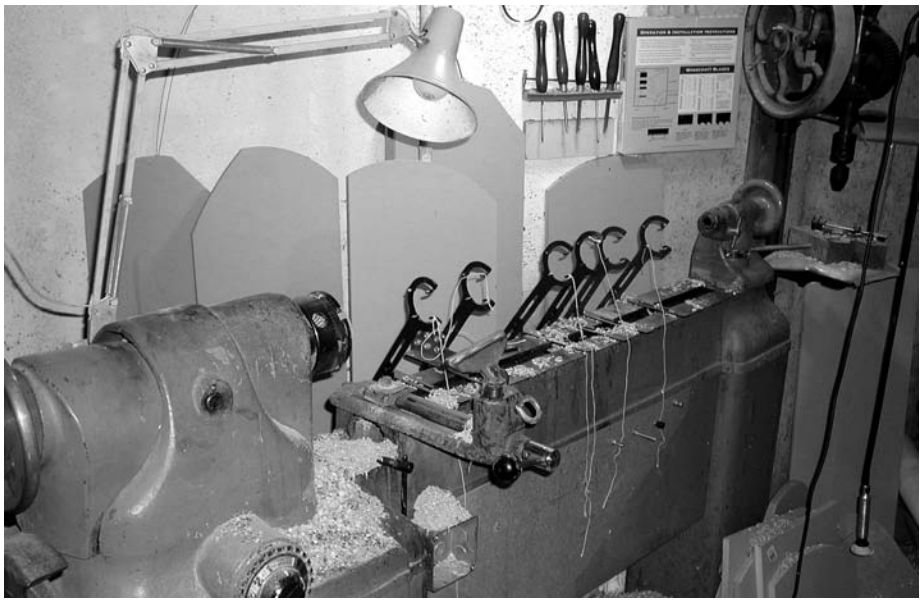
I usually mount the blank between centers and rough it round along its entire length. You won't get another chance to clean up and you can guess what happens when the roller steady hits that flat spot. Remove the blank from the centers and re-mount it in a chuck. Set up your steady rest so you'll have about 6-in. to turn at the tailstock end. Set your toolrest **ABOVE** center and turn off the end to remove the mark left by the tailstock center.

Now the fun starts, with a finial and thin stem and steady rests in place. Photos by the author.

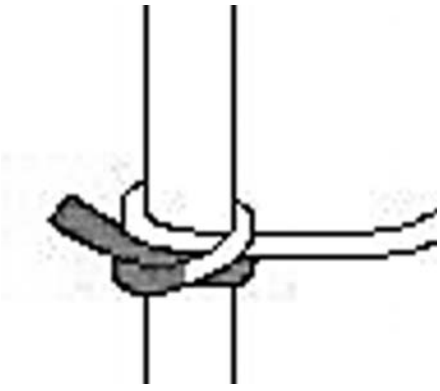
Create a finial and remove waste from just below the finial with the "pointy" gouge. You might want to make the finial a little smaller than the full diameter of your stock. This will help the piece appear a little lighter and will help keep the trembleur from falling over in a breeze. We have a constant breeze in our family room as my 14-year-old daughter runs for the phone

.Now for the fun stuff. The thin stuff.Using the pointy gouge, sweep in from the headstock end toward the tailstock end to create a spindle about 1-in.-long by $^1/_4$-in. diameter. One-quarter inch is about 6mm, so we're really not very thin yet. Thin spindle work like this can be done very nicely with a gouge using a special technique that Stuart Batty uses for his thin stemmed goblets. He turns the gouge on top of the work, as shown above. This is where the toolrest above center really comes in handy.

Grab your 5mm x 9mm bedan (see the next article for hints on using a bedan), for the very thin spindle. Turning left handed helps because your right hand is free to support the finial. You're working quite close to



String steadies are shown along the bed of the lathe after the turned trembleur is removed.



To secure the fragile trembleur, the author uses a traditional technique of using a string steady secured by a clove hitch, right,along the length of the spindle.

the roller steady rest so you can take surprisingly aggressive cuts. As you get thinner and thinner, (mine are about 3mm which means I'm still an apprentice) the finial will wobble more and more. Adjust the speed of your lathe to stabilize the wobbling finial. Support it with your "off" hand or you might have to pick it up off the floor and find that bottle of glue.

When you've finished a 1-in.-length of extremely thin spindle, go back to the gouge and rough down the next 1-in.-long by 6mm-diameter section. Repeat the bedan work, then the gouge, then the bedan again until you have a clear length of thin spindle. A 3-in.-length is a fine first attempt.

After you're a little ways along the thin spindle, maybe 2-to-3-in. set up your first string steady rest. The string steady clamps to the lathe bed like any other steady rest. Adjust the C-shaped portion of the string steady concentrically around the thin section you just turned. If you finial is fairly heavy, you might position the string steady close to it. Otherwise, setting it up in the middle of your thin section should work just fine.

As an interesting sidelight, the string steady rest is called a "Lunette a Ficelle" in French. That shows the beauty of their language.

Cut a length of smooth string and give it a coating of paste wax. Tie the string to one post of the string steady with a clove hitch. Loop the free end of the string around the thin spindle and return to the same post you tied the knot on. Continue the path of the string around the next post, around the spindle and back to the post. Continue around all the posts and tie off the string at the end. This string steady will stay in place until the trembleur is complete. It does nothing but support the work. It does not support the cut.

(For information on tying a clove hitch, go to: http://www.mistral.co.uk/42brghtn/knots/42ktclov.html)

Before you move the roller steady rest, make sure you have just cut and sanded up to a transition point, say from a spindle to a bead. Otherwise if the steady rest, when moved to the new position, doesn't support the trembleur in a way that's exactly concentric with the last position, the transition will hide this flaw.

Stop the lathe by slowing your variable speed down. Move your steady rest about 6-in. toward the headstock and reset the rollers. When you start up again, use the variable speed to gain speed slowly and watch for excess wobble at the finial or other heavy beads.

That's an introduction to turning a trembleur. Go ahead, give it a try. You should start with some small ones. My first trembleur was 10-in. tall. My next, I hope, will be 42-in.. Maybe I'll get two, each 21-in.. Above all, have fun with this new challenge.

Glenn McMurray is a woodturner in Batavia, Il, and a member of the Chicago Woodturners.

Using A Bedan

Precision Cuts From A Traditional French Tool

GLENN MCMURRAY

Editors Note: This article is based on instructional materials from Jean Francois Escoulen, which were translated and edited by Glenn McMurray.

When I was an apprentice in my father's wood turning shop, I used bedans whose quality was exceptional. Today, for my personal needs and for turners who work with the bedan, I am happy to offer this same quality of steel: The Escoulen bedans are made of forged High Speed Steel (HSS). Forging of metal aligns and concentrates the molecules of steel in a regular pattern. Molecules in steel that has not been forged are arranged randomly. Forging brings a quality and an incomparable sharpening to the cutting edges of the Escoulen bedan.

Bedans are used for spindle work. Do not attempt to use the bedan in the manner described below until the wood has been roughed completely round. The bevel you ride as you cut with the bedan is pretty small and a catch is possible if your try to cut while a flat spot is still present on your piece.

The bedan to start with should be 5mm wide X 9mm "tall." Larger bedans are useful once you are confident with this easily managed 5X9 size. Escoulen recommends that you buy a bedan with a rectangular shape, rather than a trapezoidal shape.

If you think of all the table legs and balusters that must have been produced in French turning shops through the centuries, you have to marvel at the speed and efficiency of those turners. How did they do all that beautiful work? In these traditional French turning shops, the bedan was used constantly. It is a multi-purpose tool, perfect for a variety of uses: producing a fine finish on a long straight cylinder or taper, as a sizing tool, as a parting tool preparing a cove for the gouge, and for cutting delicate details. Another reason the bedan was used extensively is because it is easy to learn to use. A master turner could concentrate on their specialty while their journeymen and apprentices handled the bulk of the production work.

Glenn MCMurray shows off one of his trembleurs during a demonstration for the Chicago Woodturners.

When cutting with the bedan, the turner generally uses only the corners of the cutting edge. The corners take all the abuse. This is why it is so important to have a steel of excellent quality.

When you use a bedan, you raise the tool rest above centerline. Higher on larger diameters. On 1-in. diameter work, I have the tool rest about $^1/_8$-in. above center. On 3-in. diameters, the rest may be 1-in. or more above center.

Set bedan on tool rest bevel up

Using the bedan "bevel up" probably comes from an old French tradition. As with many things French, this may not seem logical to some, but with a little practice you will quickly see the obvious advantages of the bedan used this way:

- Bevel up speeds the execution of all convex shapes.
- Bevel up increases the precision of the cut, allowing tremendous detail

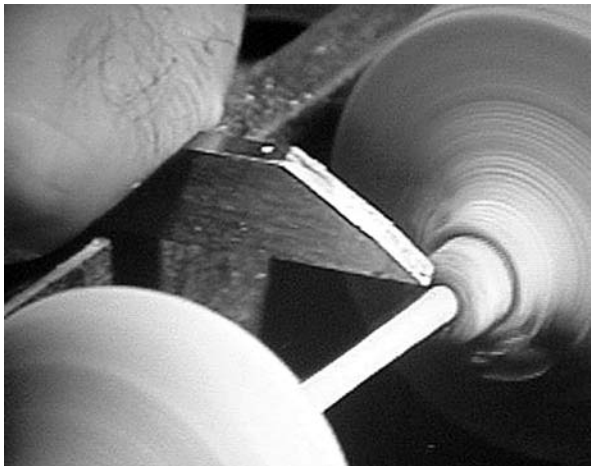
To start your cut, present the cutting edge high on the piece and at a slight angle, aiming in the direction you want to cut. The bedan is only

When cutting with the bedan, the author generally uses only the corners of the cutting edge.

used "head-on" into the wood for roughing. Find the cut by lowering the cutting edge so the corner of the tool is almost cutting.

Once you get the feel for how the corner is going to cut, gently rotate the handle of the bedan so the leading corner begins to cut. The hand holding the handle rotates and lifts to bring the corner of the cutting edge into the wood. The hand at the tool rest secures a pivot point. Control the depth of cut by allowing the bevel to ride on the wood, just like any other fine turning tool.

Swivel the bedan around the pivot point into the cut while maintaining the appropriate rotation of the handle for your desired convex shape. Only the corner of the cutting edge works.



Using a bedan bevel side up, with the tool rest set higher than the thin spindle.

With the handle of the bedan secured against your body or under your forearm, move your entire body to control the shape you're aiming for.

Reviewing the cut

1. Find the cut.
2. Rotate the handle to engage the cut on the corner of the cutting edge
3. Swivel the bedan around the pivot point.
4. Lift the handle as needed to maintain a smooth motion throughout your desired cut.

Larger convex shapes (beads) require the rest to be further away from the work. This allows a larger arc for the tool to swing through. The bedan has stiffness in the tool allowing you to work with the tool extended well over the rest.

One reason the bedan is great for precision work is because the bottom surface of the tool, produced at the forge and never sharpened, IS the bevel. This bevel is flat and smooth and consistent throughout the life of the tool. Every time you pick up the bedan, you will have the same feel going into the cut.

Sharpening

Because the Escoulen bedan is made of such high-quality forged high-speed steel, it rarely needs sharpening. I generally touch mine with a diamond file once per turning session. If a major re-grinding becomes necessary, do not grind on the bottom, only on the bevel. The bevel is ground at the angle of a donkey's nose The word bedan means donkey's nose in old French. What's that angle on a protractor? About 35°.

Developing proficiency

If the bedan is a new tool in your collection, it will take some time to get comfortable with it, even more time to become proficient. Remember to use the bottom of the tool as the bevel controlling the depth of cut and to cut mainly with the leading corner of the cutting edge. Once you're proficient using it that way, you may want to check your results using the front edge. Used correctly, the front edge can produce an even better finish than the corner.

Once you're comfortable using the bedan, you'll find that it is very useful because it makes it simple to create a pleasing shape very quickly and produces precise detail.

— Glenn McMurray

STONE INLAY

There's Nothing Hard About It

STEPHEN HATCHER

I HAVE ALWAYS BEEN MOVED BY THE beauty of stone, wood, and the elegance of cylindrical forms. So, after I began woodturning four years ago, I found the addition of stone accents became a natural theme in my designs. Inlaid in a turned notch, used as filling in bark inclusions or box lids, or even sandwiched between wood layers, the basic materials and technique are the same.

After a considerable amount of experimentation I've settled on a limited range of colorful minerals that are easily acquired at rock shops, including some on-line. The requisite tools used to form them into inlay are as basic as a chisel, coffee can, CA glue, and sandpaper.

Elm burl vase with Calcite and Azurite inlay. Color photos of the author's work are shown on the fourth page of the article. Photos by author.

Selecting Stone

Stone for inlay needs to be soft enough to finish with normal power sanding tools, yet durable enough to provide lasting beauty. Within several minerals I have found a wide range of colors and 'reflectivity.' Reflectivity is something akin to chatoyance in wood where the coarsely crushed stone catches the light with facets associated with the mineral crystal structure. Simply put: it sparkles and shimmers in bright light.

The Moh's scale is used by rock hounds and geologists to describe a mineral's hardness from 1 to 10. A hardness of 1 is talc (chalk) and a hardness of 10 is diamond. Aluminum oxide (corundum), used in sandpaper, has a hardness of 9.

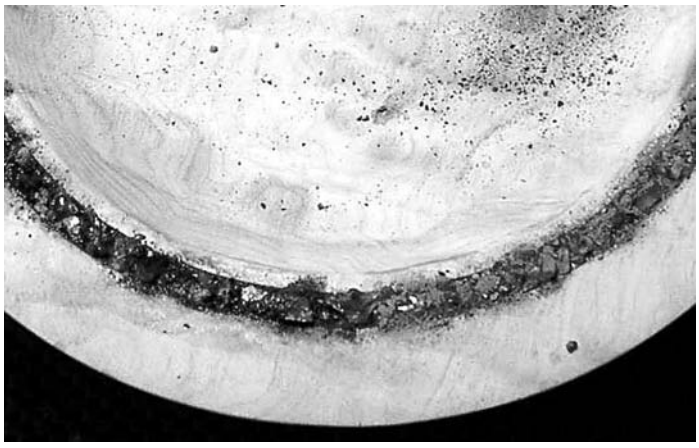
At a hardness of 3-to-4 we find several minerals that are readily available, brightly colored, and/or translucent with high reflectivity. This range of hardness, equivalent to a copper penny, is fairly easy to work while still durable. My favorites in this range are azurite, malachite, calcite and fluorite. Turquoise with a hardness of 5-to-6 is popular, but not as intensely colorful as these other minerals and usually is much more expensive. Properties of these minerals are shown in the table below. All of these minerals are common and can be found in most rock shops locally or on-line.

Options certainly exist in other sources of stone, but beware. Soapstone, with a hardness of 1-to-2, is fun to turn by itself and pretty, but is too soft for a durable inlay. Minerals harder than 6 are very difficult to finish, but that doesn't necessarily preclude their use. Layer these beneath a softer translucent mineral like calcite and the color of the harder mineral

Mineral	Color	Hardness	Characteristics
Calcite	White, orange, blue, clear, etc.	3.0	Translucent with high reflectivity.
Azurite	Deep blue	3.5-4.0	Rich, opaque color with low reflectivity.
Malachite	Green	3.5-4.0	Found with azurite, same characteristics.
Fluorite	Green, blue, red, and purple	4.0	Translucent with high reflectivity.
Turquoise	Sky blue and green	5.0-6.0	Light, opaque color and low reflectivity.

Table 1 Characteristics of common minerals used by the author for woodturning inlay.

Largest pieces of crushed stone placed in slot prior to applying super-thin CA glue.



Fine pieces of crushed stone are added after the large pieces have been glued in.

will show through while the surface mineral is readily finished.

Minerals can be mixed randomly, uniformly, or in patterns. The addition of brass or aluminum filings can enhance the overall effect. In adding metals I've found 'less-is-more': a small amount of metal adds a beautiful gold or silver glint whereas too much metal washes out the mineral colors.

Preparing the Woodturning

Whether you're using soft, spalted alder or hard maple, the inlay results are always great as long as the wood is relatively dry, about 12% moisture content or less. At that moisture level the wood movement of a finished piece through the seasons is small enough that I've never had the stone inlay disfigure.

When turning a notch for inlay, the notch needs to be very well defined. If the notch has tear-out in its sides, the inlay edge will look sloppy. On soft woods use a wood hardener to get cleaner cuts.

I use a skew chisel to create the notch sides first, cutting about $^{3}/_{16}$-in. deep into the wood. I then remove the area between the skew chisel cuts with a cutoff or parting tool. It is not necessary to undercut the notch edge.

On soft woods it is advisable to cover the surface immediately around the area where a notch will be cut with some type of finishing wax. Then cut the notch leaving this barrier on the wood surface on both sides of the notch. This barrier will keep CA adhesives from staining the wood as you build up the stone in the notch.

Placing the Inlay

Large chunks of stone must be crushed to fit the notch width. I use a small coffee can and a concrete chisel held upside down so the flat end strikes the stone. Cover the top of the can with one hand while pounding the stone with the chisel; otherwise pieces of stone will fly all over the shop. A piece of stone the size of a quarter creates a lot of crushed material. The following steps summarize the process.

1. Crush the stone only enough to allow the largest pieces to just fit in the notch. The remaining pieces will be progressively smaller down to a fine powder.

2. Place the largest pieces in the notch in whatever pattern you desire, usually a deliberately 'random' arrangement is a good start. You don't necessarily have to center the the largest pieces in the notch. Position the pieces so they are uniformly distributed across the notch width.

3. Add enough super-thin CS adhesive to hold these pieces in place. Use an accelerant sparingly to prevent clouding. I mist a small amount from about 2-ft. above a piece just to hurry it along. The CA will cure to a clear polymer if you use restraint; spraying too much accelerant will result in bubbles or clouding.

4. Fill voids with smaller pieces but don't use the fine powder yet. Add super-thin CA. but use very little additional accelerant.

5. Add brass or another complimentary material to the voids at this time. The result will appear like veins running through the inlay.

Add the fine powder to fill the remaining voids and repeat theCA application. It is important to build the CA up in layers with progressively finer material to avoid pockets of liquid adhesive within the inlay. These pockets will foul your sandpaper when you're finishing the surface and pockets of unglued inlay material will tear-out.

Finishing the Inlay

Aluminum oxide sandpaper has a hardness of 9, so it can cut through any of the minerals I have recommended. If the inlay is thick, I use silicon carbide sandpaper for the initial sanding then switch to aluminum oxide to finish.

1. Using a power sander, take the stone inlay down to where it is about level with the wood surface. The goal is to get the inlay almost flush with the wood surface, so you can see any voids in the initial inlay setting.

2. Remove the chuck and wood-

Rough sanding the inlay with 80 grit until even with wood.

Detail of rough sanded (on left section of rim) and unsanded stone inlay.

Use gap-filling CA glue to fill small voids in the inlay.

turning together and blow away any dust in the inlay voids. Apply more wax only to the wood as needed to minimize the CA glue's tendency to stain the wood. Then add finer mineral pieces and mineral dust on top of the inlay to get the surface level. Reapply super-thin CA glue, this time dripping it onto the fine material and letting it spread. Return the assembly to the lathe and repeat sanding with 120-grit. Sand into the wood slightly to remove stains from the CA or mineral dust. If needed, repeat this step.

3. When the remaining voids are small enough that no wood is visible within the inlay and the largest void is less than about an $^1/_8$-in., use gap-filling CA to fill these voids. This can be done while the piece is on the lathe.

4. Progress through finer sandpaper grades as you would in finishing any wood piece. The stone inlay may be a little tougher to sand when it's coarse but when the inlay is essentially completed go to 180-220-320-400 grits for the final sanding. Run the lathe slowly during this phase of power sanding and keep the sandpaper cool. In soft woods use care not to erode the wood around the inlay creating a stone 'dome'.

5. Occasionally a small piece of inlay will tear out during the sanding and create a void. If it's small enough, just refill with gap-filling CA; other wise add a little mineral dust and super-thin CA. For these patches I use whatever grade of sandpaper I was up to when the tear-out occurred.

6. I polish the inlayed surface with a buffer and recheck for defects. The inlay will polish to a nearly perfect luster. Then apply your favorite finish and rebuff.

Replacing Bark Inclusions

Stone inlay can add spectacular effects to otherwise drab bark inclusions. Using stone that is laminar (naturally occurring in layers), I shape the stone with a file or sanding disc to fit the inclusion void. The void needs to be clear of rotten bark to provide a solid gluing surface. The stone is placed so the layers are parallel to the void surface to create a coral-like effect after sanding or at an angle to the surface to result in parallel lines of color.

Health Concerns

Sanding stone creates very fine dust, just like the stuff you get when sanding wood. Use a dust collection system, and wear a well fitting mask.

The fine dust coming off mineral, however, does adhere more to the inside of dust collection bags. Give these bags a gentle shake after you've been working with stone to keep the filter pores open.

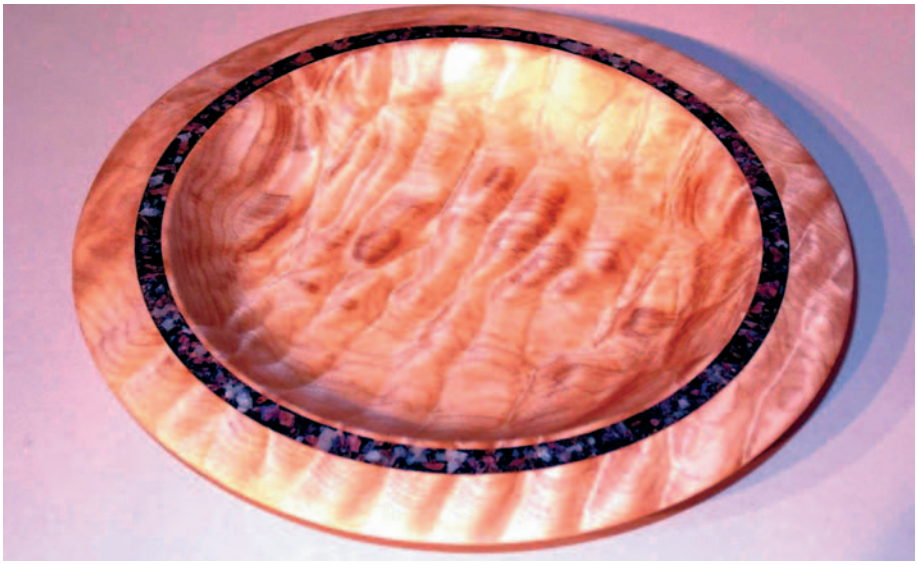
Do not use wet sanding to try to keep the dust down, at least not with calcite. Calcite can be etched with water and you can damage the surface or edge of the inlay if it stays wet very long.

Stone inlay requires the use of relatively large amounts of CA glue. I used about 0.5 ounces in the platter project just described. CA glue fumes are very irritating to your eyes and respiratory system so keep the area ventilated.

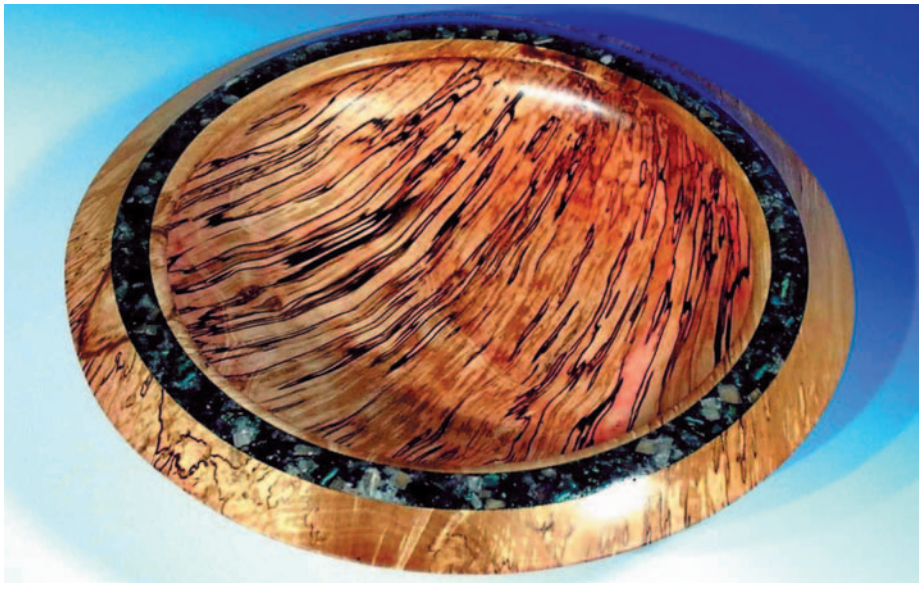
Suppliers

I've found materials of higher quality and value on-line, rather than from local dealers. That may not be true in your area; shop around. Currently my favorite supplier is: Great South Gems And Minerals at www.greatsouth.net. I have no association with this company and receive no benefit from recommending them. You can spend $20-$30 total and get enough of these minerals to complete many projects.

Stephen Hatcher lives in Renton, Washington and is President of the South Puget Sound Chapter. His email is summit@nwlink.com



Quilted maple with azurite and blue calcite inlay, right



Spalted beech bowl with green flourite and azurite inlay, right.

Quilted maple platter with white calcite and azurite inlay, right

FINISHING TOUCHES

Critiquing and Finishing Marbled Turnings

MARY THOUIN

In the Fall 2002 *American Woodturner*, Mary Thouin presented techniques for marbling turned wood. In this article she presents some of the fine points for dyeing your work to create a background color, critiquing your work and finishing.

Adding a background color

I like to pre-color woodturnings before I marble them. This gives a background color to the marbling, which de-emphasizes the visual effects of the woodgrain, which I feel fights the marbling, even with light colored woods. This is simply an aesthetic choice.

The time to apply the dye is after you have sanded the turned piece to 400 grit, wet it, let it dry before re-sanding using 600 grit. Wetting the piece raises the grain, and re-sanding this raised grain eliminates problems such as tiny air pockets or bubbles that could show up on the finished piece.

"Blue Sky" — 5-in.-high blue vase by the author.

I use either FW acrylic inks or Procion or Pro MX fabric Dyes, which are available at various art stores and craft supply houses. Each product has advantages and disadvantages as listed below.

Fabric dyes: need to be mixed with water and alcohol. You can mix a large enough quantity that the piece can be dipped. This makes coloring the piece quick and easy, and relatively inexpensive. The down side of dyes is that some of the colors bleed into the bath when the piece is marbled. I found that dipping the piece in a dye fixative before marbling greatly helps this problem, but does not eliminate it completely. I also have had some of the dyes pull through the completed marbling when a finish was applied.

FW acrylic inks: I like these colors for pre-dying the wood. They are somewhat expensive, however, so it is not reasonable to mix up a big batch of color for dipping. This means the color needs to be painted on, because you don't want to leave "lap lines." Their advantage is that once they are dry, they do not bleed into the bath and seem to be stable when finishing.

Critiquing your work

I carefully think about and examine the quality of the marbling before I put a finish on the piece.

If I am less than happy with the marbling, I wash or strip it off and start over. There are pieces I have even re-marbled up to five times. The marbling can be washed off under the faucet while the color is still wet, or if you decide you don't like it after it's dry, lacquer thinner will remove it. If you use lacquer thinner, be sure to wear protective gloves (ones that are for solvents). After using the thinner, wash the turning with very dilute soap, and rinse the piece very thoroughly. Any residues will cause havoc in your marbling bath later.

Red/Gold — 3-in.-high vase by the author. All photos by the author, except where noted.

There is a delicate balance between developing a skill base — and creative exploration. As with any art or craft, the more practiced a person becomes, the better he or she is able to identify guidelines that indicate quality work. Think about some of the qualities that we, as woodturners, feel are some basics for quality work. Marbling, though more subtle, is no different.

Some of the areas that I use when critiquing my own work are: color balance and harmony, clear line definition, lack of smudges, smears, and hesitation lines, dust holes. I strive for unbroken patterns and patterns that flow with the form of the piece.

I also posted this question to a marblers forum and these are some additional thoughts that Laura Sims,

a professional marbler and instructor at Arrowmont School of Arts and Crafts in Gatlinburg TN, wrote:

"There seem to be two main components to consider when marbling: technical skill and the relationship of image to application.

"Some of the things I look for in the technical category are high line quality, balanced concentrations of paint, manipulation of a pattern or design (ex. is the image clear or muddy) and use of color (ex. compatibility, effective contrast). Another aspect of technical skill is being able to choose between 'following the rules' or 'breaking the rules.' Sometimes I compress veins of color until they break into beads. That would not be technically or visually desirable for a fine-combed pattern, but can be an effective 'design element' for bold patterns, creating the illusion of seed beads sewn on the marbled surface.

"That example leads to the second consideration. As a rule the relationship between the object and the chosen image will be compatible. The design will enhance the object and visa versa. With working in wood you are already moving toward a heightened awareness of pattern, form, composition. That continues to evolve. Even if you can't verbalize why something works, sometimes you'll find that your heart beats faster, maybe you can't stop looking at it, or someone will see it and it'll stop them in their tracks. The marbled wood-turned objects that I have most liked have had a tangible relationship between the form, wood grain and the marbled print, as if they needed one another to show off their best qualities.

"My favorite definition for art is "technical skill often as though aided by magic" (Websters New International, 3rd edition.)"

"The Rare Marble-backed Beetle Box" The beetle body is turned and carved. Marbling and turning by the author and carving by Graeme Priddle of New Zealand. Other collaborators on the piece done at the 2002 Emma Lake in Canada were Greg Wilbur (OR) and Chelsey Kingsely (NY). Photo by Neil Devitt.

Finishing marbled surfaces

The fragility of marbled paints on wood necessitates a protective coating — and finishing marbled pieces can be tricky. You want a finish that is clear in order to not yellow the marbling colors — do not use oil finishes for this reason. The best finishes I have found to date are either water-based artist varnishes, interior water based (aqua) urethane, or Deft spray lacquer. I have found that many of the solvent-based finishes cause the dye or the acrylic ink to bleed through the marbling pattern, which diminishes the colors. Deft spray lacquer is one solvent based finish that seems to keep the integrity of the marbling. It gives a very nice clear finish, but is difficult to apply evenly. Multiple coats are needed and in order to achieve a smooth finish, a few thin (two-to-four) coats need to be applied. Then VERY CAREFULLY and LIGHTLY "rub out" the surface until it's smooth. It is very easy to sand through the lacquer and into the marbled pattern. Once this happens, I feel it is virtually irreparable. I sand with an ultra fine cloth abrasive sold by Rio Grande (7500 Bluewater Road NW, Albuquerque, NM 87121 800-545-6566) called "Wet or Dry Tri-M-Ite Polishing Paper made by 3M. It is excellent for rubbing out finishes.

For a more natural looking finish, I thin water-based varnishes about 50/50 with water, then paint on one or two very thin coats, using a quality brush.

In closing — If you have read both of my articles, you must be serious! Hopefully, they will help you dive head first into this fascinating craft — so go have too much fun, experience the magic! - (and don't forget the dinner reservation!)

Mary Thouin demonstrated marbling at the AAW Symposium in St. Paul, MN. Her e-mail address is northernlights2n@yahoo.com. To see marbling, check her web site www.picturetrail.com/marysmarbling

Peter Exton

Oneonta, NY

Peter Exton says he is "among those who believe there is still room for invention on the lathe." Over the last decade he has produced furniture, candleholders and sculpture "using the simple reversal (or 'inside-out') technique and other more elaborate processes derived from it. Except for some furniture parts and recent block bases, all shaping is done on the lathe." Photos: Courtesy of the artist.

"Prickly Blossom:" 1998; boxwood and cocobolo; $13\frac{1}{2}$-in. high X $4\frac{5}{8}$-in. diameter.

"The Cooper's Dream:" 2000; boxwood, dye, cocobolo; $13\frac{3}{4}$-in. high X 4-in. diameter.

"Flame Table:" 1992; birds eye maple,bloodwood; 26-in.-high X $15\frac{1}{2}$-diameter.

"Shot Tower:" 2002; bleached maple, dyes elm; $13\frac{1}{2}$-in high X $6\frac{1}{2}$-in. X $5\frac{1}{2}$-in.

"Split-column table:" v1992; birch; $25\frac{1}{2}$-in. high X $15\frac{1}{2}$-in. diameter.

"Boxwood spray:" 2000; boxwood, holly, cocobolo; $20\frac{1}{4}$-in. high X $4\frac{1}{4}$-in. diameter.

Bill Haskell

Placentia, CA

The hollow forms shown here are finished with a cyanoacrylate(CA) glue finish. Bill described his method for finishing with CA in the article beginning on Page 47. Many turners rely on CA glue for repairs, stabilizing wood, holding bark onto natural edge vessels and a multitude of other tasks. As you can see from the objects pictured here, Haskell's work involves more than a fine finish. In his article on "Evaluating Wood Art" (Page 35) Kevin Wallace quotes Bill as saying, "Each piece provides an adventure in discovering the inherent qualities inside the wood as well as the opportunity to create a unique and one-of-a-kind piece." Bill's descriptions of individual pieces are below.

BUCKEYE BURL HOLLOW FORM — 10-in-wide large spalted California buckeye burl piece with ebony aperture ring. Finished with cyanoacrylate (CA) glue that has been sanded smooth and polished on a buffing wheel. The CA glue finish provides a clear protective coating that shows off the rich burl detail and color more clearly than oil based finishes.

"LONE SENTRY" Parallel Stranded Lumber (PSL) hollow form rising out of an aching painted base — 14-in.-tall. A cyanoacrylate (CA) glue finish was used to provide protective coating over rough edged pine strands and to dramatize the color contrast in the overlapping strips.

MASUR BIRCH HOLLOW FORM — 6-in.-tall tall masur birch vessel with a cyanoacrylate (CA) glue finish that was sanded smooth and polished on a buffing wheel. The CA glue finish provides a clear protective coating that best shows off the dramatic detail and fleck figure.

BIG LEAF WESTERN MAPLE HOLLOW FORM — 6-in.- tall richly spalted big leaf western maple piece with pierced pebble mosaic free form pattern that encircles the opening and upper surface. Thin viscosity cyanoacrylate (CA) glue was applied as a sealer coat to show off the burl color, figure and detail. On top of the CA sealer coat, a number of spray lacquer coats were applied, the last coat sanded smooth and polished on a buffing wheel.

"BETTER HALF" BUCKEYE HOLLOW FORM — 7-in.- wide spalted buckeye burl vessel with offset halves faced with black fish paper (a resin vulcanized paper). The opening is highlighted with a black ebony collar. A cyanoacrylate (CA) glue finish sanded smooth and polished on a buffing wheel was used to bring out the rich deep burl colors and detail.

Gerald Dorn, Greenwood, SC



Gerald started doing portraits on turned urns in 1999. After turning a hollow urn up to 14-in.-tall and 10-in. in diameter, he takes a photograph of the subject, illuminated from one side to define the face in a light/shadow format. The image is sized to fit the urn and transferred with carbon paper. Major shadow areas are removed with a hand-held router, details like hair with a fine bit and high-speed rotary tool. Detail areas are later colored with black ink to provide needed contrast, and a black cloth is applied inside the urn to accentuate shadow areas. Above, from left, retired US Congressman Williams Jennings Bryan Dorn; Donald McKellar, director Emeritus of the Greenwood Community Theater, and Charlie Beaudrot, a friend and neighbor who first got him interested in turning. Dorn plans to donate his portraits of "Distinguished Citizens of Greenwood County" to the Greenwood, SC, Museum.

Jim McLain, Socorro, NM


Jim submitted a CD with several pictures "of a new woodturning concept I developed over the past few months.The concept was inspired by the events of September 11, 2001. The sphere was turned using Brian Simmons' ring method and is titled 'Windows to the World.'

"The woodturning is 12-in. in diameter and is primarily spalted maple. The top and bottom are holly to represent the polar caps of the earth. The windows are satin wood, holly, ebony and blood wood."

Brian Simmons' article on "Turning sphere" is in the Fall 2001 Journal.

Steve Mathias, Elk Grove, CA

Steve says this interesting shape is known as a "sphericon." It was first introduced to the public in an article by Ian Stewart in Scientific American magazine in 1999. You can find more information about this shape by searching the web.

Steve made this specimen on his lathe at home out of almond wood from a tree he cut down and dried himself.

"One of the more difficult tasks in making the object was clamping. First, two 90-degree cones were made and glued base to base. This required making some clamping blocks with 90-degree cone holes in them; a car was then used to provide clamping force. After cutting the double cone in half through its points, the cut was sanded flat and reclamped 90-degrees off. The original clamping blocks were modified to provide the revised blocks needed to pad the surface while the car again provided the force.

"The shape has many interesting properties. One is that it is a solid with only one surface, and will roll in a wobbly fashion down a slight incline. Pairs of them will roll next to each other in this wobbly manner. You can roll one around the surface of another," wrote Steve.

Steve says he has also made some other versions using other materials, and as wire-frame models. The wire frame versions yield some amazing soap bubble patterns.

Nick Cook

Marietta, GA

Nick is a professional turner running a full-service turning shop for the Atlanta area. That means he turns everything, from bottle stoppers by the thousands to furniture parts to massive architectural components. On Page 41, he describes how to make the simple ornaments, shown at left, for the holidays.

Glenn McMurray

Batavia, IL

Glenn likes challenges and turning unusual items. The trembleur at left certainly fills the bill. He tells how to turn one on Page 17. Plus, he describes how to use a traditional French tool —the bedan.

Members Gallery

Work From Members in US and Canada

Mark Blaustein, Pittsburgh, PA, was profiled in the Winter 2001 issue of the Journal. Above and left: Designer Coffee Table. The squares are rearrangeable and reversible to create many patterns. Made with mahogany, fiddleback mahogany,curly maple, black walnut, wenge and ash. At right, small side table of mahogany, curly maple and wenge.

Kevin Burrus, Portland, OR: "A-Z"; phone books, wood, paint; 2001; 12-in. X 5.5-in.

Kevin Burrus: "1985"; magazines and wood; 2001; 3.5-in. diameter.

Michael Kornblum, Mountain Home, AR: "I Think I'm Turning Japanese", mulberry and walnut, 5-in. H by 13-in. D. Textured with $^{1}/_{8}$-in. rolled beads. Collar is also rolled beads with carved flutes in between two rolls of beads.

Michael Kornblum: "The Final Series # 4", manzanita root with ebony finial, 17-in. H by 6-in. D

Linda Salter, San Carlos, CA: This segmented bowl is $8^{1}/_{2}$X$8^{1}/_{2}$-in. and has 387 pieces - not counting the silver in the sky. The woods used were cherry, bloodwood, maple, ebony, canarywood, purpleheart, and walnut. The "stars" are silver and are glued halfway through the wall of the bowl.

Daniel McDonald, Beaconsville, QC, Canada:Two spiked dodecahedrons inside miniature balls – one round, one with 12 flat side. Made from castello boxwood..

Daniel McDonald: Basket of miniature flowers in a 3-in. blackwood sphere which is lined with machined holly and a spot of pink ivory. Blackwood elliptical base has insert of birdseye maple.

Daniel McDonald Universal Egg of boxwood contains a miniature ball with 14 turned flowers set in its surface.to allow it to be rotated within the egg.

Evaluating Wood Art

Language and Criteria

KEVIN WALLACE

The Glendale Woodturning Guild is the AAW Chapter for Los Angeles, an area as populated as it is vast. Members often travel more than an hour along busy freeways to attend the meetings, held in a beautiful park setting in the northeast San Fernando Valley. I've made the trip myself on many occasions, to critique work and speak to the group, which counts among its members a number of talented artists. On a recent visit I offered a talk on the criteria for judging woodturning, using pieces by chapter members to illustrate various approaches and categories of art and design.

I have an ongoing involvement with the field of wood because I feel it is, quite possibly, the most important of all art mediums. Trees and human existence have always been closely connected and wood brings a great deal to our lives. In an increasingly technological world, where we pass our days staring at computers or televisions, surrounded by electronics and plastic, work in traditional craft media such as wood are particularly important.

Richard Lukes: "Untitled", Aluminum and maple, 27-in. high, two axis, above left, and "Female, above right, quilted maple, $21^{1}/_{2}X6^{1}/_{2}X2^{1}/_{4}$-in. Photos courtesy of the artist.

A new aesthetic

In recent years wood has proven itself to be a viable medium for contemporary artists, which is really quite a step up from being relegated to material for the frames of paintings. This has been a major breakthrough, but it calls for new aesthetics. How do you view and appreciate work in wood, whether it's the work of others or your own? There must be a perspective and criteria for understanding and evaluating wood art. One of the difficulties is that, within the field, there is a wide range of approaches. These could be separated into categories: contemporary art, decorative art and design or functional art.

Although these categories simplify matters, a work could fit into more than one and this must be taken into consideration in exploring different areas and approaches.

Criteria for contemporary art

Essentially, the criteria for contemporary art is that the work be sculptural, conceptual, narrative or make some sort of statement by expressing the artist's point of view. What often separates contemporary art from decorative art is that it need not be aesthetically pleasing in the sense of being beautiful. Instead, artists often go the other direction, intending to shock or challenge the viewer. In wood art, the approach used by those creating contemporary art is usually sculptural and, if an artist uses the vessel form, its function is to carry the artist's ideas and to provoke thought.

Most of the work in the field of turned wood does not exclusively fit this criteria of contemporary art, although a number of artists have gone in this direction, creating a major breakthrough for the medium and linking the field to important 20th century artists such as Brancusi and Arp. Much of this work, due to the beauty of the wood, functions as both contemporary and decorative art.

Among the members of the Glendale Woodturners Guild who create work that falls into the category of contemporary art is Richard Lukes. His work is rooted in the sculpture of both primitive and modern artists, as opposed to the vessel form that most woodturners utilize. There is a suggestion of human form in some of the works, but it is reduced and abstracted to the essential elements. In Lukes' "Eye-con" Series, a conceptual icon characterized by the depiction of a single eye appears in each piece, suggesting a relic at once ancient and

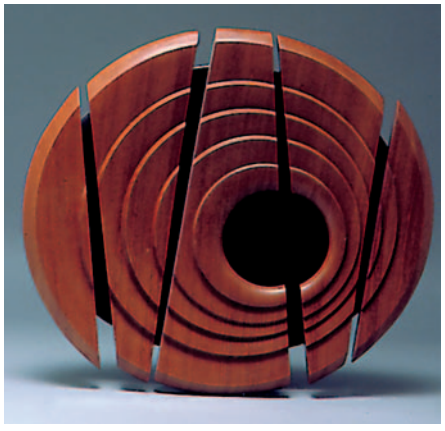
Tex Isham: above left, "Within." Bleached maple, 12X12X3in.; and above right, "Untitled,"maple and dye 15X15X3-in. Photos: Dick Lukes

modern. Lukes counts among his influences numerous contemporary sculptors and woodturners, as well as a lifelong involvement in photography, including years in the advertising and fashion industry.

"I photographed hundreds of Pre-Columbian figures for one account," he says, revealing what may be one of the greatest influences on his forms.

Tex Isham creates geometrical abstract sculpture that easily fits the category of contemporary art, although one can choose to dismiss the artist's own ideas and aesthetic explorations and accept the work purely as decorative art.

Tex Isham studied at Chounard Institute and Art Center School of Design in Los Angeles and has been a graphic artist much of his adult life. His passion for design and love of craftsmanship in wood was ignited by a chance visit to Wood Turning Center's Challenge IV: International Lathe Turned Objects exhibition when it traveled to the Los Angeles Craft & Folk Art Museum. He has come to embrace multi-axis turning techniques as a means of creating abstract forms that he feels, "…have no direct reference to external or perceived reality."



Bill Haskell: A 16-in. Mahogany wall sculpture turned on seven different centers (each off center) and segmented in five stand alone complimentary sections. The five sections are mounted on standoffs and are highlighted by a dark bronze painted background. Photo: Dick Lukes.

"I strive to give work its potency by creating a visual balance and tension." Isham says. "I create tension between what you can see and what you can't see. My passion is to see a distinctive composition emerge and a unique form unfold."

Tex Isham accomplishes this by utilizing geometric shapes and lines that are receptive to shadows, allowing light and darkness to create visual texture.

"This gives me the opportunity to capture the delicate relationships of form and how it is affected by light," he explains.

Bill Haskell creates a wide range of work in wood, from elegant vessels to pure sculpture, as shown on Page XXX and in his article on finishing wood with CA glue on Page XX. A recent wall sculpture was turned on eight different centers and segmented in five different sections. These were then mounted on standoffs and highlighted by a dark bronze background. The second off-center ring from the outside features a textured surface treatment and was given a painted bronze finish.

"Texture and carved shapes are often fashioned on a turned object to create an intriguing and attractive composition," Haskell says of his work. "Each piece provides an adventure in discovering the inherent qualities inside the wood as well as the opportunity to create a unique and one-of-a-kind piece."

Aims of decorative art

Unlike contemporary art, which can be very unattractive and provocative, the chief aim of decorative art is to please the senses and, in doing, improve the quality of life. It's interesting to note that those involved in contemporary art often look down on decorative art, as though subtlety or beauty detracts. But then, there are people who don't think a great deal of "art snobs," so it works both ways. Certainly one can't invalidate the place of decorative arts, as major museums devote a great deal of time and space to researching and exhibiting them.

Attention to form, decorative carving or texturing, combining woods for visual interest and showcasing the natural beauty of the wood are hallmarks of turned wood pieces that fit into the category of the decorative arts. In this sense, sculptural work by Lukes, Isham and Haskell can easily fit into this category as well, as it is pleasant to experience. The work has something to say, but speaks quietly so that one isn't overwhelmed by the artist's intent.

Of the artists in the Glendale group, Al Sils, Dan Hogan, Don Comer and Cal Elshoff all create work that fits easily into the category of decorative art. Each brings to their pieces a particular aesthetic and interests that exhibit themselves in bowl and vessel forms.

Al Sils contrasts metal with the textured areas of his wood bowls to dramatic effect. The abstract figures in the metal appear precious and invite closer viewing. The inclusion of metal is a fairly recent aspect of the artist's work. Sils has been a woodturner for over two decades, beginning as a furniture maker taking classes at the Anderson Ranch Arts Center with masters of the craft, as well as design studies at UCLA.

"My work has always been defined and influenced by the medium," Sils explains. "Wood has been a source of inspiration and satisfaction for me since childhood. It's graphic figure, tactile qualities, and rich and sensuous aromas have driven me to use form to explore these varied and exciting possibilities."

The classic forms of Dan Hogan's vessels often pay homage to Southwestern pottery, while displaying highly figured wood. Other pieces utilize the natural edge and voids made popular by Mark and Mel Lindquist. A particularly fine example was made from a piece of Man-

Dan Hogan: "Untitled," above, maple burl 4X11 1/2-in.; and right, "Natural Edge Vessel," maple burl, 10-in. H X 8 1/2-in. diameter. Photos: Courtesy of the artist.

Al Sils: Untitled bowl, above, redwood, fused silver and gold, 7-in. HX 17-in. diameter; "Chocolat," right, spalted black acacia, copper, silver and gold 9-in. H X15-in. diameter. Photos: Courtesy of the artist.

zanita that washed out of the canyon behind his home in an El Nino storm a few years ago.

Don Comer combines a fluid sculptural approach with the vessel, creating work that suggests art nouveau glass and ceramic forms. His elegant Untitled Lidded Form presents a sense of motion, combined with contrast that is quite stunning.

Cal Elshoff is relatively new to the field, but has created over 150 pieces since beginning to turn wood three years ago. His experience with the material goes back to his youth when he worked with carpentry crews and includes years spent practicing architecture and rebuilding homes. Design is an important aspect of his work and he approaches each piece as a new challenge, whether it be a carved wall platter or a functional salad bowl.

Design and utilitarian work

A great deal of what is created in

the woodturning field fits into the category of design and utilitarian work and these pieces often overlap as artistic or decorative pieces. It's even possible to find a contemporary work of art that is conceptual or narrative, decorative, well designed and functional, satisfying the criteria of all the different approaches. This may indeed be the ultimate accomplishment for an artist working in wood or any traditional craft medium.

Usually however, design in wood has to do with the sort of ideals the Bauhaus taught, where form follows function, or the ideas of the Arts & Crafts movement, where beauty, craftsmanship and utility are united. Essentially, the highest aspiration of design, is for the work to be aesthetically pleasing, while best serving its function.

In the works of Jim Richardson, a vintage 1820 Holtzapfel lathe is employed to create forms rich in design and pattern. One might ask what contents would be worthy of a container with such attention to detail and the artist's Fluted Urn in carob, African blackwood and pink ivory presents the answer. Of all utilitarian forms, the urn perhaps carries the greatest connotation of reverence and the artist's approach serves it well.

Rude Osolnik was a pioneering woodturner who created one-of-a-kind pieces, as well as trademark candlesticks that he would knock out with great speed. Probably a good example of a wood artist interested in the decorative arts and design, Rude

Don Comer: above, Untitled Lidded form; cocobolo, copper and bleached maple, $14^{3}/_{4}$-in H X $2^{3}/_{4}$-in. diameter. Photo: Dick Lukes.
Jim Richardson, below, Fluted Urn, carob, African Blackwood and pink ivory, $5^{1}/_{2}$-in. H X $2^{1}/_{2}$-in. diameter

believed in the importance of a functional piece being well designed. He said that he received more satisfaction in selling someone a piece that would be used every day, rather than something for display.

"If you buy something and put it on a shelf, you have to dust it every once in a while and that's it," he says in the book *Rude Osolnik: A Life Turning Wood*. "If it's a set of candle holders on the dining table, you're arranging that everyday. If it's a nice design, when they look at that they're going to be much more conscious of form and shape in everything else… if you surround a person with well-designed pieces, that's what he's going to be looking for."

So then, according to Rude, the artist/craftsman/designer can actually assist one in seeing and appreciating the world. Interestingly enough, quite often the role of contemporary art is to alter and expand perception… so then contemporary art, decorative art, design and functional art quite easily over-lap and connect. Understanding the separate criteria is the first step in moving beyond limited definitions of what is art and what is part of our everyday life.

Within the realm of design, there is of course that which is created for mass production. It's important to note that the concerns of the designer in this case are the same as those of a person creating a one-of-a-kind piece: to utilize the best material and form for the object. Artists working on the lathe to create forms are doing the work of a designer, as this approach has been utilized throughout history to create blanks for molds. So then, whether creating art or functional objects, contemporary woodturners explore areas of craft and design, though each work is truly one of a kind due to the unique aspects of each piece of wood.

When considering an artist's work, one might ask: "Why does it exist?"

Cal Elshoff: above top, Salad bowl, pine and paint, 7-in. high X 12-in. diameter; above, Laminated salad bowl, Douglas Fir and paint 6-in. high X 12-in. diameter.

and "How well does it serve its function, whether that is as contemporary art object, a work of decorative art, or a utilitarian example of design?" If people have aspirations to sell their work through a shop or gallery, they must be able to answer the question "Why should someone buy this?" Those who create works to share with friends and relatives must also answer to a similar criteria. Your daughter-in-law, grandson or Aunt Mary will probably graciously receive the object and tell you how much they like it, but whether or not they really enjoy having it on display or using it, as opposed to pulling it out of the closet every time you come to visit, is dependent upon it being really well done.

Whatever one's approach, it's important to have criteria for looking at an object and knowing which questions to ask. It takes the maker deeper into the histories of the various traditions and aesthetic theories, creating the potential to expand ones range and be part of a field that is both ancient and evolving. In this way, one can create that which best utilizes the material and the maker, whether it be art, an object of beauty, utilitarian object or a work that encompasses it all.

Kevin Wallace is a writer, curator and

FINISHING IN A FLASH

Enjoy the spectacle, but don't try it at home

PHIL BRENNION

Creating unique surface treatments and patinas on wood has played an ever-increasingly important role in my development as a woodturner. Specializing in Southwest-style vessels, I strive to emulate the look and feel of ancient pottery. Carving, dying and even treating vessels with smoke to get that ancient aura are part of my repertoire. Recently, pyrotechnics, or small scale fireworks, have been added to my list as way to create ancient-looking wooden vessels.

Turning properly proportioned shapes is the essential start to creating quality Southwest-style wooden vessels, but to really emulate the look of the "ancient ones" the turned pieces must have a correspondingly aged finish. Follow along as I take you through one of my finishing processes that transforms a bowl in the blink of an eye, to the likes of an ancient pueblo pot.

Some ancient Pueblo vessels have mottled and speckled surfaces, providing a wonderful natural element. Since the vessels were usually fired in makeshift kilns fueled by wood, hot embers were always present. The speckling or mottling resulted from impurities such as small particles of the hot embers settling on the vessel 's surface during the firing process. The finish was the result of the unique circumstances when the pots were fired, rather than any purposeful artistic efforts. But, the fired surface of these ancient vessels is often quite stunning. Pots made from tan or lighter colored clays provide a contrasting background to the black mottling.

Trying to create this aged appearance on wood has been a challenge. I tried spattering different stains and dyes on vessels, but the resulting look was always less than satisfactory. Next I ignited steel wool and other

The author's turned Southwestern style vessel, before any finishing treatment

The same vessel with Pyrodex grains of powder on the surface

The grains of powder are ignited with a long fireplace match. The reaction is instantaneous.

The surface is etched and pockmarked by the burning powder. The process must be repeated 20-30 times.

Because of the curved surfaces, the vessel must often be secured in a cradle, to keep the powder from falling off

The finished vessel, aged almost instantly with by fire. Photos by the author.

materials on the surfaces, but these efforts didn't produce enough intense heat to create the desired effect. It wasn't until I started experimenting

with Pyrodex that the results were outstanding.

Pyrodex, an explosive powder used in today's black powder weapons, was developed as an improvement to conventional black powder. Much more stable than black powder, Pyrodex produces the same explosive pressures needed for black powder weapons. It acts as the propellant in these weapons, and comes in different powder grain sizes for pistols, rifles, and even cannons. I use the rifle type powder because the grain size and burning rate most effectively produce the desired mottling effect. This Pyrodex powder is designated RS on the container. The pistol type, which has larger grains, can also produce some great effects

When the pyrodex ignites, it quickly burns into the surface of my wooden vessels.

Once there is ignition, the burning is over in a second or two, and a black spot appears where each grain of powder has burned into the surface. The more powder I use, the more black spots on the wood, so trying to envision what X amount of black spots will look like on a particular turning becomes an important part of the process.

Creating an ancient feel

The warm earth tones of Alligator Juniper that I use for many of my turnings resemble the color of clay in some ancient pots. Burned Pyrodex on a Juniper surface leaves a wonderful aged look to the surface, creating that ancient aura.

With lighter colored woods such as cottonwood or sycamore, the effects created by the Pyrodex, contrast more with the wood and can leave the piece with a more contemporary look.

A mottled and random looking finish is achieved by applying the correct amount of Pyrodex directly to the bowl, and holding it on the surface until ignition. Since Pyrodex's small grains of powder tend to roll from a vessel's smooth curved surface, keeping the powder in place can be a problem on the curved surfaces of most Southwest type vessels. I have experimented with different ways to hold the powder in place, and the best way is to lightly sandblast the surface prior to application. The sandblasting roughs up the vessel surface enough to hold some of the powder in place. Still much of it will roll from a curved surface, so I do the pieces in stages, manipulating the vessel many times during the finishing process. Placing the powder in patterns on the surface can produce interesting effects, but the more random sprinkling of the powder produces a more authentic ancient look.

CAUTION:

This technique described here incorporates the use of Pyrodex, an explosive powder, outside its intended purpose and for safety reasons is not recommended . The process described here is the procedure used by the author and is not intended as a guide or how-to article.

This type of pyrotechnic finish is done outside in a safe area, well away from my shop, or any combustible materials. When the Pyrodex is ignited, instantly it produces lots of smoke, flame and sparks. Safety to myself as well as any material around me is paramount

Extreme safety precautions when igniting the Pyrodex are necessary. I use a shield to protect my face, welding gloves to protect my hands and a long fireplace match to actually ignite the powder.

One of the most difficult parts of the process is positioning of the vessel so the powder will stay on the surface. It can take 10-to-20 different positioning and powder applications to treat one vessel. I bandsaw blocks of wood to cradle and prop the vessels into the necessary positions. I use a small teaspoon about quarter full of Pyrodex when placing the powder on the vessel's surface.

My goal at this step is to place enough powder to totally cover the area to be ignited. Each time the vessel is positioned and the Pyrodex is applied, grains of the powder will fall from the vessel surface,

Before ignition I make sure this fallen powder is swept up. I don't want a lot of powder next to the vessel during ignition or it could ignite and intensely burn the pot, causing large blackened areas

Igniting the powder

When the Pyrodex is placed on the vessel in the desired fashion, and using all my safety precautions, I ignite the powder using a long fireplace match The actual burn time of the powder is almost instantaneous, and so are the results.

Once the pots are treated using this technique, I lightly steel wool them, removing any surface residue, and apply either a light coat of lacquer or a matte protective finish, like artist fixative. This finishing technique also produces interesting effects to the rims of shallow bowls. By applying masking tape to parts of the surface that I want protected from the burning powder, I can create patterns or borders. The powder burns so quickly, it has minimal time to affect the surface under the tape. The unaffected surfaces contrast wonderfully with any adjacent treated surfaces

Whether using this method to create ancient looking vessels or just an interesting rim, I've found the results, can be as intense as the heat.

Phil Brennion teachers the woodturning program at Yavapai College, Prescott, AZ, and is a member of the AAW Board of Directors.

TIS' THE SEASON, AGAIN

Turning An Icicle Snowman

NICK COOK

DIDN'T WE JUST DO THIS? I GUESS that was a year or so ago, but Christmas tree ornaments are always a good item to make and sell this time of year.

This one is quite simple. There is no hollowing, no thin spindle and no assembly required. This is nothing more than a simple spindle with a little detail. It is an icicle snowman. Everyone will love it.

Size does not matter; weight, however, does. The local Festival of Trees restricts weight to a maximum of $2^{1}/_{2}$-ounces. You may need to invest in a set of postal scales to stay within the limits, if you plan to donate your ornaments to a charity such as this.

Hone your turning skills and spread a little holiday cheer with these icicle ornaments. Photos by Cathy Wike-Cook.

My favorite material for making the icicle snowman ornament is hard maple. I like the wood's bright, light color and its tight grain cuts and finishes with ease. I have also used soft maple, ash, oak and even cherry. I like to start with $^{5}/_{4}$-in. stock and cut it into squares roughly 1x1x8-in. The proportions work out well for this size and it is a great way to use scraps from around the shop. You can, however, make them all different sizes and use a variety of woods.

Once the blanks are cut to size, I locate and mark the center on each end. I use a spring-loaded or automatic center punch which leaves a dimple in each end of the blank. This makes it easy to position the workpiece between centers on the lathe.

Time to Turn

I prefer a $^{1}/_{2}$-in. diameter mini-spur drive-center for most work up to about 4-in. diameter. Rude Osolnik introduced me to the mini-spur more than 25 years ago. His first one was fashioned from an old cup-style dead center. He used a file to create teeth on the ring or cup. Then he extended and sharpened the center point. This allowed him to mount spindles, including his signature candlesticks, without stopping his lathe. He very graphically pointed out to me how much time I was wasting by stopping and starting the machine as I was turning baby rattles. The mini-spur is now available from Craft Supplies, USA (800-551-8876), as well as other sources.

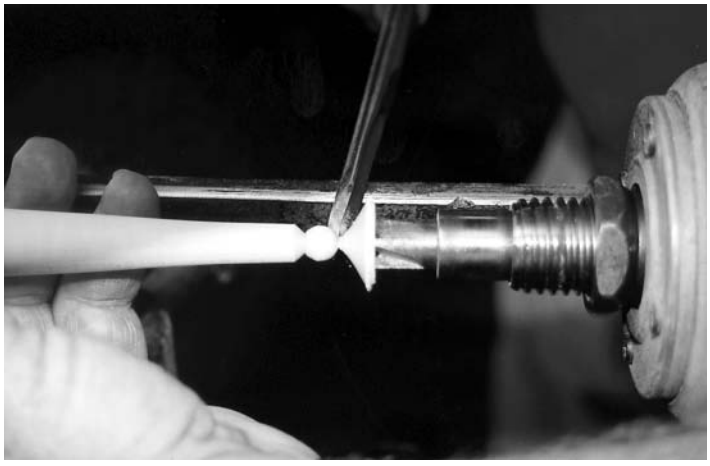
Mount the blank and position the

Two Tools: a $1^{1}/_{4}$-in. roughing gouge, above left, and a $^{3}/_{8}$-in. spindle gouge do most of the work of Cook's snowmen.

Begin shaping the icicle with the hat. The toolrest is mounted slightly below center, and the top of the icicle is secured by the tailstock.

After establishing the hat brim, the author shapes the head of the snowman, taking care to make the round head looks as if it fits naturally into the hat.

Using a gouge or a skew, taper the body from the top of the icicle (tailstock end) to the base, which is mounted at the headstock end with a mini-drive center.



After shaping a sphere at the the bottom of the ornament, the author reaches over the work to steady the piece as he separates it from the lathe.

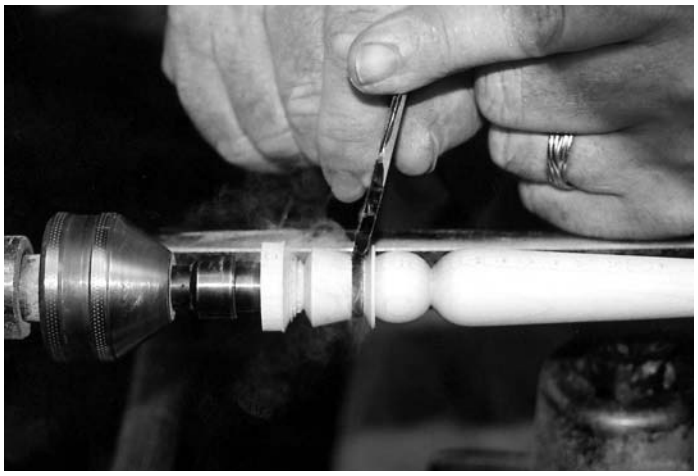
tool rest just below center. Set the lathe speed at approximately 3000 rpm. Start the machine.

I begin with a $1\frac{1}{4}$-in. roughing gouge and turn the blank down to a cylinder.

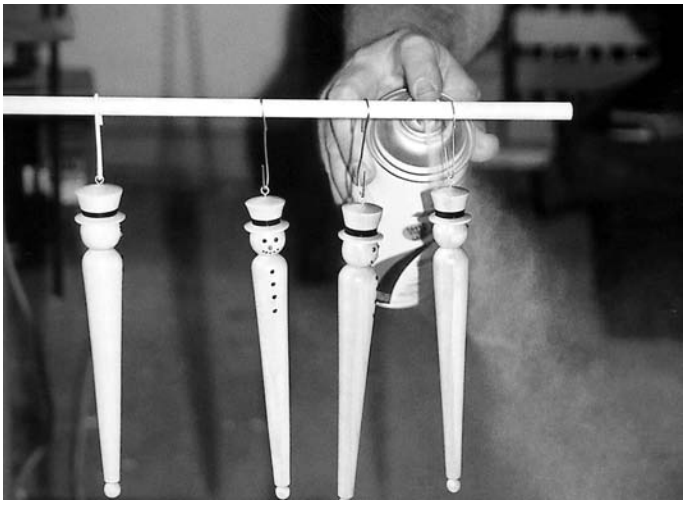
I use a $\frac{3}{8}$-in. spindle gouge with a long fingernail grind (about 25° bevel) for detailing. I start at the tailstock end and work back towards the headstock. The first cut defines the top of the hat. The next cut sets the brim so you can finish shaping the rest of the top hat. The brim should be thin, approximately $\frac{1}{16}$-in. A bead or small sphere is turned just under the brim of the hat to create the snowman's head. Make the diameter of the bead a little larger on the top (where it meets the hat) than at the bottom (where it meets the icicle body). Think of the top of the bead ending somewhere under the hat. Otherwise the hat may look as if it's perched too high on the snowman's head.

The body or icicle is next. You can use either the roughing gouge or a skew to taper the rest of the blank down to approximately $\frac{5}{16}$-in. diameter. I add a small ball or sphere at the bottom of the icicle to finish it off. I sand the piece with 150-grit and then 220-grit. Then, I use a piece of $\frac{1}{8}$-in.-thick tempered masonite to burn a band into the top hat just above the brim.

Turn each end of your snowman down to just under $\frac{1}{8}$-in. diameter. You should always separate the workpiece from the tailstock end first and then from the headstock end. Once separated, you will need to



FINISHING THE ICICLE: The hat band is created before the blank is cut off the lathe by pressing a piece of masonite against the spinning wood, above, left. Be sure to predrill the hole for the slender eye hooks with a drill in a pen vise, above right, or a Dremel tool or other rotary tool.



The button eyes and the nose, above left, are formed with a thick polymer puff paint; the mouth is done with a black Sharpie pen. The author finishes the ornaments by spraying on a couple of coats of Deft lacquer, above right.

touch-up each end with a little sandpaper.

Use a small drill bit, about $^{1}/_{16}$-in. diameter, to drill a pilot hole in the center of the top hat with a Dremel tool, flex-shaft or pin-vice to hold the drill bit. I use #217-$^{1}/_{2}$ screw eyes, available from many craft suppliers and hardware stores. If you don't predrill pilot holes, the eyes probably will twist off the slender screws.

Ready to Finish

I use puff paint for the finishing touches. This is a thick, polymer paint that is three-dimensional when applied to most surfaces. It is available from most fabric and craft supply outlets. The eyes and buttons are done in black and the nose is orange. You can add a little extra orange paint to pull the nose up into a carrot shape.

I use a fine tip Sharpie pen to make dots for the mouth. You can also use ribbon to create a scarf around the snowman's neck. If you have plenty of time, you could insert small twigs into the body to create arms

Once all the details are in place and dry, I spray on a coat or two of clear lacquer for a final finish. These ornaments make great gifts or even decorations on presents.

Make lots of them and give them away to friends and family. It is an excellent project to help improve your woodturning skills.

Happy Holidays.

Nick Cook is a professional turner, teacher, and writer in Marietta, GA.

Sliced Walnut Ornaments

A Different Way To Trim The Tree

JOHN LUCAS

We have a monthly competition in our turning club. Someone suggests a topic and everyone uses imagination and skill to best complete that project. One month the project was to make something from a walnut. There were some really interesting ideas, but the most interesting to me was a Christmas ornament made by Lester Wright of Crossville, TN.

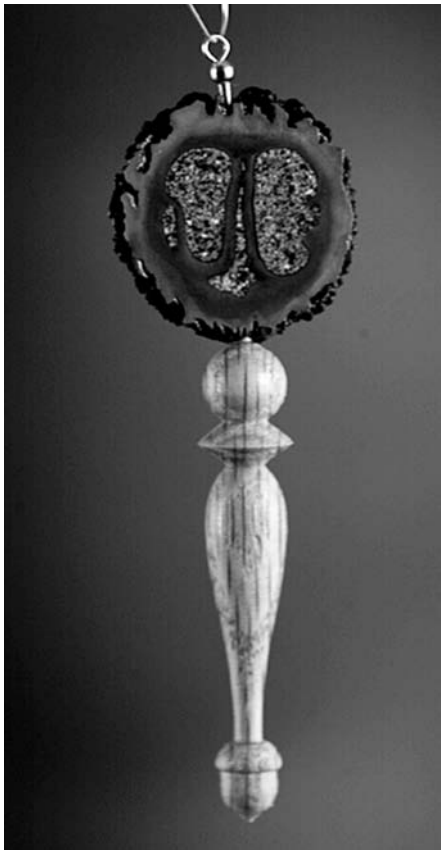
Lester cut a walnut into thin slices and added a finial. I saw real possibilities for some unique ornaments. I thought it would be interesting to put something into the voids created when the nut meat was removed from the shell sections. I tried all sorts of materials mixed into epoxy or Inlace. I've had a great time experimenting with these materials, so in this article I'd like to share what I've learned.

Caution when slicing nuts

I start by slicing the walnut. I use a bandsaw because it's safer and makes a thinner kerf than other types of saw blades. Even so, walnuts are very dangerous to hold with your fingers while slicing. I sand a flat spot on one side of the walnut and then glue it to a scrap piece of 2x4 with medium CA glue. I slice off pieces that are $^1/_4$-in.-thick.

After slicing the walnut, punch out the nut meat. Then place the shell on wax paper and fill the voids with your favorite concoction. Inlace is very easy to use and very nice looking. It comes in several pre-mixed colors or you can mix your own blend using the white, black or clear Inlace. My favorite is black Inlace with the turquoise chips or clear Inlace with Gold leaf stirred into the mix.

(Inlace is available from many woodturning dealers, including Packard Woodworks, Inc (800-683-8876) and Choice Woods (888-895-7779).



Sliced walnuts offer a variety of shapes to enhance any finial design. Photos: John Lucas

I've also used epoxy mixed with various metal powders or pastel chalk. Copier toner mixed with epoxy also looks nice, especially when mixed with larger pieces of brass, copper or aluminum.

Try not to use more epoxy than needed. It doesn't' look very good if it gets into the outer portion of the shell. Usually the opening on one side of

the walnut is larger than the opening on the other. It helps to put the side with the larger opening up. I put in just enough Inlace or epoxy mix to overfill the void slightly. I let the epoxy or Inlace cure for 24 hours. The material turns and sands better after this long curing time.

Sand with belt sander

I sand the walnut on both sides with a belt sander, which I secure on its back in a home-made stand. Be careful doing this or you won't have any fingerprints left. I sand to 600 grit. If you use a thick finish you may not have to go this far but the metal in the epoxy will look better if polished to this grit or higher.

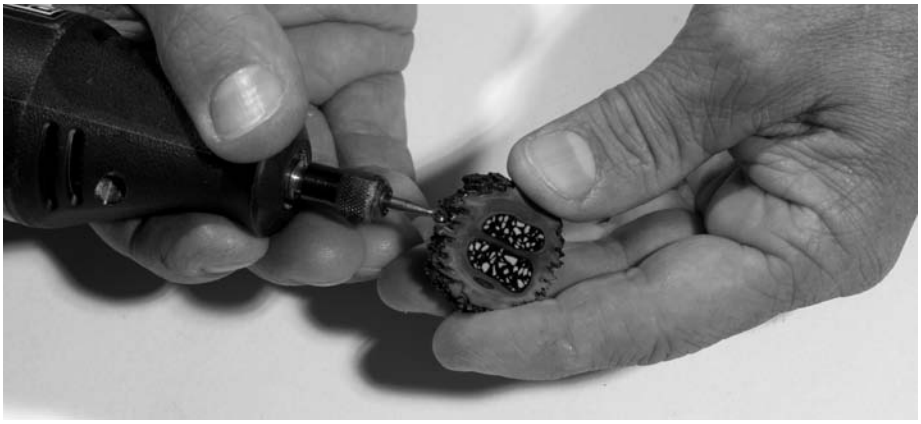
One of the hardest parts of making this ornament is drilling the holes for the hanger and for the finial. Walnut is quite hard and the outer edge will be tapered, slanted and corrugated. This combination will make a drill bit wander all over the place. I found the secret is to make a starter hole with a round ball shaped cutter in my Dremel.

I use a $^{3}/_{32}$-in. diameter ball cutter and make a little half round divot where I want to drill the holes for the finial and hanger. Then, using the divot to keep the bit from wandering, I bore out the holes with a $^{3}/_{32}$-in. diameter drill. For this operation I've used the drill press and I've drilled the holes by hand using the Dremel. I find it's easier to line up the holes by hand holding the Dremel and walnut, but, of course, this can be dangerous. You could make the walnut thicker and use a larger tenon on the finial.

Earring fobs for hangers

For the hanger I use earring fobs from my local hobby store. I cut off all but the last $^{3}/_{8}$-in. and glue it into a hole that I drill with a #69 drill bit. I drill the hole with the Dremel. The bit drills quite easily but make sure you go straight in and out. A #69 drill will

After slicing the walnuts about $^{1}/_{4}$-in. thick, the author pushes out the edible part and fills the voids with epoxies, Inlace and other materials.



To prevent the drill bit from skating over the rough surface of the nut, the author first creates a dimple with a ball cutter chucked in a Dremel tool.

After protecting the flat faces with paper, the slice can be held in a vise and secured as the bit is guided into the recess created with the ball cutter.

Cutting a tiny tenon: Lucas starts with a $^{3}/_{16}$-in. parting tool, which he rocks so it cuts on its corner.

A $^{1}/_{4}$-in. round skew could also be used to cut the tenon.

Lucas checks the accuracy of his cuts with a dial caliper set to .093-in.

break easily. It can be hard to line up the wire in a hole this small so I install the hanger and then back it out slightly. I put a drop of thin CA glue on the wire and then push it the rest of the way in.

CA glue everywhere

Be careful doing this — the thin CA glue runs everywhere. This is probably a good time to apologize to the telemarketer who called while I was trying to remove the walnut from my fingers. I'm afraid I wasn't very nice and almost glued the phone to my other hand in the process.

The finial is a really good use for the quality scraps you have lying around. I chuck a 3-to-5-in. piece in my 4-jaw chuck and turn the finial. I use my fingers to support the backside while turning to reduce chatter. I turn, sand, and finish the finial before I turn the tenon. The needed $^{3}/_{32}$-in. diameter tenon is really small and would break easily if you tried to sand the finial after turning the tenon.

Tenons with parting tool

I use a $^{3}/_{16}$-in. parting tool and rock it back and forth cutting with the corner, as shown in the photo, top left. A straight parting cut will create a lot of chatter and may break the tenon. Support the back of the finial with your finger while gently cutting with the parting tool. I use a dial caliper set to .093-in. to measure the tenon size. A $^{1}/_{4}$-in. round skew could also be used, as shown in the middle photo, at left.

Test fit the tenon before gluing. You may have to shorten it a little. Sometimes it looks better if you remove a little of the walnut edge with your Dremel so the finial fits more snugly against the walnut. That's all there is too it. I hope you enjoy making them as much as I do.

John Lucas is a photographer and turner in Cookeville, TN. He also is Tips editor for American Woodturner.

An Amazing Finish

A CA coating is hard, protective and attractive

BILL HASKELL

Here is away to finish your turned work that, believe it or not, uses a glue to achieve striking results. The glue is cyanoacrylate and it comes in various forms and brand names. The chemical abbreviation for cyanoacrylate is CA, which the glue is often called.

Most who know of and use CA glue as a quick reacting adhesive are amazed, and even find it hard to believe, that this glue can be used as a wood finish. Well, it can, and it gives a very hard and remarkably protective surface that works well in certain applications, especially on woods exhibiting extensive pattern and color variations. It also helps preserve the natural color and figure of wood when used as a base coat under spray lacquer.

More about CA

Hot Stuff is a popular brand of CA glue used by woodworkers. Sometimes, a person who has never heard of CA glue or Hot Stuff can relate to the name Super Glue or Krazy Glue. These are common household CA glue brands and there is even a version sold to repair broken fingernails.

There is a host of ways that CA glue can be used beneficially in woodturning; I always have some on hand. It's good for filling and repairing cracks, voids and knots; gluing turning blocks to scrap blocks on a faceplate for immediate use; and reinforcing the bond of bark to sap wood on natural edges, just to name a few uses.You may be even more astonished to know that CA glue is used in surgery and on battlefields to mend and adhere human flesh to stop bleeding.

Eggshell-thin walls

I started using a CA finish on California buckeye burl hollow forms. Buckeye burl often has bark inclusions that make vessel walls fragile, and the wood is soft. I use CA on the outside of a hollow form to give it strength while turning the inside wall thin. A demonstration given by J. Paul Fennell a number of years ago introduced me to this technique. Paul turned eggshell thin walls, and the CA gave him a measure of support that allowed him to turn down to a wall thickness of $^1/_8$-in. or thinner. I found that when additional coats were applied and the surface sanded and polished, the swirling colors and patterns of the buckeye burl were clearer and more dramatic than I had ever seen before. Yes, the high gloss seemed artificial, but the spectacular color and detail were so attractive, I found I could live with the sheen. Come to think of it, I have seen a beautiful finish with a similar appearance on expensive hardwood car dashboards.

To compare the results, I took a piece of buckeye burl and applied CA glue to one half and lacquer to the other half. Both were rubbed out and polished after a good build up. Side by side, the difference between the two types of finishes can be seen, especially the greater color fidelity and detail sharpness of the CA finish. Some will like the CA finish, others will not. It's a matter of personal preference.

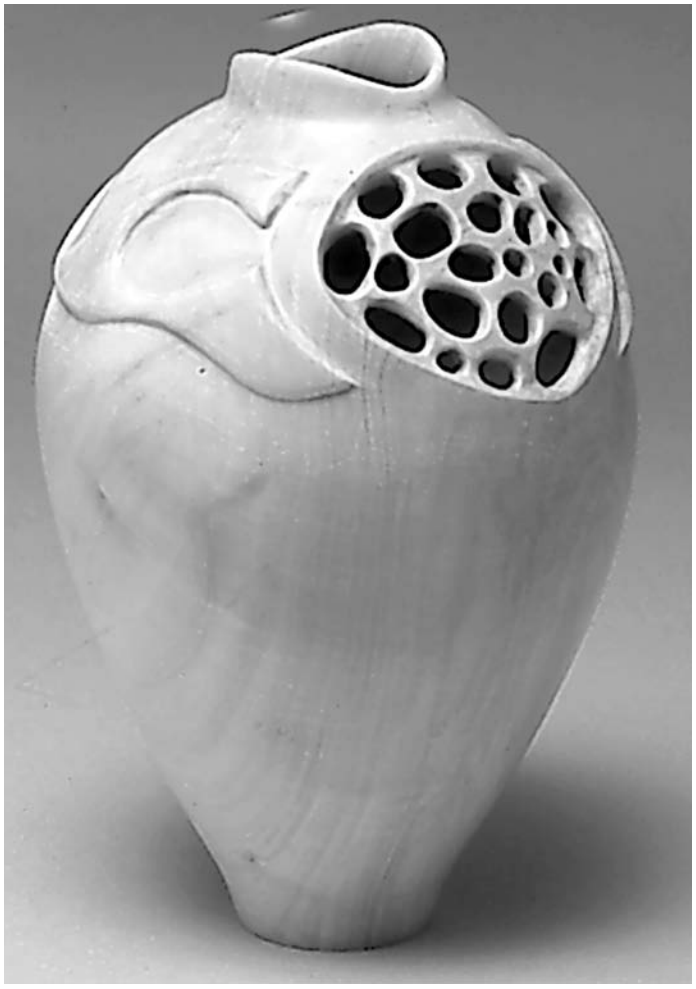
I talked to the manager of the Hot Stuff Company, and I learned that he had used CA glue as a finish. However, he was familiar with finishing flat surfaces, not round. For example, he had finished a breakfast room tabletop with CA glue and achieved a harder and more moisture resistant surface, he claimed, than could be accomplished with a bar top varnish or marine spar varnish. He also mentioned how a customer who makes custom guitars sometimes uses CA glue coating on guitar backs to create a different but desired sound. These are just a few examples of how CA glue can be used to treat the surface of wood for a reason other than gluing or repairing.

Cyanoacrylate Finishes

Advantages	Disadvantages
• Very hard finish • Gives added strength for turning thin and fragile walls, especially with voids, knots, etc. • Stabilizes punky and soft wood • Provides sharper color and figure definition than most finishes • Does not yellow over time or give a muddy appearance like oil based finishes • Needs no maintenance over the years; e.g. waxing, polishing, etc. • Does not require a lot of coats for build-up	• Can be tricky to learn how to use • Fumes from the liquid glue can be irritating • Can not be applied with brush or sprayed • When polished it has a high gloss finish that some find unappealing • Relatively expensive • More time consuming to apply than a one or two coat finish, but not more than a multiple coat rubbed out finish • Easy to sand or polish through the surface to bare wood

The chart above summarizes what the author calls obvious and not so obvious pros and cons of using CA as a finish for woodworking.

Author's Portfolio: Bill Haskell
Color photos of some of the author's pieces finished using the CA technique described here can be seen on Page XX



Clockwise from above: An 8-in. tall hollow form in silver maple with relief carved free-form design that envelopes pierced pebble mosaic carved areas. The piece was a collaborative/teaching undertaking in conjunction with Art Fitzpatrick; above right A 7-in. wide camphor vessel with color variations and fiddleback figure. The two vessel halves are offset and faced with black fish paper (a resin vulcanized paper). The aperture collar is black walnut. Right a19-in. tall madrone burl disc with carved and dimple-textured stylized web design and carved open pendulum shape. The madrone disc is mounted on a tall bullet-shaped painted vertical form. Photos: Dick Lukes.

Applying CA as a finish

The method I use to apply CA glue as a finish for turned pieces is outlined below. Recognize that this is my approach, the one that works for me. Other turners may find that variations to this method will work as well or better for them.

It's a tricky finish to apply and achieve the desired results, but it can be well worth the effort and the learning process to get there.

Procedure for turnings

I typically apply a CA finish only to the outside of a hollow vessel with a small opening. Bowl forms are a little more difficult to do on the inside, depending on the degree of enclosure, when sanding and buffing the inside finish. I will address only an outside application here; the same methods can be used to do the inside of a bowl.

Generally, I complete all turning and sanding to final grit. In my hollow vessel process, the vessel foot and neck are left oversized for strength and support. These areas are not turned to final form until all hollowing is complete.

Application:

1. With the piece mounted on the lathe, before turning the inside of a hollow vessel, apply a coat of thin viscosity CA glue to the outside surface. I formerly used the medium viscosity glue, but now I prefer the thin version and apply only a penetrating sealer coat.

2. Apply by pouring a few drops on the piece and spread with a finger covered with latex glove or finger cot. I'm told Rude Olsonik would put this finish on with his bare finger, and after a number of applications and build up, he would peel the coating off. I have not found that it peels off easily; however, I didn't let a number of coats build up either.

3. Cover several square inches with each application and repeat until the entire surface is coated. Spread on quickly and as smoothly as possible. Do not go over an area again once the glue starts to set up.

4. After the piece is fully coated, let the glue cure and set up. Depending on the moisture and chemical content in the wood and other conditions, it may take anywhere from several minutes to half an hour to set up. I try to be patient (often difficult for me) and wait for natural curing. Using a CA accelerator works to speed up the process, but it may make the cured glue more brittle and rougher.

Sanding

1. The CA glue will set up with a rough surface, so it must be sanded smooth. Briefly sand the piece with the lathe at low speed using 220- grit paper. After the high spots have been sanded, stop the lathe and sand the remaining high spots, bumps, etc. by hand with the lathe stopped. This will take a few minutes and some patience. Finish sanding briefly with 320-grit paper.

2. In the sanding process, take care to sand as little as possible while getting down to a completely smooth, dull and fully sanded surface. Good lighting will expose shiny areas or dimples, which require more sanding. Beware, too much sanding will go through the surface and expose bare wood.

3. At this point, you must decide on what kind of final finish is desired; there are two alternatives:

A. Put another coat or two of CA glue on in the same manner, or

B. Apply spray lacquer or other finishes when the piece is completely done.

I used to do the first option, applying multiple coats of CA, but now prefer applying spray lacquer to a base sealer CA coat. This is much easier and less risky than relying on CA alone. With two or three coats of CA, sanding and polishing often created a bare spot or two. These are difficult to repair without creating more bare spots.

The base CA sealer coat is very effective in preserving the figure and natural color of the wood. Then the lacquer applied over the CA gives a fine deep protective coating.

Polishing

1. After the CA finish has been sanded smooth, down to 320-or-400 grit, rub out with 00 steel wool. You're now ready to polish on a buffing wheel.

2. Buff with a soft cotton wheel no faster than 1750 RPM, using a compound like white diamond. Tripoli is too coarse. Be careful when buffing — you want to remove the scratches, but it is very easy to buff right through the CA finish to the bare wood.

3. This is not a problem if lacquer is going to be applied over the CA base coat. However, if CA is going to be the only finish, repair by wiping CA glue on the spot, sand, and polish. Making these repairs runs the risk of creating more bare wood spots, so be as careful as possible to keep from going through the CA finish.

4. After polishing, I have tried to reduce the sheen by rubbing with 0000 steel wool, pumice, or rottenstone, but have not liked the results.

Conclusion

This total procedure takes practice and patience to accomplish well. It is a good idea to practice on a turned scrap piece until you get the hang of it. After you feel comfortable with the procedure, try it on a better-turned piece. Good Luck!

This finish works best on woods with pattern and color variation (California buckeye, Paralam, burls, spalted wood, etc.). Unavoidable imperfections in the cured CA will be more visible on plain wood like maple or walnut.

No doubt, there are other applications where this finish will prove beneficial. I know of some turners who have used it for pens because of its hard finish.

This procedure may sound complicated and difficult, but once it is learned and used, it's not any more difficult than other finishes that achieve stupendous results.

Bill Haskell is a woodturner in Placentia, CA., and a member of the Glendale Woodturners Guild, an AAW chapter in the greater Los Angeles metropolitan area. He also attends meetings of the Inland Woodturners and the Orange County Woodturners.

Safety Lessons The Hard Way

Advice From The Ozark Woodturners

RON UFKES

During the August 2002 meeting of The Ozark Woodturners Association, someone commented on a bandage I had on my hand and rudely asked what had happened. After I told him, a couple of others spoke briefly of injuries that they had suffered over the years.

A few days after the meeting I received an e-mail from a newer member who said that he had learned more from the discussion of our safety lapses than he had from any of the other demonstrations we had given. With that in mind, our president, Steve Ramsey decided that the October meeting would be given over to safety lessons learned the hard way and that each member would be asked to describe injuries they had sustained or near misses from which they had gained a lesson in safety. Below are the stories as told at our October 19, 2002 meeting. They are edited and paraphrased, but are substantially as told by the member.

• Paul said that he had been told that holding a wire in a groove around a turning would make an attractive dark ring around the piece. What he had not been told was that the wire is an excellent conductor of heat and before he knew it he had also burned a dark groove in his hand. He has since learned that wooden handles should be attached to the wire. (The handles will also prevent a severe cut if the wire should be seized by the rotating piece. Never, never make loops on the end of the wire and try to hold it with your fingers. This is an excellent way to lose a finger.)

•Cliff suggested that if you are running a small piece of wood through a planer, you should always use a push stick or it will cut off your fingernail and along with it a part of your finger. Holding up a finger he said that it still hurts after the accident two years ago. He also said that you should always wear a face shield, because if you don't and a bowl explodes, it will hit you across the nose and that smarts.

• George #1 cautioned against sticking your hand in a bowl because of the danger of getting caught. He also noted that even if you use a push stick to push a piece of wood through a table saw, you should not use your left hand to guide the piece. Believe it or not, if your thumb slips, the saw will cut it, he said, as he held up his thumb. (Feather boards are a great assist here.)

• George #2 said that he was carving on a bowl when his wife called him for dinner. He was cleaning off the bottom of a bowl with a chisel and as he held it in his hand and hurried to finish it, the chisel slipped and cut into the palm of his hand. He wrapped it in a paper towel and secured it with duct tape (Which is good for almost any problem), ate dinner and then went to the emergency room and got three stitches. The doctor commented that it was a nice clean cut.

• Joe #1 also commented that if you use a wire without handles to burn a groove, "it seems like you just can't hardly get rid of it fast enough."

• Bob said that while we think of steel as being tough, a $^{3}/_{8}$-in. gouge that he was using to drill a depth hole caught and broke into several pieces which flew in different directions. He also told the members that if anything other than cutting is to be done to wood on a lathe, it is very important to remove the tool rest first, because sandpaper, a cloth or steel wool can be caught so quickly that it and fingers holding it can be pulled into the space between the work and the tool rest and could easily result in the loss or at least injury to the finger(s). He warned that the scroll chucks that we all use can very quickly catch a cloth or steel wool and pull your hand into the lathe. Moe, a pen turner, commented that steel wool will also catch on the mandrel bushings.

•Ron passed two pairs of glasses around, noting that the spots of polyurethane, when dried, cannot be removed from the plastic lenses. However, he had found that acetone will remove CA glue from some plastic lenses. While acetone is a powerful solvent and will destroy some plastics, his optometrist cleaned the glue off without damaging the lens. He warned, however, not to let the acetone run to the edge of the lens where it can get between the frame and lens. Apparently the coating on the lens prevents the damage to the plastic. Consult your optometrist before you try this, though, because all lenses may not be of this same type. His main point, though, was that it is absolutely necessary to wear some kind of eye protection at all times while doing any lathe or other machine work. Had he not been wearing glasses, the CA glue and the polyurethane finish would have gone into his eyes. We all have face shields and know that we should wear them, but truth to tell, we don't all the time. However, if you value your eyes at all, at least wear some type of eye protection. He also told the members that after removing a piece from the scroll chuck, it is a good idea to remove the T-bar or Tommie bars before turning the lathe back on. He said that it was important, as stated in the manual, that the jaws of the scroll chuck not be opened so far that the slide extends past the outer edge of the body of the chuck. They will fly out. He also noted that the large di-

ameter three-jaw chucks work well, but that the jaws protrude out so far that they are apt to strike the user's hand if he is not very careful and it will definitely take a chunk of flesh away. Several members nodded at that.

• John ran a tool off the end of the work and into the four jaw chuck. He said he lost the tool, some skin and a piece of the chuck.

• Joe #2 said that he failed to use a push stick and ran his hand into the blade of his bandsaw. His doctor in the emergency room told him that sooner or later, everyone suffers an attack of severe stupidity.

• Jim told of slipping while using a chain saw and receiving a cut across the thigh.

• Ray recently glued up three 20-in. 2 X 6's to make a housing for a lighthouse lamp. He clamped everything and trued it all up, cut the corners off the end, and carefully mounted the assembly. After carefully checking the tailstock to be sure it was tight, he turned on the lathe, but had forgotten to check the speed. (He does not say what the speed was, but it must have been very high.) The lamp came apart and became so out of balance that it "whacked" the cast-iron tool rest and broke off its base. Delta wanted $92 for a new tool rest base. "Check the speed." The consensus was that he was lucky to get off with only a cost of $92.00.

• Mike said that one hazard was forgetting to raise your face shield before spitting. More seriously he told of cutting his thumb on the bandsaw only a week earlier. A member asked Mike to describe the ceiling of his shop. He dismissed this saying that the holes were only from some explosions. (He does a lot of Manzanita.) He also admitted to having lost a few fluorescent lights.

• George #3 pointed out that when using CA glue to fill a void of any depth, the accelerator will harden the glue on the surface like a scab, but the glue underneath will remain liquid for a much longer period of time. If you begin turning too soon and turn off the surface, the uncured glue beneath will be flung out by the rotation of the piece and into your face.

• Ed said he had been pretty fortunate. He threw a blank off his lathe and the piece flew out of his shop and hit the barn about 100 feet away. Luckily he was standing out of the way. He warned the members that if they hear any unusual noise while turning, stop and check it out before continuing.

• Bob said that he was turning a vase and as a challenge to himself he made it as thin as he could. It was so pretty and so thin that he really liked it, but he wasn't sure that the rim was quite smooth enough. He checked it with his finger and cut himself on the rim — It was sharp as a knife.

He also cautioned that the C in CA glue is cyanide and that a mask should always be worn when sanding items where CA glue is exposed.

• Moe was turning a 4-in. alabaster bowl and had it sanded and ready to finish with French Polish, which he normally does with the lathe at high speed. He had forgotten that alabaster expands with heat and as he was applying the polish, the bowl exploded and flew all over the shop. Fortunately he was standing off to the side and didn't get hit. The moral of the story is that when using alabaster or talc, turn at a low RPM and keep the material cool because it will come apart.

• Steve said that he was not going to talk about the finger he lost on the table saw because everyone already has ridiculed him about that. Years ago he read an article about inlaying wire into a groove in the wood and securing it there with CA glue and then turning off the rough surface of the glue. He thought it was a good idea.

He said that what happened next was not really his fault (yeah, right Steve), because the author of the article did not say that the tool might catch the end of the wire and tear it loose. At about 450 RPM, the loose end of the wire caught him across the back of the hand several times before he could jerk it away.

• Finally Ron asked if any other members had ever punched little holes in their elbows because they had left the sharp pointed center in the tailstock while doing faceplate turning. Several hands went up.

It is always comforting to know that you are not the only one that does stupid things at times.

Devote A meeting To Safety

The Ozark Woodturners is a small club of about 38 members; 21 were present for the safety meeting and of the 18 with stories to tell, at least six sustained injuries serious enough for a trip to the emergency room. I know of two additional injuries which needed emergency treatment: a finger broken and a finger requiring eight stitches (mine). In a group of macho guys, these stories produced a lot of laughs over the stupid things we had done, but as I wrote this article, I realized that these injuries and near misses were not funny at the time. It was sobering to think of the pain suffered (especially mine) from incidents which were all preventable. I suspect other turning clubs would have similar results from such a session. I urge each club to devote one meeting to a discussion like this and see for yourselves. There is real danger of serious injuries if we don't keep our heads up and pay attention to what we are doing. - R.U.

Ron Ufkes is a turner in Lakeview, AR and secretary of the Ozark Woodturners Association.

JAPANESE TOP TURNERY

The Magic is Not In The Lathe

ALAN LACER

HOW MANY OUT THERE FEEL THAT if they just had the perfect lathe, they could produce masterpieces? Here is a turner that debunks that myth. Please read on.

Massaki Hiroi of Tokyo, Japan, comes from very a long tradition of top makers in a country where tops are considered much more than diversions for children. His grandfather, father and brother are regarded as master top makers in Japan. Also, his work is strongly rooted in the Edo (the old name for Tokyo) top and toy making tradition of approximately 350 years. He himself has been turning tops for 57 years — as a maker, teacher and international demonstrator.

First, some comments about his "lathe." If you look closely at photos on the next page, you can see that the lathe is nothing more than a fractional horsepower motor with a chuck mounted to its shaft. It runs at one speed only. The direction of rotation is achieved by spinning the shaft by hand to start the machine in the direction you desire — much like a motor with a bad capacitor. This is very handy because Japanese turners frequently change directions; reverse drive is very important to their methods of woodturning.

The toolrest (ushi) (referred to as a "horse" or "cow") is a freestanding structure that is maneuvered by the turner at will — often even during a cut.

For this style of lathe in Japanese turning, the turner is seated on a stool, usually facing the shaft of the motor. I don't really know how you could get any more basic with powered equipment and call it a woodworking machine or lathe — and it works marvelously! I would only add that this is his travelling lathe — although the lathes in shops back in Japan are quite similar in many ways.

His tools come directly from the long Japanese woodturning tradition (See *American Woodturner*, December 1994 and Fall 1999). There are right-angle hook tools for outside work (kanna-bo), a simple, flat parting tool, and an amazing curved scraper that is used for subtle shaping and finish cuts (bankake). And like virtually all turners in this tradition, his tools are user-made rather than purchased from any commercial firm.

His lathe has a single holding device that accomplishes all of his needs, as shown on the next page. In western terminology we would refer to this chuck as a cup or ring chuck. The chuck body with a deep recess and very sharp rim can hold in one of two ways: the rim can be driven directly into the work or the wood driven inside the cupped recess. He received quite a response from the crowd when we created his "drill press" by turning a round tenon from waste material held in the chuck — and then proceeded to drive a Jacobs chuck onto the tenon. Once again, this was the height of simplicity and efficiency.

A real crowd pleaser at this year's symposium in Providence, RI, Massaki Hiroi brought the best of Japanese top making to the conference. Photo: Larry Mart.

Before looking at his top making, a bit of background is helpful. In Japan tops are a rich and varied tradition. Even today you will probably find nearly a thousand variations of tops — from simple finger tops to fairly complex mechanical objects that defy our notion of a top. Unfortunately in Japan as here, tops are out of favor with the young — holding most of their attraction to adults and the many collectors of tops.

In his demonstrations Mr. Hiroi illustrated quite a variety of tops. There were mechanical tops made of several pieces that imparted an action as they spun, as shown on the last page of this article. His extreme miniatures were a real hit with both the crowd and the Saturday night auction — bringing quite a handsome

What a difference in technique! Classic Japanese turning methods: the tool rest is away from the work, cutting action is below center, work is held in a cup/ring chuck, unique hand hold for the tool and tool rest.Photo: Larry Mart.

A few more differences in Japanese turning: the turner is usually seated for this style of turning and, of course, there is no tailstock to this lathe.
Photo:Larry Mart

The tool rest is freestanding and sloped at an angle, making it easy for the turner to vary the cutting height, angle and distance from the work
. Photo: Alan Lacer

The cup/ring chuck can be used in two ways:the wood is driven into the chuck, as shown here, or the sharp edge of the chuck is driven into the end grain of a larger diameter workpiece. Photo: Alan Lacer.

amount for the Educational Opportunities Fund. He, of course, made finger tops with bright colors. One of my personal favorites was a jumping top — where a smaller top jumps out of a main body (eventually the lid, body and inner top are all spinning from a single pull of the string). Towards the end of the conference he made a humming or singing top in the shape of a watermelon.

His method of turning tops is consistent from one type to another. He begins by driving the block of wood onto the cup/ring chuck. By the way, the wood is Japanese dogwood — a true dogwood, but not as dense as the North American varieties. This wood has exceptional turning qualities, is very stable, and takes paint extremely well. Using the right-angle hook tool he forms the outside shape. Final shaping and finish cuts are made with the curved scraper — held free hand without need of the tool rest. Sanding was kept a minimum, as the tooling was superb! Every top gets some color—even the smallest miniatures. The paints are water-based paints that soak nicely into the wood but tend not to run into unpainted areas. A small amount of wax finishes off the top.

Perhaps the most intriguing top was one he had brought — an acrobatic top. This was certainly one of those moments where "you had to see it to believe it." He began by spinning the top with his palms, then placed it on a narrow thread stretched about fifteen feet away to a bench, as shown on the next page. and finally

An example of a mechanical top: the spinning action of the umbrella, left. activates the figure below to play his musical instrument The acrobatic top, above and below, was another crowd pleaser. These tops are about 5-in. in diameter with a metal stem, brightly colored and extremely well-balanced. Their unsettling feats of balance are rather mysterious. Photos by Alan Lacer.

he slowly manipulated the spinning top down the thread and onto the bench — still spinning when it reached the other side. These tops are the source of much showmanship in Japan, sometimes on the thread, other times along a sword edge, point of a slender dowel, edge of a hand fan or in the palm of ones hand. The tops are finely crafted, colorfully painted, extremely well balanced and with a metal stem rather than wood. There are certainly a number of "secrets" regarding the use of these types of tops to create such feats of balance — but often known only to the makers and practitioners of acrobatic tops.

Also of great interest was the humming top Mr. Hiroi created. A long tradition in both the East and West, the top that sings, cries, or hums has intrigued for centuries. The form of the top created by Mr. Hiroi was one of the harvest time — a watermelon top body, and a cucumber handle used for spinning. These tops are intriguing on a number of levels. First, the wood must be well seasoned and turned with a very even wall thickness (usually less than $^{3}/_{16}$-in.) if you hope to avoid a top that wobbles as it dries after hollowing out. Secondly,

turners have been doing "blind turning" to create these tops for centuries — my apologies to David Ellsworth. And lastly, the carving of the slot in the side of the hollowed top is the method to "tune" or control the sound the top will make as it spins.

What an amazing tradition of woodturning. The variety, wit, and imagination that Mr. Hiroi brought to us from Japan could fill volumes. What's also fascinating is that new variations of tops come on the scene on a regular basis — hardly a dead tradition, and one that we hope will continue.

Alan Lacer is a turner, writer and instructor living near River Falls, WI. To view other examples of tops from this tradition check out these sites: www.fsinet.or.jp/-eohashi/index-e.htm and www.sandstrum.com

SECOND THURSDAY

Central FL Woodturners Educational Program

KEN KEOUGHAN

AT THE WOODCRAFT STORE IN CASSELBERRY, a small town engulfed in the urban sprawl of Orlando, 21 people are happily turning wood on six lathes. It is Second Thursday for the Central Florida Woodturners. Of the 21, six or seven are mentoring, the rest are having problems solved, questions answered, tools sharpened.

Second Thursday began in July 1996. Tom Tabbert, VP of the Central Florida Woodturners had asked Marvin Murray, a man who has forgotten more about wood than most of us will ever know, to put together a basic course in woodturning. The first session was held that July. "There was a lot of classroom type education: safety, mounting workpieces, speed, definitions of terms. Maybe too much classroom type stuff, but you never know. The club wanted it, the store wanted it, and at Weyerhaeuser, where I spent my career, they taught me that you simply can't overdo basics and safety," Marv mused.

One of the events that triggered Second Thursday was that Chuck Young, manager of the Woodcraft store, told Bob Harkrider, an employee of Woodcraft and a member of the Central Florida Woodturners, that the "academy" (their name for the store's teaching area) would be available on the second Thursday of the month; the chapter meets there on the third Thursday of the month. Bob, who coordinates between the store and the club, helped the turners jump on this new opportunity.

However, Marvin was a little cautious. "I thought we should take advantage of the opportunity on alternate months," he says. "I had no idea how many people would show up, to teach or to learn; what if any type of continuity would evolve; how the subject matter would be received.

Marvin Murray demonstrating how to shape a foot with reverse turning. Photos: Ken Keoughan

I just felt that we shouldn't push it so hard that we would burn people out. We have members driving up to 50 miles one-way to get to the Woodcraft store."

Attendance at the first meeting was pretty good, 18 people out of 55 members. Then it slumped a bit, but after about six months it began to pick up. "Word was getting out," Murray says." "Besides, some of our participants were developing into bona fide turners. They wanted to learn more, to keep on progressing. Now some of the first beginners we had are teaching the beginners. And a lot of our former beginners are approaching and, in fact moving through and breaking out of the intermediate level."

As Second Thursday evolved, so did the skill of the turners. Beginners, once bunny-rabbit shy, began to develop a little self-confidence. They began ask questions. Then they began to ask us 'why?' "Asking 'why?' is always a good sign," Murray says. "It means that they understand and either want to know more or have conceived of other ways to do it. Either way their mental processes are becoming more facile with the concepts of turning wood."

As these dynamics emerged, the program began to mature. "We began asking them what they wanted to do next; what was on their minds; what was troubling them. We found that with encouragement they would bring in a piece with faceted curves and we could help them smooth them out; we could show them how to chase the bevel clear across the bottom of a bowl or plate or a platter. One fellow had bought the Robert Rosand AAW tape: *Turning Projects from Scrap*. He wanted to do bird houses and Christmas ornaments. We helped him learn how to do them and the ones he is doing now are absolutely beautiful."

Tool sharpening is an ongoing problem, Murray says. "We ask everybody to bring in their own tools so we can see how they are sharpened, if they are sharpened. Wonders never cease. We have even seen big scrapers with the top flat surface scuffed up with a grinder." Asked about grinding jigs, he says "we make only limited use of grinding jigs; not because they aren't good, but because the newcomer probably doesn't have one and because they all involve at-

tachment to a bench, marking the floor — some sort of permanent or semi-permanent adjustable installation — and that just isn't practical in our setting."

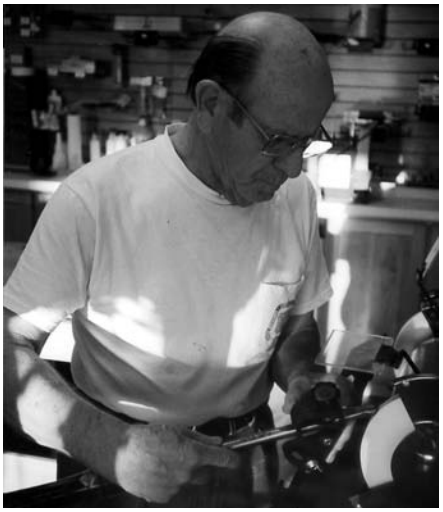
Who supplies materials? "We ask people to bring in their own chunks of wood, but we always have some around and of course there's lots of wood available for sale right in the Woodcraft store." Does the program conflict with the lessons Woodcraft offers for a fee? "Not at all,"Murray says. "We encourage our guys to get any further education that they can. In many cases, we get them interested, the store gets them started and then they come back to Second Thursday for practice and progress. We also encourage our people to explore Arrowmont, John C. Campbell, the Appalachian Center for Crafts, and various symposiums.

Plus, the chapter has had a great many guest demonstrators and hands-on sessions with Mick O' Donnell, John Jordan, David Ellsworth, Dale Nish, Chris Stott, Ray Key, Clay Foster, David Barriger and others

What is the biggest change that has taken place since this program began? Marvin replied, "Instead of a prescribed course of basic basics aimed at brand new beginners, we're working more with solving the problems and fostering the growth of turners who can get the workpiece on the lathe and shape it about the way they want it. Instead of us showing them what they need to know, they are telling us what they would like to know. It has become a real nice give-and-take. Very productive. Very satisfying."

Who gets more out of it, the teachers or the students? "We all do," he says with a big infectious grin. "We're all getting much much more than sitting on the sidelines or watching TV."

Most consistently evident problem? Tool sharpening. "But we keep chipping away at it. Henry Neidrich comes to every session with his grinder and his expertise. Henry has had 'Old World'" basic training. Henry really knows how to sharpen tools," Marv says



Henry Niedrich using Bob Peshkin's Vari-grind jig to shape a new bevel gouge.

Are there any other keys to the success of this program? Marv smiles and says, "Two subtleties help a lot. First Bob Harkrider, his coordination with the store, presence at the sessions, and his constructive help are invaluable. Second, after I get the people signed up at the regular meeting, to come to Second Thursday, I follow them up with a reminder call."

In the ongoing evolution of Second Thursday, Marvin Murray and his proteges agree: "We'd like to go out in teams of two or three, go right to a person's house at his or her convenience and work with that person with his own tools in his own shop. Take Central Florida Woodturners education on the road."

At one Second Thursday meeting, I circulated among the participants and asked them what they're getting out of the sessions. Among the answers are the following quotes:

Michael Thilmony: "I got serious about turning about a year ago. I've been a cabinetmaker for 25 years, but here I get new perspectives, basics on turning wood."

Hank Malenofski: "I wanted to know how I caught the gouge on the edge of my bowl. I also wanted to find out how to put a foot on a bowl. The grinds on a tool are a mystery too."

Ken Platt: "I learn a little something at each of these sessions. If I'm working on a piece and have a problem with it, they show me how to solve the problem. We learn techniques, ways of doing things, even some design ideas."

Freida Platt: "The thing we get most here is real strong encouragement. I wouldn't have made my goblets if I hadn't come here and learned how to do it"

Bob Peshkin: A former industrial arts teacher, Bob says, "I wanted to consult with Henry about sharpening. In fact, I wanted to get him to sharpen some of my new tools."

Robert Chappell, a mural painter by trade was recently asked to paint a design on some unpainted furniture. "I decided that if I'm going to paint it, I would rather design it and make it myself. And coming to these sessions with the Central Florida Woodturners gets my mind ticking."

Ralph de St. Aubin, a nurse therapist, needed a few rollers made for para-spinal muscle relaxation. "Nothing works better. I'm going to a therapist's convention and I'm afraid to take the one that I have. It's my last one and I know that it will disappear."

Second Thursday is indeed a program whose time has come, one that can be undertaken by any AAW chapter.

It strikes me as a win, win, win program. The students win; the teachers win; and the Chapter wins. And that ain't bad.

Ken Keoughan is a writer and turner in Friendship, ME, and contributing editor at American Woodturner.