American Woodturner

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COLLABORATIVE WORK

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

On Turning, Demonstrating, and Teaching

At the AAW conference last June, several sincere individuals expressed concern about a few of the demonstrations. It seems they were surprised at and disappointed with how little they had learned. This led me to thinking about a difficult issue that has been banging around in my head for years: the enormous differences there are between turning, demonstrating and teaching. The distinctions have significance for all of us, whichever side of the lathe we're on, whether we've decided to go public with our skills or to attend those who have. After all, an outstanding turner may be a poor demonstrator or an ineffectual teacher—and a great teacher can be a lousy turner—all combinations are possible. But I can think of only one or two individuals who have excelled at all three pursuits.

I had a curious story told to me recently. It seems there was once an individual who worked for a particular company demonstrating their equipment at trade shows. He was billed as "The World's Greatest Turner." Now I don't know how serious he was about it, but evidently he put on a pretty good show. He would take a skew, rough a square blank, produce a free ring, bang the tailstock release with the chisel handle, catch the falling piece of wood, and toss it into the audience for inspection—all in a minute or two. Impressive is not the word! Entertaining or showy might be more appropriate. I doubt if this person ought to be regarded as a national treasure or a guru—but he apparently was a great demonstrator.

Much of this comes down to expectations. Are you witnessing a great chef prepare a meal or are you attending a cooking class—or are you looking for a good meal? It makes a difference. In the first years of my involvement with woodturning, I once traveled halfway across the country to attend a seminar by a nationally known figure. The room was crowded, I was toward the back. The individual turned for about an hour and remarked, "That's what I do," and proceeded to pack up. I learned almost nothing! This was my mistake. I had confused a true demonstration with a lesson.

Okay, some learning can occur during a demonstration, but not to the degree you'd expect from a structured educational situation. And it's often edifying to watch a great chef prepare a meal, though you wouldn't expect to be able to master his techniques as a result.

The differences between turning, demonstrating, and teaching have most to do with their purpose or intent. Teaching's purpose is to engender learning, to evoke insight or to help expand abilities. Demonstrating aims to exhibit a tool, technique, style, or the like—and often to impress, captivate, or entertain. And, of course, turning produces work (and sometimes even income). It should be evident that the skills for doing each of these are fairly different from one another—which explains why transference of competence between the three areas is not a given.

There are a number of implications, depending on your perspective. If you're a participant at an event, you need to identify your needs. Do you want to learn how to use the skew, or do you want to see how a well-known turner incorporates chainsawing into his or her sculptural pieces? It makes a big difference. If you're not looking for an education, you might enjoy a good demonstration—even by the "World's Greatest Turner."

If you're a turner interested in sharing your methods or helping others, you will need additional skills, especially in the area of communicating. To demonstrate, you may need to work up a routine—not to cheapen what you do but to meet the needs of your audience. You'll have to be clear, you'll have to be interesting, to some extent you'll have to entertain. You'll also have to accept it when clones of your pieces start appearing. Your work is not now limited to the objects you produce but includes the act of turning itself. You have not only customers but audiences. And they're watching you reveal your schtick. So don't be surprised when they pick it up.

If you're a turner intent on teaching, you ought to be focused on your students. What encourages or discourages learning? How do you organize and deliver content effectively? How do you assess your students' needs, measure their progress, add to their understandings and abilities?

There are implications for our organization, too. When we choose "demonstrators" for conferences, we should consider qualifications other than those that identify excellence in turning. How well does a candidate perform before an audience? Is he or she a teacher? Or is our intent to document a bit of living history?

The important thing is to make our purpose clear—just as important as it is for each of us to understand our own needs and interests. That's the situation out of which informed, satisfying choices can be made.

—Alan Lacer, President of the American Association of Woodturners

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On the cover: *Four bowls turned initially by Michael Hosaluk and finished, whether by reshaping, carving, painting, or scoring (clockwise from lower right) by Mark Sfirri, Leon Lacoursierre, Todd Hoyer, and Rude Osolnik. For more on collaborative work, see the articles beginning on page 14. Photo: Jim Frank, 1993.*

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Call from Japan

This is to ask for an exchange of information between Japanese and American woodturners. We heard about the AAW from Mr. Alan Lacer and received some bulletins from him. We are much interested in American woodturning style because it is so different from Japanese style. We hope to know more about American woodturning and offer information on Japanese woodturning.

Our town, Eigenji-chô, is said to be the birthplace of Japanese woodturning. We are proud of our history and have been studying in cooperation with Nihon Kijishi Gakki (Japanese Woodturners Society). This society was established in 1985 to research and preserve Japanese woodturning. It now has 400 members.

Today in Japan, traditional woodturning skills are fading. We feel a sense of responsibility to preserve that tradition and are planning to establish new facilities that aim at preservation, exhibition, research, and exchange of information. We want a wider knowledge of woodturning. I would appreciate hearing from any American woodturners interested in participating in these activities.

—Kaichirô Ikeda
Eigenji Town Office
Planning Section
1303 Yamagami, Eigenji-chô
Kanzaki-gun, Shiga, Japan 527

Sadder but wiser

This is a very difficult letter to write. I have been doing weekend art and craft shows for over ten years now and have never had even the smallest piece of inventory "disappear." That is, until this September. I agreed to exhibit and sell at a one-day show here in Indianapolis. The sponsoring organization provided volunteer labor from its members to help the artists set up and tear down on Saturday evening.

During the Saturday evening tear-down process, five boxes containing six pieces of my best wood turnings were among the missing. Since we were not accosted at gun point (nor did we think this was a deliberate act), we did not feel we had been the victims of robbery. At least, that was our initial reaction. We have contacted all the artists by phone and by letter in the hopes that, in the confusion on Saturday, a well-meaning volunteer inadvertently placed our boxes in the wrong vehicle. To date, all responses have been negative. Another local turner states that he was the last person to leave the area and there were no boxes left over, nor any boxes that might be confused as trash. So, we now know that we have become one of the growing number of artists that are robbed.

I am writing in the hope that readers will benefit by becoming more aware of the possibility of being robbed. We certainly have become much more cautious and much more cynical. Another hope is that readers can be on the lookout for these pieces. Four of the missing turnings were featured in *American Woodturner*, March 1993 issue, and again in *WoodWorks*, Spring 1993. All pieces are signed on the bottom. Four of the turnings are mountain maple burl, two are of buckeye burl. A reward is being offered. I am not interested in retribution, only in the return of my work.

I would still like to think that this was a simple error, but each day that passes makes it more difficult to maintain that belief.

—Dick Gerard, Indianapolis, IN

Highlight on yellowwood

American yellowwood, *Cladrastis lutea*, now redesignated *Cladrastis kentuckea*, is a tree native to this continent and confined originally to a few limited areas in the southeastern states. Although not common in the wild, it is now sold by a number of tree nurseries and is a moderately popular ornamental. It grows to be quite large and has a number of advantages as a residential planting in this part of the country.

Several years ago an ice storm broke off some branches of our two yellowwoods and I put them on the firewood pile to season; later, when I cut them up they showed such an attractive sheen and grain that I tried turning some small goblets from them.

The wood is a bit softer and grainier than boxwood, but it cuts under the skew chisel with the same smooth, almost buttery feeling that boxwood gives. Despite its name, much of the wood is not truly yellow, but pale yellowish white. After good sanding it can be French-polished on the lathe to an ivorylike finish.

However, the older and larger pieces often have an intense yellow color, rather more pronounced than satinwood, but without the figure that satinwood often has. On the other hand, the rich yellow pieces of yellowwood often include streaks of tan, purplish-gray, or cream which can provide beautiful veneers or details in turned objects.

Yellowwood is not one of the commoner trees, but it is not rare or endangered, either. Turners would be well advised to look out for trees that are felled or trimmed.

I have also found an interesting chemical stain, which converts yellowwood to a convincing imitation

of purpleheart. Organic chemists have long known of the Runge pine splint test for pyrrole, which is alleged to give a fiery red color, accounting for the name pyrrole (Greek: "fiery").

It occurred to me that this might be an interesting chemical stain, but I never got around to trying it on pine before I tried a 0.1% alcoholic solution of pyrrole, with a few drops of 6N hydrochloric acid added just before use, on my *Cladrastis*. When painted on the sanded wood, the solution causes very little change at first, but after a minute or so a faint purple tinge begins to develop which becomes a rich purpleheart color after about a half hour. The little bit of acid in the stain seems to make no difference, and the purple color has shown no tendency to change or fade, at least during the few months that I have observed it.

The stain is not unique to yellowwood: I got the same purple with a piece of white pine. I can only conclude that Runge's "fiery red" must be formed with some sort of European pine rather than our common American variety.

The quantities of pyrrole and hydrochloric acid involved pose no problems of toxicity. The howls about "deadly chemicals" that usually crop up in the columns of woodworking magazines whenever an article mentions something stronger than spring water are quite uncalled for.

—James B. Patrick
Professor of Chemistry, Emeritus
Staunton, VA

Where credit is due

For the September issue (page 43) I submitted a photo of a shallow broadleaf maple burl platter that in retrospect looks as though it came off the cover page of the 1992 May/June issue of *Woodturning*. Alan Stirt was understandably upset and voiced his concerns in a letter. To make matters worse, I credited Dennis Elliot as my source of inspiration only to discover later that Dennis acknowledges Alan as an influence on him. Both Dennis and Allen should have received credit. In my own defense, I can only say that there was no purposeful attempt to steal ideas from anyone. However, I do feel that Alan Stirt was correct in his concerns. In a panic, I discussed the problem briefly with David Ellsworth and he reminded me that an artist has the responsibility to be aware of the work going on within a given field and to be knowledgeable of what has gone before. That is a lesson I will not soon forget. I would like to publically apologize to Mr. Stirt for my error and carelessness.

On a more positive note, Alan Stirt and I will be working on an article for a future issue of *American Woodturner*. The topic? As you may have guessed, it will probably have a lot to do with ethics and crediting people for concepts and methods. Do you give your rights away when you teach and demonstrate? If imitation is the sincerest form of flattery, how much flattery is too much? These are all serious and complex issues that may appropriate to discuss within the AAW at this time. We hope to be contacting some of you for your input, so please be thinking about the issues.

—Robert Rosand, Bloomsburg, PA

Alan Stirt, 1990: "Ceremonial Bowl #14," maple burl, 24 3/4" x 2 3/4".

REFLECTIONS ON JAMES PRESTINI (1908–1993)

From Jack Turley:
When I was a student in Mies Van Der Rohe's School of Architecture at the Illinois Institute of Technology in Chicago, it was a time of exciting projects, but very little was actually being built. There were exciting designs for furniture, but almost all were still on paper. There were, however, these elegant bowls being made by a mechanical engineer named James Prestini, and they became, for us, symbols of what modern architecture was going to be. Devoid of ornament or even strong figure, their simple, elegant forms with those unbelievably thin walls testified to the power of refinement. They seemed the embodiment of Mies' dictum, Less is More.

I remember traveling miles each week to see the new Prestini bowls at the one store in Chicago that handled them. Of course, a student on the GI bill couldn't even consider buying one, some of them ran to twenty five dollars.

I regarded Prestini with awe, and everytime I met him I tried to draw him out to see if I could gain some exclusive insight on the essence of art. Always, I got for my trouble, a laugh and some epigram that I puzzled over for days. Although I was unaware of it at the time, he also infected me with a lifelong interest in woodturning.

About the time I graduated, 1955, he put engineering behind him and devoted himself to Art and to teaching Design. In addition, to our astonishment, just as he achieved international recognition, he gave up woodturning because it was, for him, too restrictive. He had come, he said, to resent being dominated by circles.

By then, his work was in the great museums, some 260 pieces at least, and he had changed the face of woodturning forever. Before Prestini, it was a simple craft of thick-walled salad bowls with felt on the bottom to hide the screw holes. It was beloved of industrial arts teachers for its undemanding skills and quick results. He made it into the art form that it is today.

Jim's influence was not that he showed The True Path for others to follow; he never dreamt in his wildest dreams of what avenues woodturning would take. His influence was to show in any craft that much more is always possible and that the line between art and craft is an arbitrary one.

People like Stocksdale and Ellsworth, to name a couple, immediately expanded on what he had done, and the host of creative people now pursuing the turning of wood bowls quickly followed. I was at Provo when the AAW acknowledged their debt to him, and we spent a short time talking of the fifties and of mutual friends. As I looked over that vast room with such incredible variety of work, I was greatly moved and I said, "You started all this." He smiled cryptically, raised an eyebrow, and I felt like a student again.

James Prestini was 85 when he died at the Alta Bates Medical Center at Berkeley, CA, of heart failure. He had a world reputation as a woodturner and as a sculptor in metal. He had taught design at IIT in Chicago and at UC Berkeley. He had a major role in developing the Architecture Department's Design Laboratory. He had no survivors.

Except for every bowlturner from this time forward.

From Albert LeCoff:
When I approached James Prestini about presenting a paper for the World Turning Conference last spring, he asked me if I was sure that there would be any interest in his opinions—after all, he hadn't been a turner for over thirty years. I was at a loss for how to begin to tell him how much his participation would mean. Few of us with a love for turning can't point to his remarkable career and speak gratefully about the paths he paved for contemporary turners.

Prestini was an artist, scholar, educator, and designer, each role commanding his full attention, but none of greater importance than his love for the art of creation itself.

Prestini made his wood bowls between 1933 and 1953 during a silent period of craft woodturning. Prestini was one of only a few who was creating work with a lathe, and it wasn't until the 1940s that he received much in the way of recognition for his efforts. Even with the small amount of visibility woodworkers received, Prestini set new standards for craftsmanship and then moved on to yet another level, bridging the gap between craft and art.

Prestini was concerned with the form of his art, not the materials. While many turners love the properties of wood that make it ever-changing and adaptable to its environment, Prestini soon realized that he needed a more stable material and moved from wood to metal. Prestini's early work set standards and created a reference point for purity in turned wood bowls. His work beautifully reflected the Bauhaus design philosophy of "form follows function," a

Prestini's precisely designed "Salad Set" (1939, 22" x 6") is perhaps an example of why he moved into metalwork. Wood, with its inherent instability, is not suited to creating objects to exact specifications. The rims of the outer bowls were designed to touch each other and the center bowl, while aligning with the perimeter of the platter they rest on. (Metropolitan Museum of Art Collection, New York. Photo: Wood Turning Center Archives)

concept prevalent during his many productive years.

Prestini kept the art of turning alive in America at a time when it was pursued mainly by production craftspeople. It wasn't until much later that we learned there were others doing important work throughout the country and the world. Bob Stocksdale, Rude Osolnik, Mel Lindquist and Ed Moulthrop were some of Prestini's contemporaries also working with bowl forms.

Even as sometimes brilliant work was happening in small pockets of small communities, communication within the field did not exist as it does today. It wasn't until the mid 1970s with the advent of *Fine Woodworking* magazine and a variety of organized workshops and symposia that the field began to organize and promote itself. We've taken tremendous strides as a result of the interest spurred by Prestini and other trailblazers who shared their knowledge and encouraged others to create on the lathe.

After Prestini moved on to other techniques and media, he still shared his awareness and insights with the turning field through lectures and presentations of papers. He helped stimulate thinking within and outside of the field, appealing to turners, scholars, and historians. Today, volumes of Prestini's writings and additional writings about his work document how the process of lathe-turning and the work itself are intrinsic to each other.

As the world of turning fondly remembers and memorializes James Prestini, there are few of us who aren't affected by the results of his immense contribution to our craft. He brought to the field and the public a greater awareness of turned objects, the process by which they were created, and their meanings and inspirations. I'd like to believe that Prestini's work and word will influence craft for years to come, whenever and wherever it is presented.

From Art Carpenter:

I met James Prestini three times. The first was in 1947 when in the Museum of Modern Art in New York I came across his wood turnings, which belied the term "wooden." These almost floating three-dimensional stiffened and starched catenary curves standing on tip toe were edible, I was sure, and I ingested them, and their nourishment helped to foster and sustain my beginnings as a woodsmith 3,000 miles away in San Francisco.

The second time, a decade later, we actually met in person at a dinner Pres gave for his students here in Berkeley. I attempted to verbally genuflect before the great man, but he would have none of it and peremptorily dismissed my admiration. This didn't endear me to him.

The third meeting was last year, when Denise Rush was kind enough to chauffeur Prestini to my shop for a little outing. It's amazing how age condenses the years. We were a dozen or so years apart, which made us, at this time of life, almost peers. We got along famously and I showed him everything and he explained it all to me. And the three of us had good and interesting talk. Of course he had no memory of meeting number two and no knowledge of meeting number one. I was grateful that I finally had the opportunity to thank him for his inspiration, which thanks, this time, he accepted without demure.

Prestini for me will always be one of those weightless eggshell cones on tip toe that I can still taste.

Jack Turley coordinates the Woodworking Section of the Crafts Forum on Compuserve, where his statement was first published. Albert LeCoff is Executive Director of the Wood Turning Center in Philadelphia. Art "Espenet" Carpenter is a woodworker and mentor in Bolinas, CA.

Pioneer Mini Conference

Last October, at Coventry High School in the leaf-blazoned countryside south of Akron, Ohio, the AAW staged its first mini symposium devoted to the basics of woodturning. As the topic was sharply focused, so were the attendees: thirty-two of us with no qualms about the designation "novice." We divided into four groups each of which rotated through two 105-minute sessions with each of our four instructors. Palmer Sharpless brought his forty-odd years of teaching experience to bear on spindle-turning basics and projects. Del Stubbs concentrated on sharpening. Rus Hurt took on bowl turning. And Alan Lacer covered end-grain turning. In addition to considerable hands-on opportunities within these tutorials (only eight in a group made lathe access easy) each group had at least one hand's-on session with plenty of lathes available. Focus lectures on design, wood procurement, and finishing, as well as a closing banquet, rounded out the two-day event. But far and away, the most valuable aspect was all the hand's-on work.

Student feedback helped shape the affair. At the end of the first day we sat down to share our new understandings and our continuing concerns for the next day's workshops. At right are the kinds of tips we agreed were making this conference as useful as it was. They record just a few of the insights of this remarkably coherent affair, a venture successful enough to be precedent for future mini symposiums on other topics. The next get-together is proposed for March in San Antonio, TX, again around the topic of basic turning. For details, call Clayton Cochran, President, Alamo Woodturners, 512/655-3093. —*Rick Mastelli*

Hands-on work in an intimate setting was the hallmark of this mini symposium devoted to beginning woodturners. Participants helped one another, as at left, and instructor Palmer Sharpless, center, enjoyed a cup of coffee while a student demonstrated his new-found confidence.

Top Six Topics of Interest

- Sharpening
- The skew
- Safety
- Fast, efficient turning
- End-grain tearout
- Design fundamentals

Notes on Sharpening

- Develop a sensitivity at the grindstone that complements your sensitivity at the lathe. Sharpening skills are no different from turning skills.
- Learn sharpening by progressing from tools that require simple motions to those requiring more complex moves:
  Scrapers and skews—*straight across*
  Gouges—*rotation in place*
  Roundnose scrapers—*arcing motion*
  Ladyfinger gouges—*rotation and arc*
- Contact the grindstone with the heel of the bevel first; *listen* for the sound when the hollow finds the wheel. Test by rocking the tool.
- Maintain upward pressure on the tool to resist the wheel's rotation; lighten up on radial pressure.
- If you blue carbon steel, grind off the whole chunk, not just the surface. It hurts, but it's necessary.
- The bevel is the last surface to touch the wood. Therefore, it should be smooth, or it will rough up the wood no matter how sharp the edge.

Tips for Skew Work

- Dress the sharp corners along the length of your skew for smooth motions along the tool rest: break the corners on the long point's edge, leaving the edge flat; round over the short point's edge. And file your tool rest smooth, too.
- Drive with a dead center rather than a spur center, so dig-ins stop the wood without violence.
- Dig-ins occur from an unsupported edge: make sure the bevel is in contact before bringing the edge to cut.

Tips on Faceplate Work

- Use a 3-inch faceplate, screw on a block, and mount blanks using Hot Stuff or more elastic Pro Bond—good on wet wood up to 22 inches in diameter. No need for elaborate, expensive chucks.
- Sapwood mount gives largest possible diameter; heartwood mount gives a natural edge.
- Back up faceplate work with a tailstock for as long as possible.
- Turn green wood thin and fast, and it will warp afterwards without cracking. Or rough-turn to 1-inch thickness, seal completely with paste wax, and finish-turn after dry.

Del Stubbs begins a sharpening clinic by analyzing the tools students brought with them.

- When cutting to the right, lead with your right hand, and vice versa.
- If you can't move smoothly through an arc, you can't cut a smooth curve.
- Feedback is ever important; be mindful of the results of your actions. Shavings, sounds, your own body will tell you what's happening. Say no to white knuckles and bunched shoulders.
- Power sanding is disadvantageous: you can't see what you're doing at 1200 rpm, and the paper gets hot, causing the grit to clog and the adhesive to break down. If you use sanding discs in a drill motor, leave the lathe turned off.

Pointers for Spindle Work

- A conventional parting tool should not be used for parting off; it tears end grain. Use it in conjunction with callipers to establish reference diameters. Part off with the skew.
- For repetitive work, make a story stick, a wood strip notched to position a pencil for marking the locations of features onto spindles.
- In production, do all the work you can with one tool before changing tools. The more regular and efficient your procedures, the more consistent your work will be.

Second Life for Treaty Oak

When the Treaty Oak of Austin, TX, was deliberately poisoned in 1989, the living symbol of 500 years of history was in jeopardy. In the shade of this tree Apache, Tonkawa, and Commanche Indians conducted sacred rituals and settled disputes. With the arrival of White settlers, the tree marked the boundary between Whites and Indians; it was the legendary site of the first treaty signing between Stephen Austin and local Indians.

An angry drifter had doused the base of the tree with twenty times the amount of herbicide necessary to kill it. A neighbor noticed the leaves turning brown, unusual for a live oak, which keeps its leaves until spring. He alerted the city, and a massive rescue effort began. Earth around the roots was replaced; the tree was sprayed with spring water and injected with sugar water; a shelter was built to shade the tree. Six times the tree shed its leaves and brought forth new ones. The efforts worked; only one major limb was lost.

The city decided to do right by all the wood that had to be removed. A committee evaluated nearly fifty projects for its use, aimed at memorializing, educating, and fund raising for tree plantings. Among the twenty proposals approved was that of AAW member James Poppell of Belton, TX. He received a one-year contract to turn the wood into vessels and lidded boxes, returning thirty-five percent of the retail proceeds to the city. Poppell plans to produce some 1500 boxes and 200 larger vessels, one of which will remain on permanent exhibition.

For Poppell the most interesting and promising development has been the better understanding of woodturning that people have gained. City workers assigned to dismantle the dead wood, for instance, were instructed to lower to the ground, rather than drop and risk shattering, every sawn piece and to salvage even the smallest branches. The first day was marked by some grumbling; workers in the habit of dropping trees from cherry pickers couldn't see the value in this extra work. But Poppell brought home a 2-inch diameter branch and returned the next day with a turned box. "You could see the change in their attitude," says Poppell. "They began to bring blanks to me, excited about what I might be able to do with them....People have come to understand through this that although one chapter of the tree's life is over, a new one has begun."

Carefully dismembering an injured limb, left, and one of Poppel's boxes, above, from a 2-inch-diameter branch.

SYMPOSIUM IN GREAT BRITAIN

Nick Harty

Hans Weissflog, from Germany, turning a miniature box at the Association of Woodturners of Great Britain Seminar last August.

"ONLY IN AMERICA could work like this be done," commented one attendee at Giles Gilson's Saturday evening slide presentation. "We have no reference for it." Seminar organizers took a risk on featuring Giles' colorful and often unusual work, and it seemed to pay off, as he received a rousing ovation at the end of his presentation, as well as good attendance for each of his four rotations on decorative spray painting and design.

The fourth biennial Association of Woodturners of Great Britain Seminar was held at the respected Loughboro College of Art and Design last August, and was truly an international affair. In addition to Giles, fellow American Bonnie Klein, Irishman Liam O'Neill, and Hans Weissflog from Germany made the trip, to join Tobias Kaye, Melvyn Firmager, Ray Jones, Bill Jones, Maurice Mullins, and Dave Woodward from Great Britain to inform and inspire 161 delegates from eight countries.

AWGB President Tony Waddilove told the assembly in his opening remarks that they intended to get beyond the bowl in this seminar, and indeed Liam O'Neill was the only demonstrator working with bowls. As always, Liam was a treat to watch, passing on a great deal of useful information in his entertaining and humorous style. Bonnie Klein had them packed in at each of her rotations on turning unusual materials, threaded boxes, and production items. Melvyn Firmager ably demonstrated very thin hollow vessels, using his own somewhat unconventional gouges and special hollowing tools. Toby Kaye demonstrated involuted and bark-edge spindles that involve split turnings reglued in a different orientation and turned again.

Hans Weissflog showed the incredible skill involved in making his pierced boxes and boxes with movable rings. Hans had a small case with miniature versions of these small boxes that was nearly beyond belief. This was Han's second effort at demonstrating (the first was at the World Turning Conference last April), and he is a natural. I hope we can get him to an AAW Symposium soon.

Ray Jones demonstrated what are useful production items in Great Britain, but would be very unusual here—snooker cue racks and bowling woods for lawn bowling. These are made from lignum vitae and are quite a technical challenge, involving making an accurate sphere to a specific size, inlaying the ends, and dealing with wood movement in a large mass of wood. Ray also told some great stories and talked at some length about his concern for the decline in hand skills and industrial arts education. It sounded too familiar.

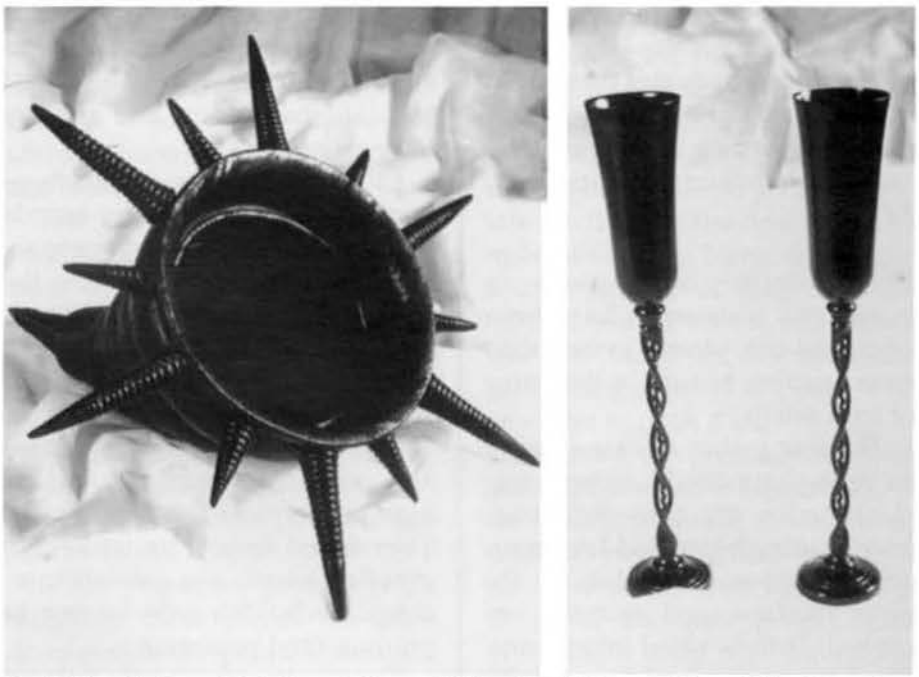
Nick Harty

Tobias Kaye beginning a demonstration on grain orientation.

Maurice Mullins showed how he makes delicate little natural-edge goblets, and also demonstrated a small fluting device similar to David Pye's fluting engine. Maurice uses this tool-post-mounted device to decorate the lids of boxes, and I'm looking forward to trying one of these.

The highlight of the demonstrations for me was Bill Jones, who will be familiar to readers of *Woodturning* magazine. Bill brought sixty years of woodturning experience to his demo, and it showed. Using mostly shop-made tools, he turned a threaded lid box in boxwood, then took a few little swipes with his hand-held chasing tool to produce a perfectly fitted lid—causing most jaws in the room to drop audibly, and prompting a wiseguy to call out to Bonnie Klein (sitting in the front row)," Hey Bonnie, do we really need your threading jig?" Bill said it probably wouldn't happen again, but with a new block and a few more swipes of the tool he had another perfect internal thread. He used it to hold the lower part of the just-turned box and finish off the bottom, musing, "Just lucky I guess." A delightful English gentleman!

Rod Bonner: Norwegian spinning wheel in ash.



Paul Clare's Burr Oak Beach Bug, 10" x 6", left, and Stuart Mortimer's hollow-twist ebony goblets, 8½ inches high.

The instant gallery showed an impressive skill level, particularly in spindle turning. There were a couple of remarkable spinning wheels as well as chairs, stools, and small furniture items. Lots of nicely made bowls and hollow pieces, many of them the bark-and-burl variety we seem to be getting away from in the States. There was a noticeable lack of the experimentation that is going on in the States, with a few exceptions: Nicholas Butler, Melvyn Firmager, and Paul Clare had work that would have fit right into any American exhibition; Chris Stott had a maple burl hollow vessel treated with different colored dyes; and Toby Kaye had a huge version of one of his sounding bowls—stringed bowls that play, producing a lovely sound.

My only criticism of the event is the lack of video equipment to enable the audience to see what the demonstrator was doing. Large mirrors were provided in all areas, and while they are adequate for the larger scale turning, demos like Bonnie Klein's or Hans Weissflog's suffer greatly; even spectators near the front cannot see the tools at work. The committee worked hard to stage a first-class event, and their efforts and experience showed. Things ran smoothly the entire three days.

What stays with me now that it's over are not differences, but similarities between American and British turners: get us together in a group, add some work, some lathes, and wood, and we'll all have a great time. Cheers!

—John Jordan, Antioch, TN

Photos this page from the juried slide collections of the AWGB Instant Gallery.

SCIENCE REPORT: BACTERIA DON'T THRIVE IN WOOD

The following press release from the University of Wisconsin–Madison reports on a new study that shows wood cutting boards, not plastic, are safer for food preparation. Such information has value to anyone who turns wood for food use.

FOR DECADES NOW, cooks in homes and restaurants have been urged to use plastic rather than wood cutting boards in the name of food safety.

The fear is that disease-causing bacteria—salmonella from raw chicken, for example—will soak into a cutting board and later contaminate other foods cut on the same surface and served uncooked, such as salad ingredients. It's become an article of faith among "experts" that plastic cutting boards are safer than wood for food preparation because, as the thinking goes, plastic is less hospitable to bacteria.

It seems reasonable, but it just ain't so, according to two scientists at the University of Wisconsin-Madison's Food Research Institute.

Dean O. Cliver and Nese O. Ak, food microbiologists in the College of Agricultural and Life Sciences, have found that in some as yet unknown way wooden cutting boards kill bacteria that survive well on plastic boards.

"This flies in the face of the prevailing wisdom," says Cliver. "It isn't what I expected. Our original objectives were to learn about bacterial contamination of wood cutting boards and to find a way to decontaminate the wood so it would be almost as safe as plastic. That's not what happened.

"Wood may be preferable in that small lapses in sanitary practices are not as dangerous on wood as on plastic," he says. "This doesn't mean you can be sloppy about safety. It means you can use a wood cutting board if that is the kind you prefer. It certainly isn't less safe than plastic and appears to be more safe."

Cliver and Ak began by contaminating wood and plastic boards with bacteria and then trying to recover those bacteria alive from the boards. They also tested boards made from seven different species of trees and four types if plastic. They incubated contaminated boards overnight at refrigerator and room temperatures and at high and typical humidity levels. They tested several bacteria—*Salmonella, Listeria,* and enterohemorrhagic *Escherichia coli*—known to produce food poisoning.

The results consistently favored the wooden boards, often by a large margin. The scientists found that three minutes after contamination 99.9 percent of the bacteria on wooden boards had died, while none of the bacteria died on plastic. Bacterial numbers actually increased on plastic cutting boards held overnight at room temperature, but the scientists could not recover any bacteria from wooden boards treated the same way.

Cliver hopes to continue the studies. The question now, he says, is why wood is so inhospitable to bacteria. He and Ak have tried unsuccessfully to recover a compound in wood that inhibits bacteria.

The first year of the study was funded by the Food Research Institute with unrestricted food industry gift funds; other funding sources are now being sought. Cliver and Ak will soon submit an article based on the research to a refereed scientific journal.

—George Gallepp, UW–Madison Ag Press Service

Q & A

I am very much a novice at turning. I recently tried some cocobolo on two projects and have had difficulty with the glue not holding. I don't know if the wood wasn't dry or if I used the wrong glue. On one project I glued 4/4 cocobolo to Honduras mahogany with Franklin Titebond and it is splitting at the glue joint. On the other project I glued two 8/4 pieces of cocobolo with Hot Stuff—same results. Help!

—David Lacure, Twim Lake, MI

Rick Mastelli, AW Editor, replies: Your problem, also encountered with some other tropical hardwoods, is oil, which occurs naturally in the wood and interferes with a good glue bond. Make sure the surfaces to be glued make tight contact and are freshly cut. Because cocobolo is such a hard, dense wood, it might help to rough the surfaces a little with sandpaper. Then wipe them free of oil with a clean cloth doused in acetone. Glue up your pieces immediately after the solvent has evaporated, before more oil has had a chance to migrate to the surface.

If this doesn't work, switch to an epoxy, preparing the wood in the same way. A G-2 epoxy, specially formulated for dense, oily, and acidic woods, is available from a number of woodworking supply houses, including Highland Hardware, 800/241-6748.

BOOK REVIEW

The American Country Woodworker: 50 Country Accents You Can Build in a Weekend by Michael Dunbar. *Rodale Press, 33 East Minor Street, Emmaus, PA 18908. Hardbound, 307 pp. 1993, $26.95*

Michael Dunbar, author of *Woodturning for Cabinetmakers, Make a Windsor Chair,* and *Restoring, Tuning & Using Classic Woodworking Tools,* has now written a book of 50 "country accents,"each of which can be made in a weekend. These are "the small, everyday pieces which the collectors and antique dealers call accents...the pieces that create depth in a decor."

Most can be handled by a beginning woodworker. They do not generally require a full workshop (but as we know, the more tools you have the easier the projects are and the more fun you have). There are a number of projects which do require a lathe, so turners will be very pleased with this project book. Some of the projects are completely turning projects, but there are often alternatives given for those who do not yet have a lathe.

The first pages discuss what is country and country finishing, and there's a short chapter on tools and techniques. Because this is country woodworking, the emphasis is not on power tools. Rather, Dunbar concentrates on the methods the country woodworkers used to make the originals from which these projects were copied. Most of the projects are reproductions of pieces which Dunbar owns or has seen—some are exact copies, some are variations, and there are a few originals.

For those who make and sell crafts, as well as those who would like to, there is a very practical chapter on selling your craft. Dunbar discusses how to decide if you really want to pursue that take-this-job-and-shove-it dream and become a full-time craftsperson. Dunbar covers how to set prices and marketing basics.

The projects are by-and-large practical and fun things you might want to make for yourself, your kids, or your grandchildren. The instructions are clear, offering techniques and tips to help you avoid mistakes and to make the process easier. Because the projects are not time-consuming, you can make one in a weekend, or devise shortcuts to do multiples.

A key to country projects is the finishing; these pieces are often decorated with painted designs. The chapter on finishing and the thirty-two pages of color photographs depicting many of the projects are very useful.

The projects are divided into five categories: Stands and Stools, Treenware, Boxes, Wall-Hung Shelves and Racks, and Kid's Stuff. Among the projects which I found interesting and want to try are the bucket bench, bed stair, Windsor stool (a complete turning project), standing quilt rack, ratchet candle stand, turned-and-carved breadboard, mortar and pestle (turning project), clothespin (turning project), potato masher (turning project), primitive coatrack, pyramid shelf, spinning top (turning project, including top, holder and string handle) and a noisemaker.

This book was fun to read and offers a number of projects that turners will be pleased to find.

—Robert J. Lenrow

Bob Lenrow is editor of A Skew Askew, *the newsletter of the Hudson Valley Woodturners, where this review first appeared.*

TURNERS' TIPS

Pen tips

Here are a few suggestions in response to your article in the September issue on turning pens:

To keep glue out of brass tubes, use medium-viscosity cyanoacrylate. First insert the tube about $1/8$ inch into the pen blank, then apply a drop or two of glue onto the tube. Rotate the tube as you push it into the blank to distribute the glue, using a dowel or pencil with an eraser to push it in.

Instead of pressing the pen parts together in a bench vise, I use a drill press for more precise control. I have mounted mine on a platform so the retracted chuck is at about shoulder height. This gives me a good view of what's going on, whether it be pen drilling or pen assembly.

If you have a small defect in a barrel, hide it under the clip when you assemble the pen. If you have an attractive feature or figure pattern, be sure not to hide it under the clip *—W.G. Kissel, Yankton, SD*

Disc disposition

Many of us use drill-mounted circular sanding discs for final sanding of bowls and plates. The trouble occurs when you take them off for later reuse, and they pile up on your work surface: The diskettes are not all marked with the grit number, and if they are, they become unreadable after some use.

I mark the grit on the back with a waterproof felt-tip pen. And to further simplify things, I put the discs in their containers upside down for quick identification.

—Michael Mogilevsky, Titusville, FL

Send tips and questions to section editor Robert Rosand, Dutch Hill Woodturning, RD1, Box 30, Bloomsburg, PA 17815.

COLLABORATIVE WORK

Its context and recent beginnings

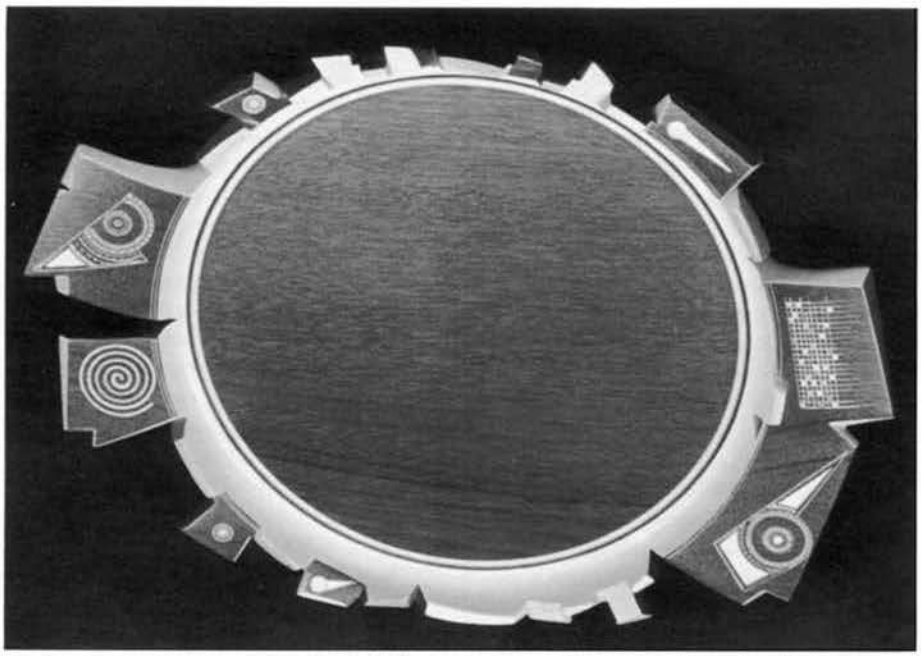
MARK SFIRRI

The first instance I know of in contemporary woodworking where collaboration among different craftspeople on the same piece was arranged, staged, and highlighted was in a show at the Workbench gallery in New York City in 1985 or 1986. The idea was inspired by the wood and metal furniture of Gary Knox Bennett; it paired woodworkers with metalworkers, none of whom had previously worked together. In some cases they were jointly designed pieces (with each executing his or her specialty), and in other cases each person made one half of the project and the other person finished it by making the other half with their design. A follow-up show at Workbench, called "Joint Ventures," in late 1987 featured pieces each made by a woodworker collaborating with some other artist or craftsperson (metalworker, ceramacist, fiber artist, or painter) of the woodworker's choosing. The public's interest in this kind of work is difficult to gauge, but many of the craftspeople involved were invigorated by it. I know I was.

A personal start

My own interest in collaborative work began while I was making furniture in 1986. I wanted to incorporate painted decoration in some of the pieces I was preparing for a show, but I had no experience as a painter and I didn't have time to experiment. I had always admired the work of painter Robert Dodge, whose colorful abstract compositions, incorporating architectural elements and repeat patterns, seemed to be a perfect match for the kinds of forms that I was working with at the time. I approached him with the idea and we decided to try it out. I designed and made the pieces and then handed them over to him for painting. The only discussion we had regarded which areas were to be painted and which not. The colors, patterns, and composition were all Dodge's, a task he describes as painting on a three-dimensional canvas. I was very pleased with the results (see photo, below left) because it added another level to my work and it gave me a chance to see my forms from another perspective. I deal with shapes as sculptural forms and, in many cases, don't think of them in terms of the finish or decoration.

Dodge lives about twenty minutes from me, so a number of concerns common to collaborative work were not issues for us. Telephone bills and transporting pieces back and forth were not expensive. Also, because of our proximity, we could work on fairly large pieces. The work ranged from small bowls to folding screens, tables, desks, and large entertainment centers (11 feet long was the largest).



Mahogany platter, 19"x15"x2", turned by Mark Sfirri and painted by Robert Dodge.

The Saskatoon connection

In August 1992, Michael Hosaluk invited Del Stubbs, Giles Gilson, Richard Raffan, and me to lead a turning symposium. This was really a magical event, largely because of the way it was put together. The first thing that Michael did was to have us all live together. This allowed us to interact for a full day before the symposium even started. We decided the structure the night before the event, one in which the participants would be involved in hands-on ac-

A glimpse of "The Mark and Mikey Show," collaborative work of Mark Sfirri and Michael Hosaluk, at the Sansar Gallery in Washington, DC, through December 18, 1993.

tivities. The symposium involved only about eighty participants, so the scale of the event made spontaneous directions and interactive participation possible.

One of the topics for the second rotation was surface ornamentation, presented by Gilson, Hosaluk, and me. Our goal was to demonstrate carving, cutting, shaping, painting, leafing, bleaching, and spraying techniques. This initially seemed a big flop because most people went to Stubbs' and Raffan's sessions on basic turning techniques. We decided to work on a bunch of turned bowls that Michael had brought. We started carving and shaping and painting pieces, spontaneously designing and making at once. Michael asked for participants to produce legs for two tables that were going to be jointly made. The only requirement was that they be a particular length with a turned tenon on the end.

As the symposium proceeded, a number of other cross-ventures took place among the presenters. Raffan sprayed some lacquer, a new experience for him. Stubbs did some multi-axis turning with me. Raffan made some handled bowls by combining spindle and bowl turning, inspired by a bowl of Stubbs'. We were only midway into the first day of the event and already it seemed there would not be enough hours to finish all that was started and evolving. The evenings' open sessions became productive work time for both the presenters and a charged group of participants whose numbers grew as the symposium progressed.

We completed a number of objects for the auction; they were snatched up. At the end of the symposium, the presenters agreed to work on more projects together. All of this seemed to be the start of something big.

Collaborative showings

Hosaluk pursued things directly. He turned 50 or so bowls and sent them off to as many people to continue work on. (See page 17.)

Upon returning from Saskatoon, I got in touch with the Creations Fine Woodworking Gallery in Yorklyn, DE, to propose a collaborative exhibition involving the five presenters from the Saskatoon event to run at the same time as the World Turning Conference in April of 1993. John Sherman, the owner of this new, large, and beautiful gallery, was reluctant to do it because he felt that it was too specialized. His preference was to expand the idea into a larger exhibit that I would curate, a show that I titled "The Manipulated Turned Object." Although I had been involved with collaboration before, I was a little unsure about how much work would actually come out of the group. Dealing with five separate careers and three countries posed some questions. Having the show expanded to twenty people offered a broader scope as well as a safety net if the

Why collaborate?

WHEN YOU CREATE SOMETHING, you're likely to regard it as precious. Handing a work over to someone else involves release and trust. You have to let go not only of the piece but of what you might do with that piece. You have to allow for the possibility that another craftsperson might do something at least as valuable as you might, or maybe not. If what your collaborator does is no different from what you would do, there would be no point in collaborating. Your collaborator must have a vision different from yours. The work should not only reflect both of you (or all—however many there are), but it should be more than the sum of its parts. The best work will come from compatible spirits and a common commitment to quality; it will be a unique blend of all who do the making. If you require all these factors in place before venturing, you will never try. You have to value surprise, too. Taking a chance is a big part of collaboration.

But there are a number of solid reasons to try collaboration: You may, as I did, recognize the need to avail yourself of someone else's expertise, whether in finishing, decorating, or shaping. Even when the hand-off is more open-ended, the perspective another person can bring to your work by working on it is valuable, beyond what can be said. By someone else reworking your forms, or by you reworking another person's forms, you can understand your own work in new ways. Realizations can take place in technical terms as well as aesthetic. One particularly valuable approach is developing variations on a theme. Each person approaches the same challenge differently. If you pass your work around while it's still in progress, greater coherency as well as diversity can result.

Collaboration is also a neat way to use up rejects. I've sent out pieces that I thought were not very good, only to have them come back much better, which is surprisingly worthwhile. From a marketing standpoint, collaboration yields uniquely appealing work. It marks a date, place, and time that two or more careers met. And collaboration develops ties with others in the same or related fields.

Practical concerns

As exciting as the experience can be, collaborating can be complicated. Telephone calls and shipping can get expensive. Calls are necessary to coordinate efforts, and with pieces going from person to person as well as to their final destination, shipping costs are multiplied. Working in smaller sizes helps keep costs down. When there is a deadline, allow enough time for shipping and for the last person to do his or her part.

Signing work is usually left till the end, and that means a whole other round of shipping. Otherwise, where to sign is a problem. A collaborator may wish to work an area that's already signed or to change the orientation of the piece, and the signature can end up in a bad spot. The signature itself can present limitations on the creativity of the next collaborator.

Photographing the work along the way is often the only way to see how the piece evolves. Without such a record, you know only what a piece looks like when you start and end your part of it. Of course photography is another step, which can interrupt making the piece. Keeping track of hours on a piece becomes tricky when you're working on several and sending them to different people. This is compounded if you don't have mutually understood labeling for the work. In relay-collaboration the responsibility of the final statement falls most heavily on the final collaborator.

I find the whole process very energizing and eye-opening. It's inspiring and pushes you in new directions. It is very easy working by yourself to follow the same tack. Collaboration leads you into unexplored areas. *–M.S.*

collaborative work did not happen

The exhibition was a big success. Collector Irv Lipton said this was one of the best turning exhibitions he had ever seen. The collaborative work included various combinations of the five collaborators, with four collaborating on one piece, entitled "Old Lance" (see page 21).

At last June's AAW Symposium, in Purchase, NY, Hosaluk, Gilson, and I presented a slide show of our collaborative work, and Michael and I gave a workshop on surface ornamentation in which participants dove right in, decorating turnings made by others. (See poem on the facing page.)

Collaborative work is going forward vigorously. At the time this journal was going to press, the Sansar Gallery in Washington, DC, opened a show of the individual and collaborative works of Michael Hosaluk and myself. The show will run into December. A picture of some of the pieces in that show appears on page 15. And next year the Sansar Gallery is planning an exhibition of fifteen to twenty turners collaborating on their work.

Mark Sfirri lives in New Hope, PA

COLLABORATING BY MAIL

Please, Mr. Postman, look and see...

MICHAEL HOSALUK

In November of last year I sent out fifty-three small wooden bowls of various sizes and descriptions to as many people around the world (see letter on page 18). I had just finished cranking out production for two craft sales (spin tops, door stops, salad bowls, etc.), so I was on a roll. Time was short for an exhibition, entitled Faces/Places, that I was to have in February, so I decided to make twenty small bowls that I would apply various types of surface design to. Production allows time for your mind to wander, and it was while turning these bowls that I decided to send some to other people for them to decorate. One thing led to another, and I was sending fifty-three.

On the mailing list were furniture makers, potters, jewelers, weavers, turners, friends, kids, a photographer, basketmaker, glass artist, and tatoo artist. I questioned myself more than once. After all, I could sell these bowls myself. But off they went to Japan, Australia, Scotland, the U.S., and within Canada. Each bowl could fit into a box 6x6x6 or 4x8x8 inches. I did several series to see how different people would approach a similar challenge.

The idea for all this was spawned at a weekend conference we had had in August 1992, where instructors and participants collaborated spontaneously, decorating bowls, making furniture, and trying new ideas. At the end of the conference, the pieces were auctioned off and raised over $5,000. The instructors then decided to have a collaborative exhibition in the near future. (See pieces pictured on pages 20–21.)

Hosaluk bid me:

relax, respond, let go!
ignore the passerby
who symmetry may satisfy.
allow your heart to modify.
why the limits, rules, constraint?
you're the maker,
don't hesitate

just paint it,
pierce it, perforate.
it's not too late
to try it—dye it.
if it splits, then tie it.
scrape it, screw it.
break it, glue it.
get your friends
to stick things through it.
chip it, carve it.
twist and turn it.
bleach it, blast it.
bend it, burn it.

who will discard limitation?
why regard this regulation?
life is precious.
your work becomes a tale,
a tale expressing art.
conceive, create,
communicate.

—Luke Mann, Waitsfield, VT

Poem by an attendee of the Hosaluk/Sfirri surface design workshop at last June's AAW symposium.

Reg Morrell's tatooed transfiguration of a Hosaluk bowl.

Now all I had to do was wait. The first package came before the end of the year. I decided not to look at any of the bowls until the exhibition set-up day. My wife, Marilyn, opened and inspected each piece, and she didn't make it easy for me with her excited "You should see *this* one!"

Of the fifty-three bowls sent out, forty-two came back in time for the exhibition, one arriving the day of the opening. Only one was returned untouched. I received a finished bowl this last August, so that leaves ten more that could arrive at anytime throughout my life.

Well, the big day arrived, and I was like a kid at Christmas, opening packages. Once the show was set up, my first observation was how insignificant the wood is. It is our ideas that count! The objects spin tales of fantasy, outline journeys to the fourth dimension, recall trips to the beach, catch fish, and send messages, both personal and political. They display a strong command of technical expertise and a lot of energy.

Once you transform a turned wood bowl with your ideas, that object displays a part of you that no one else can replicate. One of the first objects completed was by Reg Morrell, a tattoo artist who works with me off and on (photo, left). I gave him the bowl on December 23 at 8 PM. He went home, locked himself in a room, and by 10 PM the next day he brought the bowl back almost completed. He had only to borrow my daughter's hairspray to apply the final finish. What a masterpiece!

There are many stories of how things were conceived. I remember

Dear _____,

You are probably wondering why you have received a small bowl from me. In February, 1993, I will be having an exhibition entitled "Faces/Places" at the new Saskatchewan Craft Gallery in Saskatoon. Each of you is a face that has played a role in my development and success as a craftsman. Through the sharing of knowledge, your work, friendship, and good times, you have made my life richer, so in some small way I would like to honour that. I am asking you to spare a few hours, have a little fun, and apply surface design to the object I have sent you. (Paint, dye, cut, do whatever you want.) It could depict Faces/Places, but is not necessary; the connection is already there.

I have sent fifty-three small bowls of varying size and description to people from various backgrounds and media. I am hoping I will receive all fifty-three back. The reasons I have sent them at such short notice are:

a) I just got the idea a few days ago.
b) If I would have sent it earlier, I wouldn't get it back any faster.
c) I wanted to make it harder for you to say no.
d) I want to capture your first reaction and not give you too much time to think about it.

In addition to these objects, I will have ten to fifteen objects of my own, some like yours, some larger vessels, and furniture. The success of this show depends on your participation.…

Love & Peace,

A sample of the letter Hosaluk sent, along with a turned bowl, to more than fifty people.

phoning Giles Gilson, who told me how he took the bowl out of the box, held it between two fingers and thought: "Cannon," which led to "Cannon fodder," which elicited "fodder/mudder," (as in "mortar") and then the revelation: "Son of a gun!" So there was the title, and now he had to make it.

I tried sending objects to people so they couldn't do things that they normally do, leaving woodturners David Loewy and Michael Peterson, for instance, with a minimum of material. But Loewy found a way to add material back (pelican bones discovered on a camping trip) and Peterson sandblasted the already thin bowl into translucency.

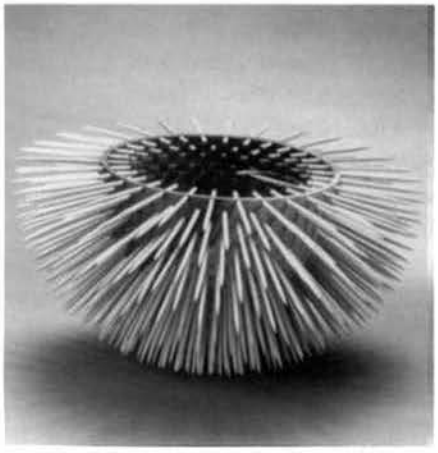
A lot of the bowls bear personal messages. Woodturner François Lambert inlaid silver dots around the rim of his bowl to say "No To Violence" in Morse code. And patternmaker Henry Black addressed issues of deforestation around the world with his piece, "Money Talks"(photo, left).

Henry Black's "Money Talks."

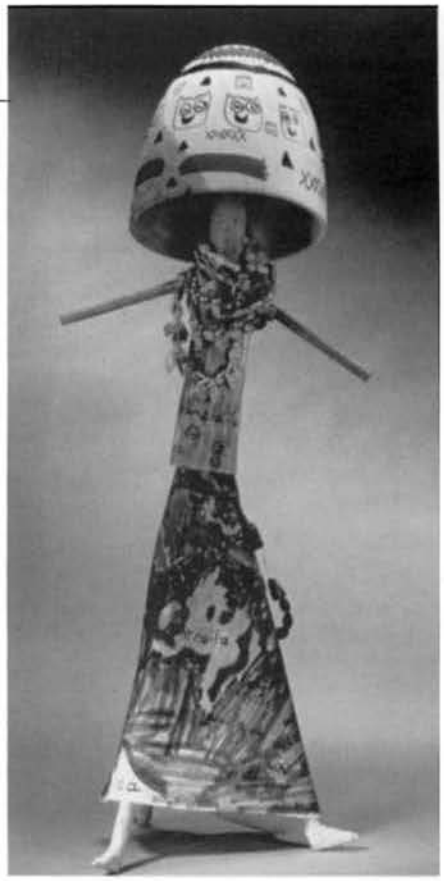
A very exciting aspect of this exhibition was to see how people from other media responded to wood. Potter Mel Bolen commented, "It's good to have a problem dropped in your lap, a great exercise, and a lot of fun." Ceramic artist Anita Roccomora wrote, "As it happens, I received a Dremel tool for Christmas. Your bowl was the perfect medium for trying my new toy." And glass artist Lee Brady called it "Tough fun. Forced to consider a shape and scale I don't usually work in, I responded with solutions new to me."

Some of the pieces took us on adventures and holidays. Del Stubbs took us to Ukraine. Paul Tiernan recalled his vacations on the beaches of northern New South Wales. My daughter, Laura, aged 10, took us to her own Australia, and my son, Jason, aged 12, into outer space. Furniture-maker Donald Lloyd McKinley took us on a trip about the world, maps and baggage tags included. (See photos on the facing page)

I got a call one day from fabric artist Pat Adams, asking how important it was that the wood show. I told him to do what he wanted



Ron David's "What To Do with Albert's Toothpicks If You Have False Teeth."



Hosaluk's collaborators on the "Faces/Places" show evoked exotic lands. Counterclockwise, from left: Del Stubbs' "Rycea, Best of Luck" depicts a view of Ukraine; Paul Tiernan's "The Deeper You Look, the More You Sea" recalls holidays on the shore in New South Wales; Donald Lloyd McKinley's "Checkered Helmet" incorporates memorabilia from around the world; and Laura Hosaluk's "Australia" stands for the land down under.

and that the wood bowl was insignificant. "Okay, bye," he said, and boiled the bowl in purple fabric dye until it split. Then he felted his own bowl around mine, resulting in the piece "Purple Haze." Fabric artist Kaija Sanelma Harris filled her bowl with dirt and suspended over it a tapestry of a tree, to look as if it were growing out of the bowl. Photographer Grant Kernan attempted to print a photograph onto the bowl's surface. The result: no photo, but an interesting patina of chemical coloration.

Some bowls displayed very subtle designs. I remember when Leon Lacoursierre brought his burl bowl to me. He had simply carved feet onto it and oiled it, saying the bowl was too beautiful to do anything else. I accepted that but asked him to sign it. He said he would do that at home. When he returned, he had carved three very simple v-grooves into the bowl from rim to base and painted them black and red (see cover photo). This small detail accentuates the wood even more.

The show was a success for the variety and personal involvement it exhibited. From tatooing to boiling, from stone to rubber bands, people pushed the techniques and materials we've associated with woodturning. Many devised support structures for their bowls, from fish hooks to a carved newt. Some oriented the bowl upside down or sideways. The show exhibited an incredible range of distinctive ideas, all cohering around the idea of collaboration.

I thank all who participated, and I extend the challenge: Send a bowl yourself to someone to do something to. Then have them send or bring it to the next AAW conference. Let's see what happens, eh?

Michael Hosaluk will conduct another woodturning symposium in August, 1994. For information, write RR#2, Saskatoon, SK S7K 3J5. Slides of the Faces/Places show are available from Grant Kernan, AK Photos, 813 29th Street W., Saskatoon, SK S7L 0N2. Cost for a 45-slide set: $68.50, including tax and shipping.

Corroborating collaborators

FROM RICHARD RAFFAN

Michael Hosaluk's wonderful collaborative turning seminar in Saskatoon last year reminded me how stimulating it is to work on projects with other people. Previously, I'd collaborated with a number of artists and craftspeople using all sorts of materials including glass, paper, enamels, stone, metals, and ceramics, as well as cabinetmakers and fellow turners, but not for some years.

Post Saskatoon I embarked on a joint venture with Mark Sfirri in Philadelphia to whom I sent bowls for carving. When Mark had finished he passed them on to Giles Gilson and Michael Hosaluk for completion. Some pieces fell by the wayside as design concepts, whilst others just failed to live up to expectations. We ended up with a few spunky little bowls wherein the keen eye might still discern my typical forms beneath the carving and paint. And we sold a few, too.

But I find that a problem with collaborating at a distance (in my case, between continents) is a sense of lack of involvement. The bowls go off and that's that. The direct interaction of ideas and personalities across a workbench or spray booth is lacking. I want to be in on the hacking and hewing and spraying and painting and final concepts. I want to be there to say to my collaborators "What about trying..."

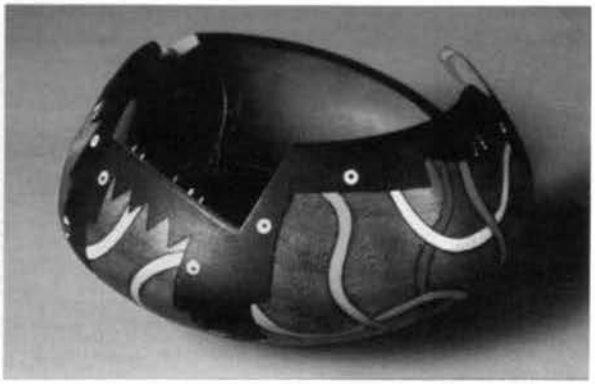
If we all had fax machines, communication might be speeded up, but we don't. And anyway, it's not quite the same as the eye contact that allows you to see the flash of an instant—and utterly truthful—reaction to some idea. That, for me, is when things begin to spark, when you have to defend a notion or even see in that flash of a millisecond in another's eye that it's best abandoned immediately. Brainstorming is not possible at a distance.

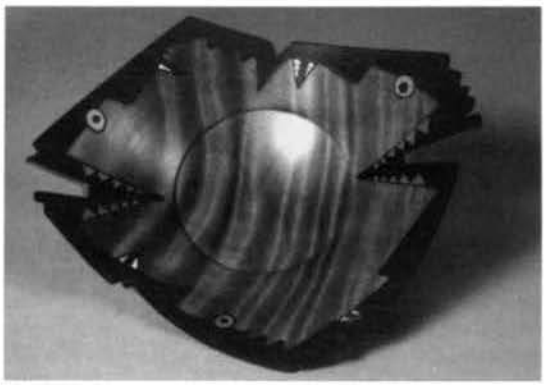
But why should I collaborate in the first place? (Bear in mind that my living still relies to some extent on my selling what I make.) Initially I hope to be stretched into trying something different (different for me, that is!) by working within parameters defined for me by a fellow maker, rather than the impositions of the material or marketplace. Concurrently I hope to stretch my collaborators, some of whom have not always seemed too keen to rise to the challenge. This might be simply a case of the my-ego-knows-best syndrome, but I suspect that most of us find the unfamiliar a bit daunting.

But here I find the germ of a scenario: that one should make three-dimensional the thoughts of another, so the initial idea is subjected to a totally different interpretation. This in turn sparks off new lines of thought in both parties who then by working together surely cannot help but come up with something totally different. Then the fun begins, because you have to assess whether your efforts are worthy of placing before the public.

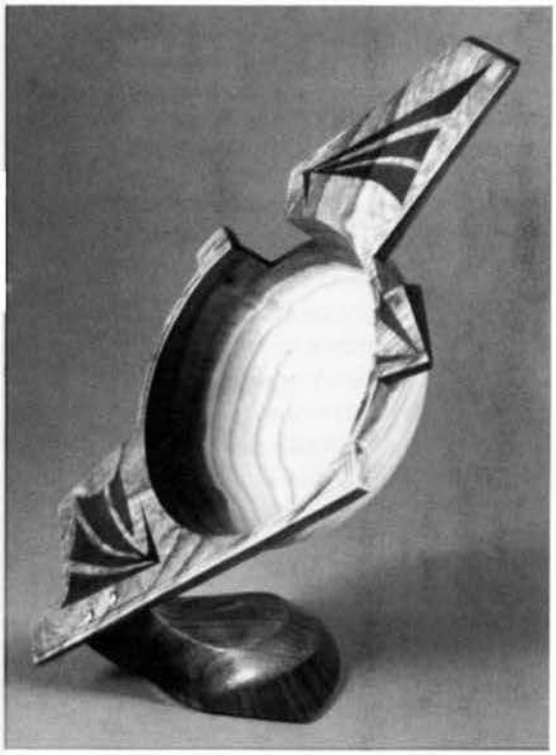
I always get a buzz from being involved in collaborative projects, regardless of whether finished work emerges or not. I usually get an insight into how fellow collaborators think and work, and pondering this inevitably adjusts my thinking and approach to the lathe. But in the final analysis I find such breaks with my normal routine something of a vacation. The break with routine allows me to view my creative efforts from a slight distance. And almost inevitably I come to the conclusion that I still find the greatest challenges lie in trying to create truly satisfying pure and simple forms. There are a staggering number of astonishingly well made turnings around these days, but practically all of them lack that extra sparkle which gives real life to a piece. I know I prefer to chase the elusive sparkle because, every now and then, I catch a glimpse of what I think I'm after.

But between times I know also that I still want the collaborative experience as well. We should organize more meetings with collaboration in mind possibly including other craft disciplines.





Two bowls: turned by Raffan, shaped by Sfirri, and painted by Hosaluk.



Bowl: turned by Hosaluk; shaped by Sfirri; painted, lacquered, and mounted on pedestal by Gilson.

FROM GILES GILSON

I have participated in collaborative works several times in the past. We all collaborate in everyday life, and many of us have engaged in it in our art work. Many artists turn away from it probably because problems seem to arise due to different points of view between those involved. If you think about it, this is just what happens in politics, committees, companies, clubs, and even relationships. Conflict seems the norm whenever there are more than two or three people involved.

But even given these "problems," I still feel strongly attracted to collaborative projects, perhaps because I have noticed that when several people are working well together toward the same goal, there is incredible energy, and often, a special bond is formed.

The experience we had in Saskatoon in '92 became a collaboration involving everyone present and many pieces. One dominant attitude was spontaneity. Another, and perhaps the most important, was that it didn't matter what someone else did to the piece. The energy was tremendous; everyone was playing and really having fun. This was a very important conference.

Michael, Del, Mark, Richard, and I had to make a decision: Should we finish the bottle of Alberta Blend, or should we plan a series of collaborative works for the winter to show next spring? We did both. The idea was that someone would start a piece and then send it to the next person and "let it go." All of the pieces worked very well. An interesting benefit from this is the added freedom in my regular work. I am feeling more open to ideas and am even more influenced by the other artists.

I have talked often about communicating through the work, mostly referring to an artist getting across to the audience. Another type of communication is between artists. In collaboration several artists also speak to the audience through the same work.

We as artists tend to be reclusive. I need to work alone much of the time for various reasons. I also need to be in touch with other people, especially peers. I look forward to seeing friends and meeting new people at symposiums and workshops, or when they visit. It re-inspires me. Finding the balance between solo and collaborative work can be powerfully beneficial.

"Old Lance": Hosaluk turned the heavy bowl, Sfirri carved and shaped it, Gilson turned it upside down and made the visor, and Stubbs added the anemometer, constellations, and bat inside.

FROM DEL STUBBS

For the first ten years that I turned wood, I worked intensely with myself. It was important to be alone. Now collaboration is important. Life to me is collaboration. I think of it sometimes the way the Navahos think of marriage. As they say, "We come together in order to share our aloneness."

REPLACING BEARINGS

"Sealed for life" doesn't mean forever

ERNIE CONOVER

An arbor press can exert tremendous, but perfectly axial, force on shaft assemblies. While older presses were mechanical, newer ones are generally hydraulic.

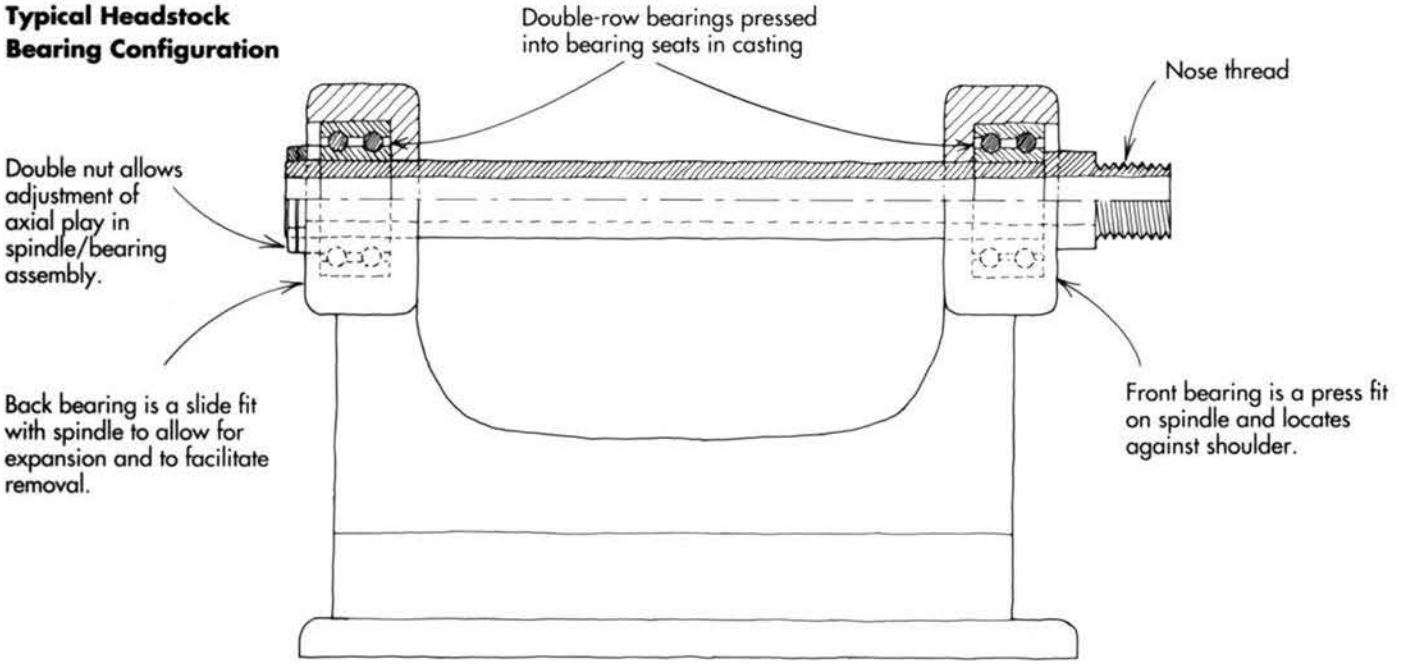
In the unlikely event that you have an old lathe with plain bearings, you can keep the lathe running smoothly by oiling the bearings on a daily basis. Most lathes today, even those found on the used market, are equipped with ball bearings that are lubricated and "sealed for life." These bearings don't require any regular maintenance, but they do need to be replaced every few years.

The sides of the ball bearing are sealed with plastic, which retains the grease packed into the bearing during assembly. Age and use take their toll on any grease, even in a sealed-for-life bearing. Eventually, the grease fails and the bearing fails shortly thereafter. I've always joked that a "sealed for life" bearing is just that: It's sealed for its life, which is however long it takes for the grease to fail. Fortunately, this is usually a good long time.

If you use your lathe on a regular basis, you probably won't notice the gradual loss of bearing performance. If your bearings are more than five years old, however, chances are they're anemic, if not spent, and it's time to think about replacing them. A good test for worn bearings is to remove tension from the belt, which leaves the headstock spindle free to turn without resistance. Spin the spindle by placing your hand on the pulley. If the spindle spins freely and the bearings have a "dry" sound and feel, the grease is dry. (If the grease is still good, the spindle will have a slightly dead feel and not want to spin freely.) The first order of business is to remove the offending bearings.

I can't offer a definite prescription for removing bearings since no two headstock designs are the same. However, understanding

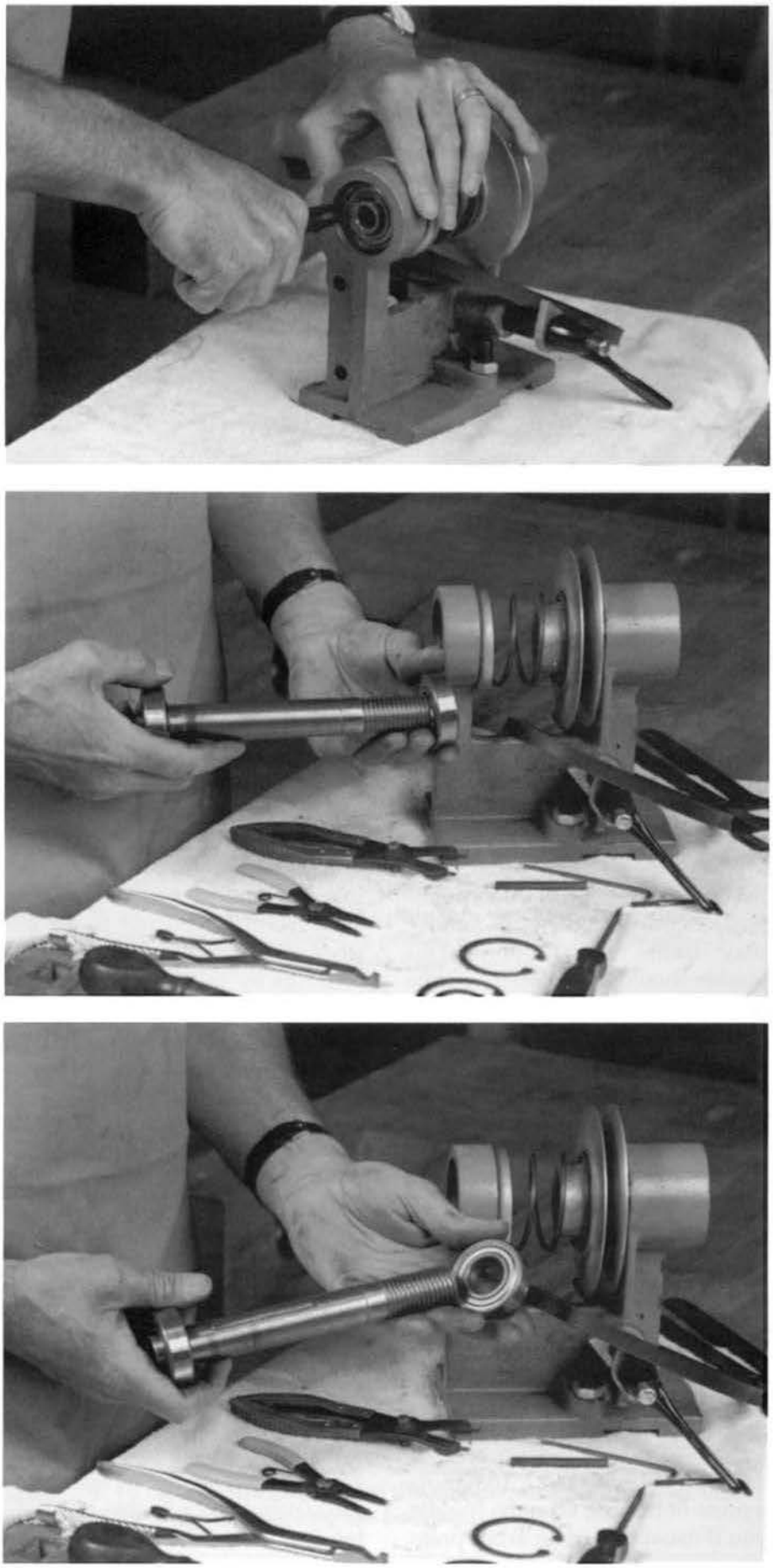
Typical Headstock Bearing Configuration



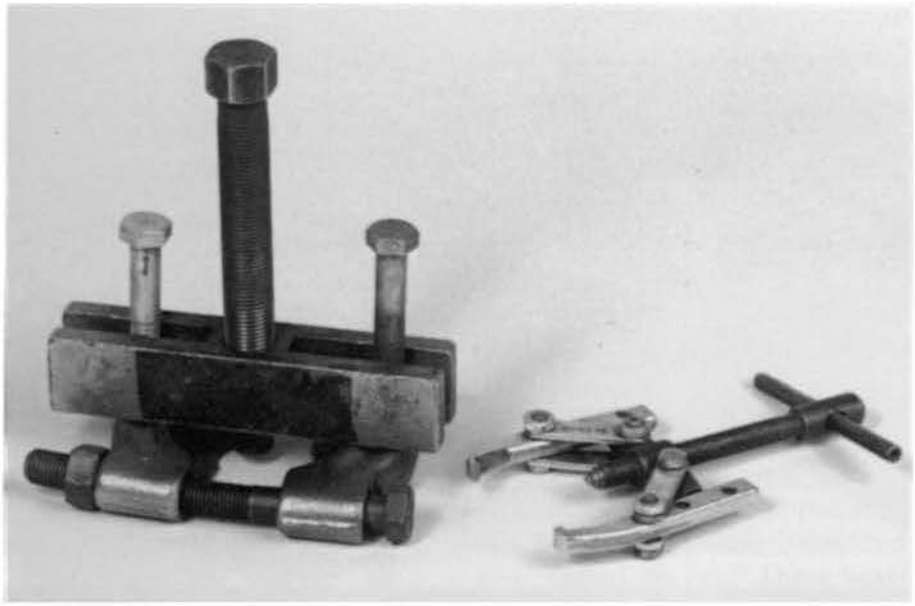
how a typical bearing assembly goes together should help you figure out any headstock. The surfaces of the bearings and the bearing seats (the areas on the spindle where the bearings ride and the pockets in the headstock that hold them) are machined to strict tolerances. There are two types of fit for the bearing seats: a sliding fit and a press fit. In a sliding fit, the two mating surfaces can slide over each other but there is no radial play. In a press fit, a slightly larger diameter is pressed into a slightly smaller mating diameter. Such assemblies require an arbor press to put them together (see the photo on the facing page).

Because the headstock spindle expands as it heats up during use, at least one of the bearing seats must be a slide fit. A common configuration is shown in the drawing on the facing page. The bearings are a press fit into the headstock casting. The front bearing is a press fit against the shoulder on the spindle. (The other side of this shoulder is the shoulder for the nose thread.) The back bearing is a slide fit with the spindle.

Most lathes have additional fittings to hold and cover the bearings. Often, metal rings screw into place with three or more screws around the spindle, and these may contain seals that further protect the bearing. A common design is to have a fine thread on the back of



Disassembly of the headstock (here the Delta 46-700) requires the removal of various fittings, including the snap ring that retains the rear bearing (shown at top). Once the headstock is disassembled, the slide-fit bearing (in this case the front bearing) can be removed. The rear bearing will be removed with an arbor press.



Bearing pullers are used to remove the bearings from the headstock spindle. The puller at right removes small bearings from shaft assemblies, while the larger model at left adjusts to a variety of situations.

the spindle (the end opposite the nose) on which there are two nuts. The first nut is run up against the inner race of the bearing and adjusted until there is no play in the assembly. The second nut is then locked against the first. Sometimes a wavy washer is interposed between the nuts and the bearing as well, its purpose being to remove play from the assembly. This washer should be replaced with the bearings because it invariably takes a set. Snap rings are used extensively today, and there is usually an array of spacers and washers involved. As you disassemble the headstock, make a careful note of the order in which all of these parts are taken off so that everything can be reassembled in perfect order.

Once you've taken the headstock apart, there are various ways to remove the bearings from the spindle. One method is to use a bearing puller (photo above). A tool of this type would be used for removing the back bearing, and possibly the front, from our typical headstock in the drawing on page 22. To remove a press-fit bearing from the spindle, you'll usually need an arbor press. Often the entire headstock must be placed in a press. You can sometimes improvise an arbor press using the bench dogs of a European-style workbench (see the sidebar on the facing page).

Although it's tempting to pound the assembly apart using soft-faced mallets and blocks of wood, I strongly urge you not to do this since this practice can ruin the bearings by putting flat spots on the balls. While it makes no difference in the disassembly, it does in the assembly. Since one is merely the reverse of the other, it's not a good habit to get into—in my opinion, hammers have no place around bearings. Once the bearings are out, test them by spinning them with your hand. If the grease is dry, the bearing will spin and even coast for a while; if it's really bad, you'll feel flat spots in the bearing.

Replacement bearings are easy to obtain. Each bearing will have a shield number on one or both sides, which should be all the information a bearing supplier will need to get you a replacement. For instance, a 2802Z would be a double-row bearing that presses into a 1⅜-in. bearing seat and accepts a ⅝-in. shaft. Bearing suppliers are listed in the Yellow Pages (Bearing Distributors and Bearings, Inc., are two of the better-known companies). It never hurts to take the bearing along with you to the bearing store, so you can check the replacement directly against the original. You'll be amazed at just how inexpensive a new set of bearings is—typically no more than $15.

Once you have the new bearings for your lathe, reassemble the spindle assembly and headstock in the reverse order that you took it apart.The correct sequence for reinstalling the bearings on the Delta 46-700 is shown on page 26.

In the rare event that you have a very old set of bearings for which replacements are no longer available, you may still be able to salvage the bearings. Such bearings are typically shielded with a metal disc on one side but not sealed. Once you have the bearings out of the headstock, soak them in kerosene or a similar solvent (in a well-ventilated area) to remove the old, dried grease and dirt. Never use compressed air on bearings since it usually ruins them. A soft brush and some elbow grease will remove the dirt just fine.

Next, heat up some grease in a metal can. Use an electric hot plate, and be most careful of fire—I prefer to do this kind of work outside. Almost any good-quality automotive grease will work, but if you're a stickler for doing it right, you can get tubes of grease specially formulated for bearings at any bearing store. Drop the bearings in the liquid grease and let them soak for a while. Once the grease cools, pull the bearings out, remove the excess, and you're back in business.

Although it's not a difficult job to replace bearings, not everyone

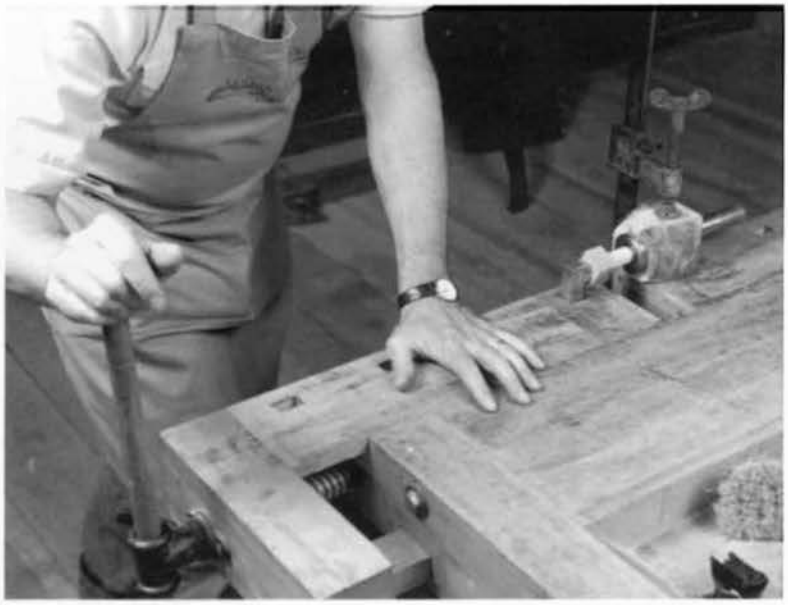
Using a workbench as an arbor press

IF YOU HAVE A EUROPEAN-STYLE WORKBENCH, it's not difficult to improvise an arbor press. Using the bench dogs in combination with two turned pieces of wood will provide the necessary force you need to remove the bearings from the spindle.

To make the support block for the spindle, mount a square block in a four-jaw chuck and drill a hole through it to a diameter slightly larger than the spindle (1⅛ in. for the spindle assembly pictured). Then scrape a pocket in the support block to accept the bearing.

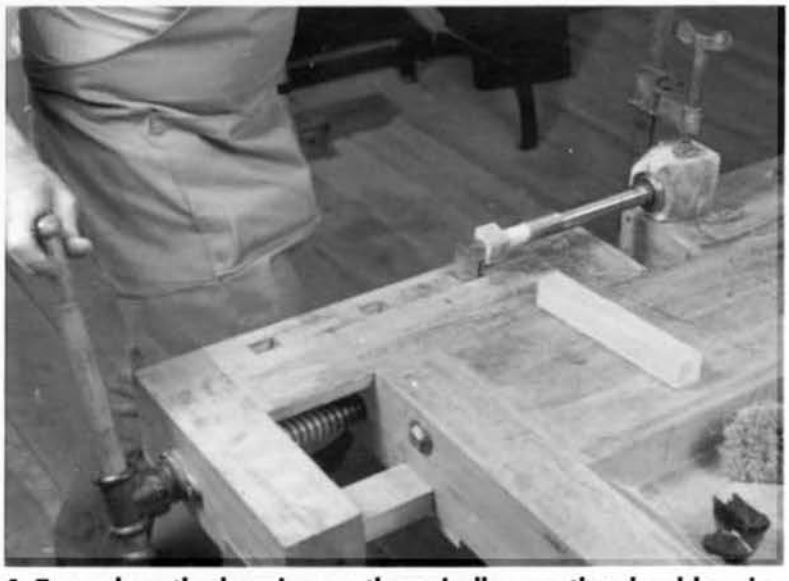
To make the pusher block, turn a hickory block to a tenon with a shoulder. The tenon diameter should be equal to the inside diameter of the shaft. Clamp the support block to the workbench, insert the tenon into the spindle, then use the shoulder vise to force the spindle out of the bearing, as shown in the photos below. *–E.C.*

1. Fit the tenon on the pusher block inside the hollow shaft.



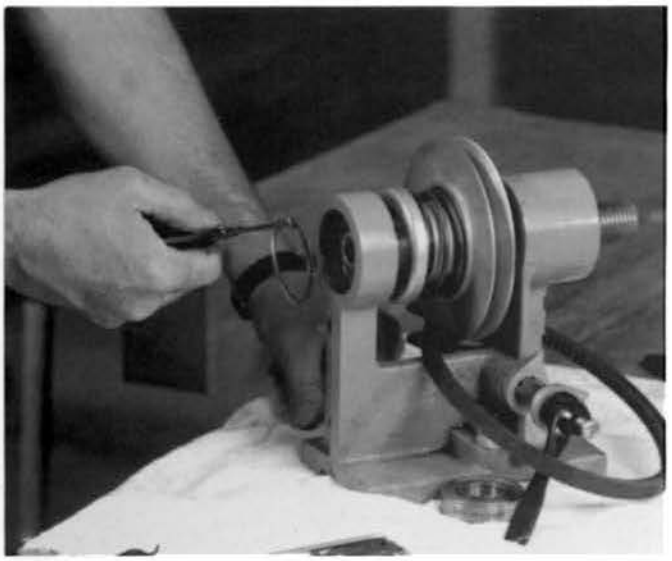
2. Insert the spindle and bearing into the support block and align the bench dog on the pusher block. Use the shoulder vise to push the spindle out of the bearing.

3. The bearing removed from the spindle.



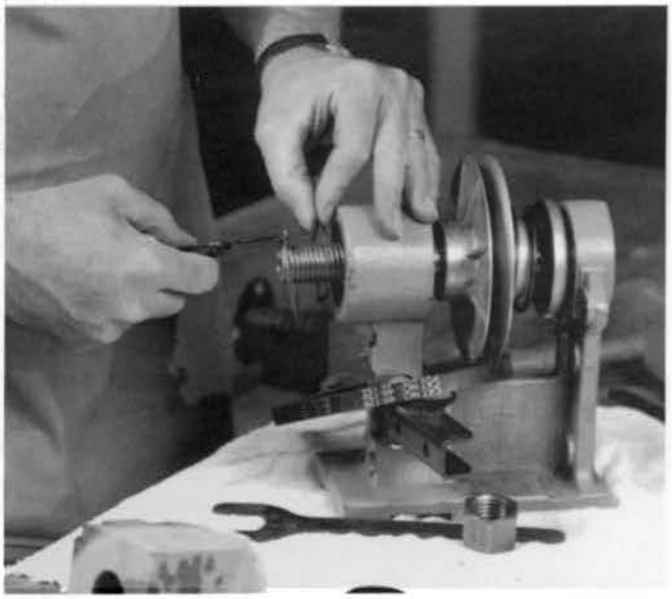
4. To replace the bearing on the spindle, use the shoulder vise to force the spindle into the bearing.

Installing new bearings

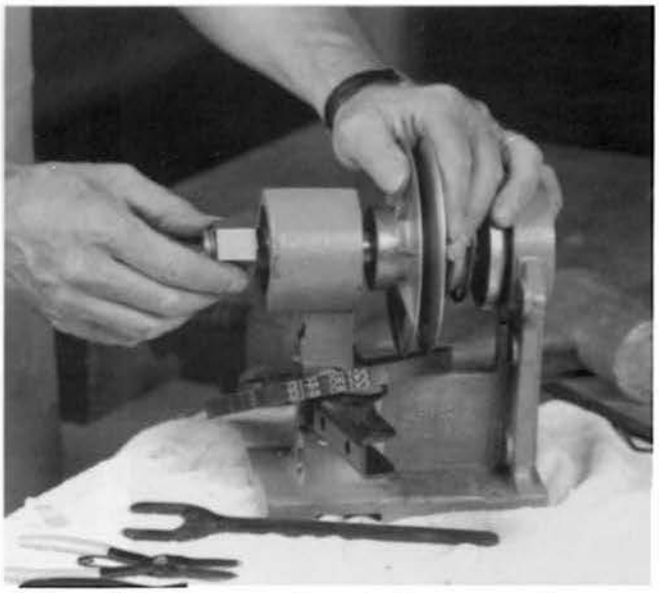


1. Put the new bearings and spindle back in the headstock casting, then replace the snap ring that retains the rear bearing.

2. Replace the front bearing, which is a slide fit with the spindle. The wavy washer goes between the snap ring and the bearing to take up play.



3. Replace the snap ring after the wavy washer.



4. Thread the nut onto the spindle nose and up against the inner bearing race. The outside face of this nut creates a shoulder for the faceplate.

has the proper tools for it. The best alternative to doing it yourself is to take the entire headstock to an automotive machine shop and have the work done for you. Automotive machine shops abound, and they're well equipped for any work involving bearing removal and replacement. On most lathes, the headstock is a separate piece and can be removed. If the headstock and bed are a one-piece casting, you'll have to take the entire machine to the shop.

Ernie Conover turns, writes, and directs workshops at his school in Parkman, OH. This article is an excerpt from his new book The Lathe Book *(The Taunton Press, Newtown, CT 800/283-7252). It's 208 pages, softcover, and costs $25.95.*

MESQUITE TURNINGS

Honoring this ornery Texas native

S. GARY ROBERTS

My grandfather, John Willis Roberts, hated mesquite. He spent his life fighting to keep it from coming back in his West Texas pastures. The young mesquite plants are covered in long toxic thorns that injure horses and cattle. He did, however, leave a small stand of mature trees near the house to be used for wooden handles and in the smoke house. I know he would be surprised to learn I like the wood and love working it.

My first remembrance of there being different kinds of woods was in my grandfather's shop. He would let me "help" him in his well-equipped farm shop where he did everything from carpentry to blacksmithing.

One day he was making a singletree, used for pulling the horse-drawn wagon, out of a mesquite limb. My chore was to help with the clamps and pick up the chips. The wood had heavy bark, a honey-colored center, and bright yellow sapwood. The chips were to be saved in a separate container and taken to the smoke house for use later.

I was curious about the use of freshly cut wood. His answer was that if you were going to make something of mesquite you would have to make it while it was green. Otherwise, the wood will be too hard to cut with a drawknife. Besides, mesquite can be worked green with less chance than other woods of warping or splitting as it dries.

I asked my grandfather once if it would make a good house. He laughed and said that it did not get big enough for house lumber but made the best singletrees, tool handles, and smoking wood "that ever was." He pointed out the color and graining, saying that any tree as bad as mesquite was out on the range must have at least a few good qualities.

Lidded container, 8½" dia., affectionately entitled "I ❤ mesquite."

Mesquite's qualities

I have since found that mesquite is a wonderful wood for turning and carving. It has exceptional lateral grain strength. Studies at Texas A&I University, by Dr. Peter Felker have indicated a wood with remarkable assets. Its volumetric shrinkage and swelling are far less than that of other fine hardwoods: 16.1% and 13.6% for red oak and pecan, respectively, but only 4.7% for mesquite. Perhaps more importantly, mesquite's radial and tangential shrinkages are identical, which means that when it does shrink or swell, it does so in the same amount in both direction. This is why it is so unlikely to crack or warp as it dries, after being worked reasonably thin. End-grain sealing seems to be effective for storing thicker pieces.

In "Understanding Mesquite Lumber," a paper by Peter Felker and Mark Sorensen, (available from the Center for Semi-Arid Forest Resources, Texas A&I University, Kingsville, TX 78363) I find this analysis:

"Mesquite's hard wood makes it ideal for furniture and flooring

applications. For example, the force required to push one half the diameter of a 7/16-inch steel ball into a piece of plain-sawn wood was 690 lb. for loblolly pine, 1,450 lb. for sugar maple, 1,060 lb. for red oak and 2,340 lb. for mesquite (Texas Forest Products lab #140, 1986). Thus mesquite has nearly twice the hardness, or resistance to wear, of oak which is the hardwood most commonly used for flooring. This hardness makes it possible to sand the wood for a natural high polish. Mesquite wood is easy to sand since the wood does not contain oils that clog up sandpaper.

"Due to the adverse conditions under which mesquite grows, the trees seldom reach heights of 35 feet, and they branch low to the ground. As a result, logs for mesquite are typically short (3 to 6 feet), small in diameter (less than 18 inches), twisted, and have a radial crack that runs the length of the log. In some hardwood tree species, highly figured grain patterns are generally restricted to the interface where the trunk and root system meet. In contrast, many of the above-ground portions of mesquite have considerable figure that is attributable to twisted trunks, low lying crooked limbs, mistletoe, branch suckers, and crotch pieces. Unfortunately, many of these highly figured pieces are also associated with knotholes and cracks. Fortunately these holes can be very attractively filled with a clear casting resin.

"The heartwood of mesquite is light brown or pink when freshly cut but eventually darkens to a dark orange-red with age. The sapwood of mesquite is yellow, not very dimensionally stable, and highly susceptible to powder post beetles that produce holes less than 1/32 of an inch in diameter. Longhorn beetles also cause serious defects to mesquite wood. These beetles generally start off just under the bark in the yellow sapwood and produce holes and galleries about 3/8 of an inch in diameter in both heartwood and sapwood. All of these insects and larvae can be killed by a kiln if the wood temperature reaches 125°F. for more that 45 minutes."

"Viney Mesquite Decanter," 24" tall, displays the thorny character of its origins.

Viney mesquite decanter

The hollow vessel pictured at left is the result of a number of procedures that came together on this interesting project. We spend most winters in the border region of the Lower Rio Grande Valley of Texas. The log that produced this project was heading for a camp fire until I rescued it from some mildly amused visitors. I use only dead wood in my work, aiming to give a new life and form to what was once a natural beauty. The procedures I used for this project are typical of how I make mesquite vessels.

I mount the turning blank on a 3-inch faceplate using 1 1/4-inch drywall screws. Make sure that the screws are in solid wood and that the blank is securely attached. To hollow the vessel, I use a procedure developed by Dale Nish of Provo, Utah, turning a plug out of the bottom of the piece and setting it aside to be inserted again as the base of the finished turning. This allows easy access to the area to be hollowed.

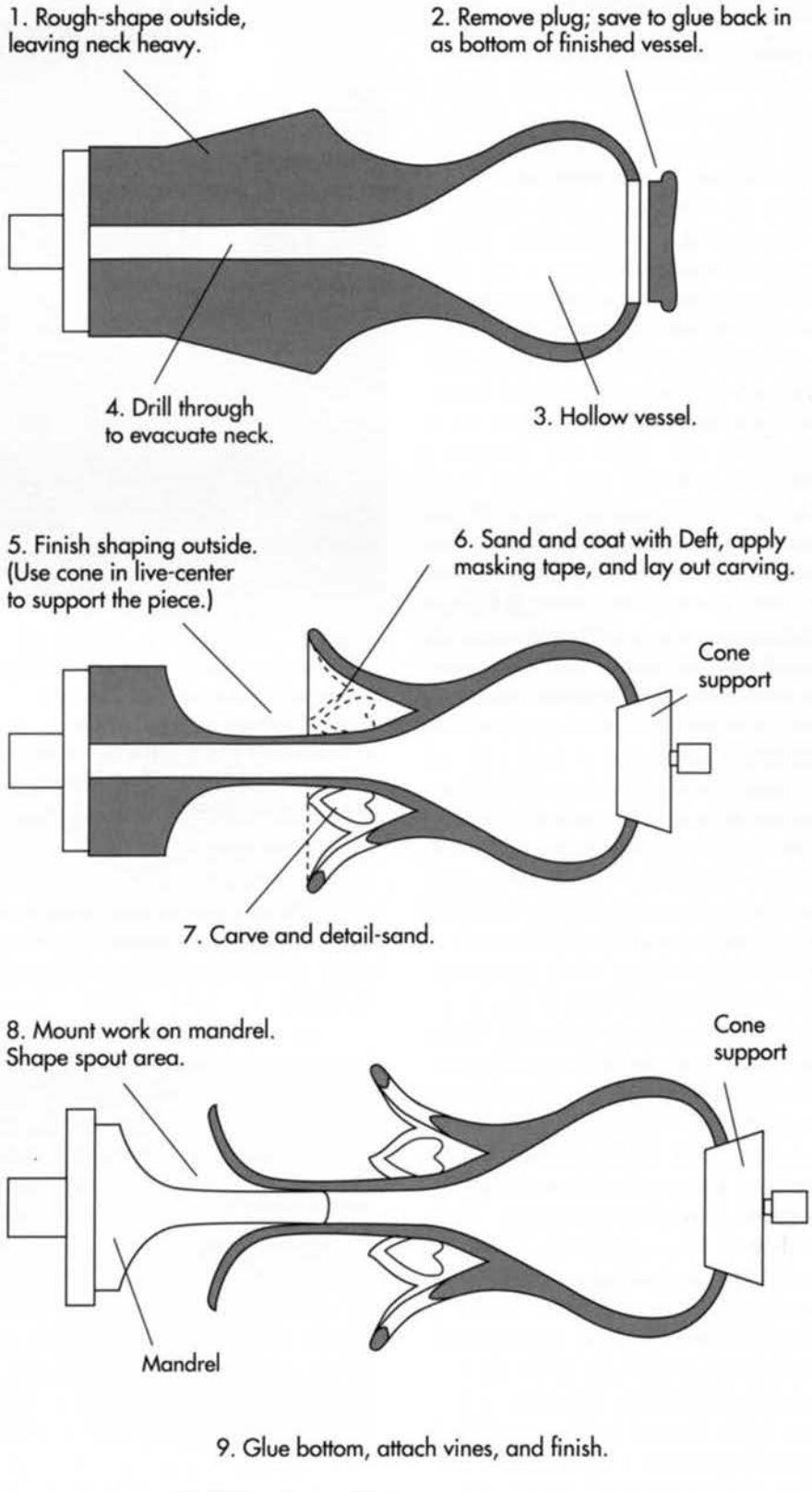
After hollowing, I drill a hole all the way to the faceplate using a Jacob's chuck mounted in the tailstock. This hole evacuates the neck

of the vessel and goes on a mandrel once the project is removed from the faceplate. I make the mandrel on a waste block screwed to the faceplate and use a cone on the live center to support the work while hollowing the spout.

But before removing the piece from the faceplate, I design and turn the areas to be carved, using a shop-made cone pressed into the hollow base to support the piece. After sanding, I apply a coat of Deft to seal the wood and keep it clean while handling during layout and carving. I cover the area to be carved with masking tape so I can draw directly on the piece and carve through the tape, still seeing the pattern. I use a shop-made index to mark off the piece so the patterns will be consistently spaced. I use a 10-inch circle of scrap wood or cardboard with the degrees marked from the center to the outer edge. In this instance, I chose eight repetitions of the heart pattern, which spaces out at 45° apart. A dowel rod inserted in a heavy block of wood set on the floor acts as a holder. A screw in the dowel points out the lines on the index wheel, and the tool rest set at dead center provides the place to mark the workpiece. This is not a complicated procedure and is very accurate—provided you don't kick the block on the floor about half way through. I hate it when I kick the block.

I carve the pattern with a shop-made carving knife that has a short, stout blade 3/4 inch long. I detail and finish the carved area with a variable speed, reversible, high-speed grinder. The power grinder I like best is the "Optima II," available at most carving suppliers for less than $300. The small handpiece provides good power and is easy to handle and control. A small split-shank mandrel that will accept

Turning a Carved Decanter



Drawings: Deborah Fillion

scraps of sandpaper makes a great flap sander to get into the tight spots.

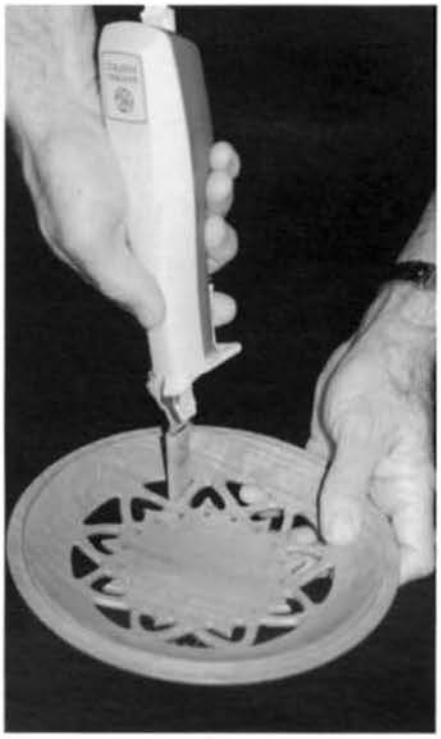
I pattern out the "vine" handles in scrap wood, then cut them out on the scroll saw. Joining these pieces requires a lot of care. A bad joint really can ruin the effect. I cut the adjoining surfaces at a 45° angle, glue them, and hand-shape the transition until the two parts flow into one another.

On this decanter I made a solid finial first and decided it would look much better carved through. The carved and turned finial complements the rest of the piece.

I ❤ mesquite

The lidded bowl on page 27 is Texas mesquite from the San Antonio area. This area produces an orange-colored mesquite. Old mesquite experts can tell which area of Texas produced the wood simply by it's color. Minerals in the soil and climate conditions affect the color and graining.

Shape and thickness will affect the visual result of carved-through patterns. Inconsistencies in wall thickness will distort the shape of the designs to be carved. Careful measuring of wall thickness with a figure-eight caliper set is essential. Also, carving around a bead or cove adds to the complexity. Simple configuration and nearly level planes work the easiest and produce the best results. In all lathe procedures, I use the tailstock to support the piece for as long as possible, increasing safety and quality. I turned the body on a faceplate, the lid, base, and finial between centers. Other than a deep-V bowl gouge, no special tools are required or used for the turning procedure. Delineating the area to be carved with a couple of skew lines frames the carving; the lines act as stop cuts during carving. Mortise-and-tenon construction throughout, although shallow, keeps the pieces centered during assembly.



A reciprocal sander that will make neat work of finishing off delicate pierced carvings can be fashioned from an old electric carving knife. Simply wrap double-stick tape onto the stub end of the reciprocating blade and add sandpaper.

I like running patterns, which repeat around the turning, though differences in diameter can dramatically affect and distort the intended concept. Planning and drawing are critical on this type of project. A pencil is the most important tool in your shop and should be the most frequently used. I use full-size drawings and apply them directly to the piece. Before removing the piece from the lathe, I use a shop-made index and check how the pattern will lay out on the piece. In case design modifications are necessary, this is the time to see if they work and how they will actually look.

Achieving a smooth, sanded finish on pierced carvings is a challenge to both patience and ingenuity. I use power anytime I can. I converted an old electric filleting knife into a power sander by adding double-stick tape to the stub end of its broken blade. I then applied sandpaper to the tape (see photo at left). It makes a fine sanding tool and can be modified by duct-taping various-sized dowels to the stub end and adding the double-stick tape to these. Cloth-backed sandpaper (from Switzerland) sticks better to the tape than the paper-backed stuff.

As with the vined decanter, I applied a coat of Deft, then masking tape to draw and carve the pattern.

I finished this project as I did the vined decanter, using liquid clear satin Deft thinned 20% with lacquer thinner. I apply a wet, dripping coat and wipe down with a lint free cloth. Between coats, instead of fine steel wool, I have found that the plastic pot scrubber pads are far better. They do not leave fine steel particles in the wood and give a better finish. After curing time, I buff the accessible areas with a muslin buffing wheel mounted in the head stock of the lathe, turning it about 2,000 rpm. Be especially careful around the carved areas. Last, I usually apply a hand-rubbed coat of paste wax. I like the feel and finish the wax gives. This also helps if the project is to be handled at a demonstration or show to keep fingerprints to a minimum.

AAW Board Member Gary Roberts lives in Austin, Texas. For information about Los Amigos Del Mesquite, write Tom Raine, Treasurer, P.O. Box 67, Manchaca, TX 78652.

No Wild Cards

The refusal of embellishment in the work of Bob Stocksdale

Stocksdale's bowl of black walnut, left, and Sekimachi's paper bowl from their show, "Marriage in Form."

ART CARPENTER

The work of Bob Stocksdale and Kay Sekimachi is presently on display through January 2, 1994, at The Palo Alto Cultural Center, a community one hour south of San Francisco. The Exhibit is called "Marriage in Form," for Bob and Kay are a couple in marriage as well as in some of the forms that the two express in their separate crafts: his, wood; hers, paper and monofilament. The exhibit is supported by a grant from the National Endowment of the Arts and will travel to other cities in the U.S. A well-illustrated catalog accompanies the show.

Bob has forty-seven pieces on exhibit dating from 1958 to 1993 in a well spot-lighted, pristine setting that shows the wood and the shell-forms at their best. Simplicity and quiet is immediately manifest on entering the show. There are no shocks, no wild cards; there is no attempt at gimmickry. Just pure form which allows the woods to show themselves off. It felt like entering a room full of Sung vessels. Stocksdale continues on the same path as James Prestini (see pages 4–5) in the knowledge that wood has so much intrinsic beauty that the only embellishment possible is the refusal of embellishment. No need to gild the lily. Subtle and sensual curves are all that is required. But that is a big ALL. And these forms express these subtleties to perfection.

There is a Stocksdalism that I have noticed over the years, and it was evident at this showing—it is the pedestal at the base of each turning. In only a half dozen objects out of the forty-seven was there no flare at the bottom. The pedestal has become a Stocksdale signature. Some of the footings are $1/4$ inch high and some are more than an inch. They help to elevate the bowl form and thereby lend it more delicacy and significance. These in general are not utilitarian pieces, so tipsiness is not a prime concern; Bob's salad bowls do sit more solidly on the earth, but this is a display of show pieces.

The exhibit reveals that Stocksdale was experimenting with bark or waney edges as early as 1960 and was well into what I call the roller-coaster edge and the "bird's-mouth" edge (ellipsoidal, with the thicker edge up, and the thinner down) by that time. The pedestal, edge wane, and the ellipsoid are the only extravagances that Bob has allowed his basic shell architecture, and these are just enough to reveal more of the material and give increased interest to individual pieces. As an aside, for those who are interested in the details, Bob tells me that most of the pieces are finished with three coats of sprayed lacquer.

The difficulty with this showing as well as others is the lack of feel and smell. I suppose that there is little that can be done about it, but the uninitiated will never know the real sense of these forms without being able to handle them. The surprise at the lightness and eggshell strength is not fully apparent to the eye. It might perhaps be possible to tie a "second" to the wall for people to touch and lift.

This show, as it goes to venues yet to be announced, will leave a trail of new imitators. No one could choose a better model.

Bowls of blackwood (left) and ebony evidence Stocksdale's "roller-coaster" and "bird's-mouth" edges. Photos: Christopher Dube.

Art Carpenter began woodworking as a bowlturner in San Francisco forty-six years ago. He now makes furniture in Bolinas, CA. This article is reprinted courtesy of Turning Points *and The Wood Turning Center.*

SHOP-MADE VACUUM CHUCK

Turning on air

MIKE DARLOW

The weight of the earth's atmosphere above us exerts a pressure that keeps us from exploding. We can use this pressure in woodturning in a process known as vacuum-chucking. In vacuum-chucking the workpiece is drawn (actually, pushed) against or into a chuck forcefully enough to require no mechanical fixing to hold it while being turned, and it can be chucked or removed in a couple of seconds.

I've used commercial systems, which involve expensive vacuum pumps and accessories, but you can achieve similar if less powerful effects using a suitable domestic vacuum cleaner, one that does not employ the sucked air for motor cooling. A typical vacuum-cleaner-based system achieves pressure reduction of about 3 pounds per square inch. (This compares with a reduction of more than 14 psi obtainable with commercial systems.) When you understand how to make the most of the contact area, this can be plenty.

If in Figure 1, space A is partially evacuated from the atmospheric pressure at sea level of 14.7 pounds per square inch down to, say, 11.7 psi, (a feat well within the capacities of most domestic vacuum cleaners) then the bowl is pressed against the chuck by a horizontal force which can be measured as follows:

$$\text{Force} = \text{Area of A} \times (14.7 - 11.7)$$

If the diameter of space A is, say, 6 inches, then the force would be 85 pounds.

The latent frictional force which the above horizontal force can generate between the workpiece and the chuck's contact surfaces is usually insufficient to hold the bowl securely during turning. To resist the tendency for the bowl to fly off during tool application, it is sensible to locate the workpiece within a recess (Figures 1 and 2) or pressed onto a spigot (Figure 3).

It is not always feasible to provide a positive workpiece location. Where the holding area is large and the leakage small, a vacuum without an enveloping fit may provide sufficient holding power to turn bowls on a spigot (Figure 4) or flat-bottomed discs on a faceplate (Figure 5). However, I would suggest some cautious testing. Note that the foam-rubber disc in Figure 4 and the butyl rubber O-rings in Figure 5 both provide an excellent seal and have high coefficients of friction. O-rings are readily obtainable from bearing suppliers.

The pivotal component of any vacuum system is the connection between the evacuator and the

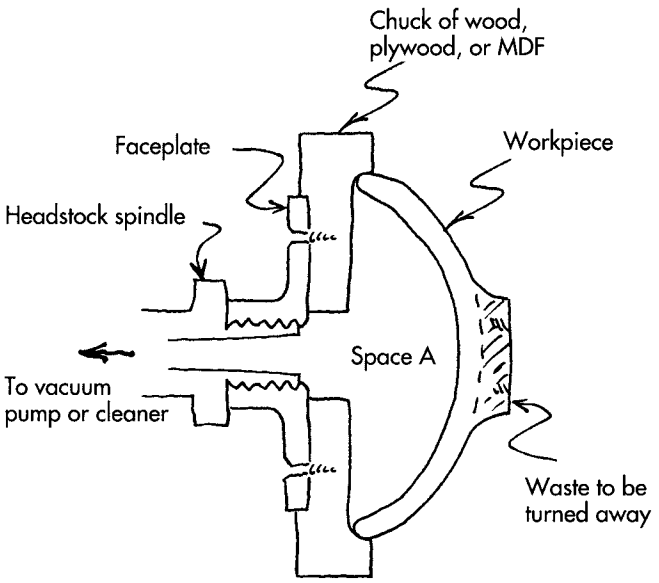


Figure 1: Holding a workpiece within a recess

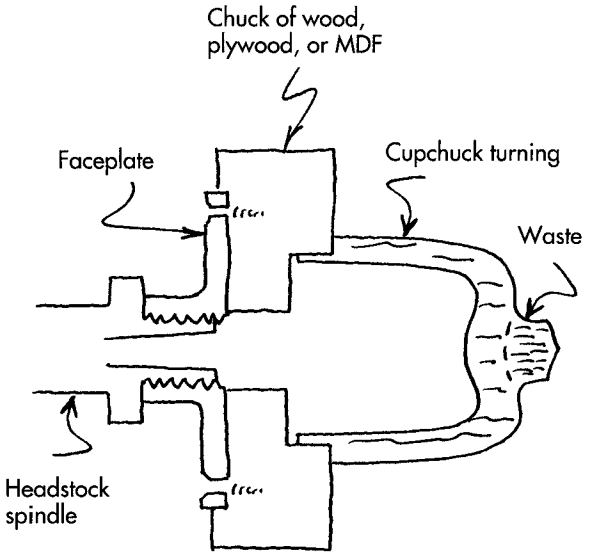


Figure 2: Holding a cup-chucked box bottom

Drawings by the author

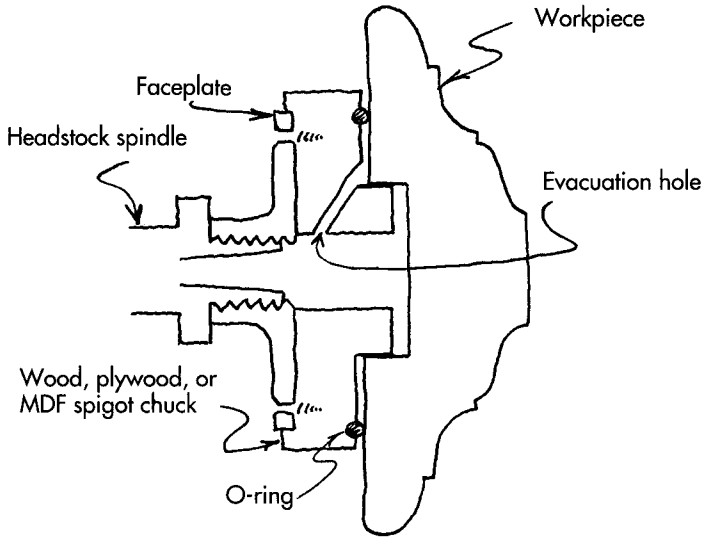


Figure 3: Holding a workpiece on a spigot

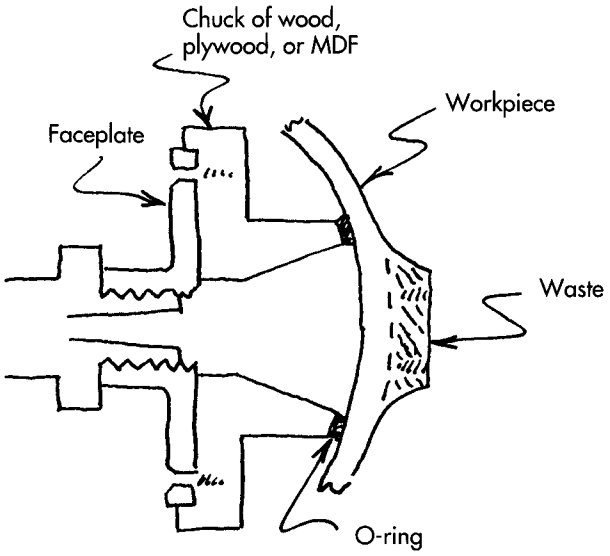


Figure 4: Holding a wavy-rimmed workpiece on a spigot

lathe. Because the lathe spindle rotates, your vacuum cleaner hose needs to be attached to the end of the hollow headstock spindle opposite the chuck via a rotating seal system commonly called a "union." Commercial unions are leak-free but expensive and not worthwhile if you're evacuating with a vacuum cleaner. You can, however, make a satisfactory union using a sealed ball bearing which you can seat in wooden parts (Figure 6).

Vacuum chucking can be used inboard or outboard. The former enables the tailstock to be used for centering, and to give added security until almost the final cut. Perhaps the only other requirement is an understanding spouse.

Mike Darlow is a professional turner and writer in New South Wales. This article is adapted from his new videotape series, The Practice of Woodturning. *For details, see his ad on page 47.*

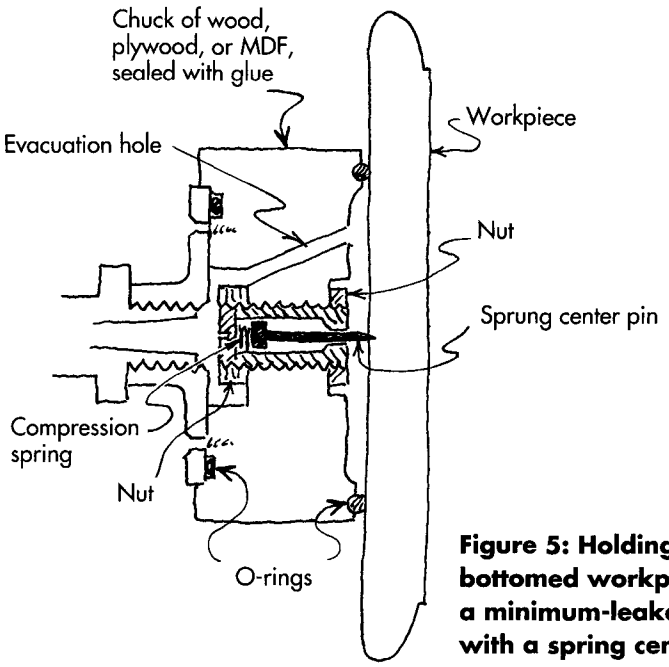


Figure 5: Holding a flat-bottomed workpiece on a minimum-leakage chuck with a spring center pin

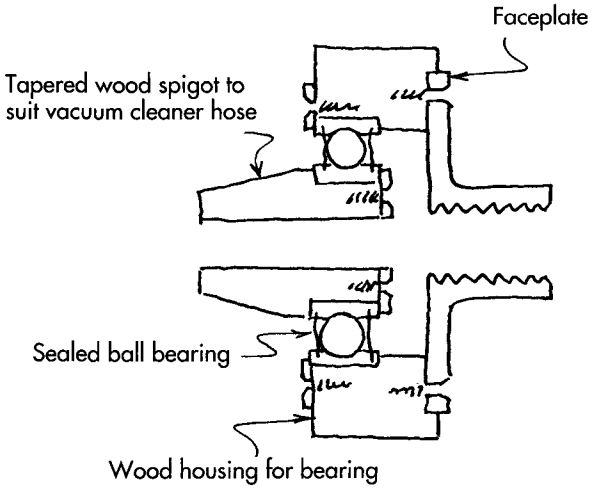


Figure 6: Union made from wood, a bearing, and a faceplate

END-GRAIN TURNING

Discover the practice

WILLIAM L. STEPHENSON, JR.

As with most types of turning, end-grain turning requires developing a special set of skills, none of which is too difficult. New avenues of expression and new opportunities for design will become available to the woodturner who masters these.

In end-grain turning, the grain of the wood is aligned parallel to the lathe bed, the same orientation as for spindle turning. End-grain turning differs from spindle turning, and also from faceplate turning, in that the form is hollowed by cutting directly into and across the ends of the fibers. The result is a vessel, the grain of which is oriented in line with the axis.

Wood for end-grain turning

If you've hand-planed the end of a board, you know how much more difficult it is than hand planing the face. Wood is tougher to cut across the end grain, especially if you intend to leave a smooth surface. Some woods are better structured than others for end-grain turning.

The diffuse-porous woods, such as birch, maple, or dogwood, are among the best for end-grain turning. In these woods, the larger pores are scattered throughout the annual rings such that smaller fibers are compacted around the pores providing a more uniform, self-supporting texture. The semi-ring-porous woods, such as walnut, butternut, or pecan hickories, will also turn well but tend to have greater variability in texture. Any of the fruitwoods such as persimmon, cherry, pear, plum, or apple, are good semi-ring-porous woods for end-grain turning. Expect the ring-porous woods, such as oak, true hickories, and ash, to be more difficult to end-grain turn.

If there is an ideal wood for end-grain turning, it is probably apple. The texture is uniform and of a density and hardness that makes cutting a joy. Also, it is a surprisingly beautiful wood, with colors ranging from tan to red to purple to brown and highly variegated.

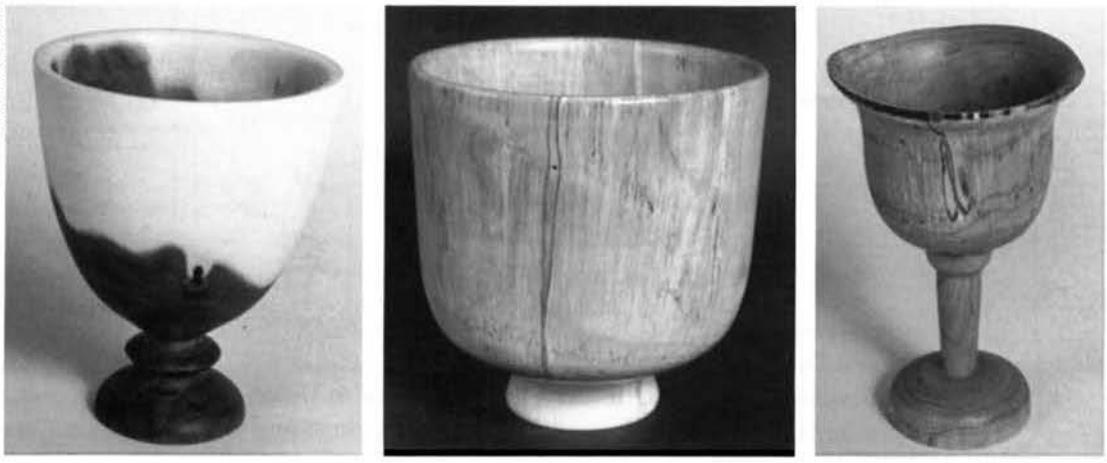
Whatever the species, green wood (the fresher the better) is preferable over dry for learning to turn end grain. The moisture that still fills the pores makes for a cleaner cut, as the wood is less brittle, the swollen fibers better support one another, and the moisture provides much needed lubrication.

Design advantages

Many North American hardwoods exhibit a dramatic color contrast between sapwood and heartwood. American walnut (*Juglans nigra*) is an extreme example. The color difference is caused by deposits of extractives in the heartwood. Red elm (*Ulmus rubra*) and the red oaks (*Quercus* spp.) are other examples that evidence differing degrees of sapwood/heartwood contrast. Beginning with log or branch cross sections of these woods, end-grain turning highlights this contrast, as the growth rings correspond to the axial symmetry of the vessel. Note that because the growth rings are not perfectly circular, the effect is an irregular pattern, as shown in the walnut goblet, below left.

Internal stains sometimes form around the bole of a tree, the result of fungi introduced by bird or insect damage or mechanical trauma. These natural features frequently occur in maples and hickories. By end-grain turning a whole-log section you can remove just enough outside wood to reveal the thin ($1/4$- to $1/2$-inch) layer of natural design and coloration. The red maple (*Acer rubrum*) vessel on the

Sandsmith Studios



End-grain turning takes design advantage of various wood features (from left to right): sapwood/heartwood contrast; circumferential positioning of fungal stains, and the bark of small branches, which rims the small goblet.

facing page, center, illustrates the streaking effect of bird-peck-induced blue-stain fungus.

Limbs and off-cuts considered too small for conventional turning can often become pleasing end-grain objects. The cherry goblet on the facing page, right, includes the bark of the 4-inch diameter branch from which it was turned.

Another advantage of end-grain turning is that you can utilize wood compromised by defects such as ring shake or surface checks. Simply turn off the flawed wood and what remains can be turned into an end-grain object.

Shrinkage of wood during drying is, in most cases, less across the growth rings (radial direction) and more along the growth rings (tangential direction). This difference in shrinkage is the reason bowls warp when turned green and allowed to dry. With end-grain turned objects, the shrinkage will be mainly toward the center of the object. When using whole logs, the rings will go around the entire object so that the shrinkage will be uniform. Vessels turned with green wood will have minimal shrinkage and minimal distortion. Objects can be turned to their final form, allowed to dry, then sanded and finished with little need to re-turn the object round, which is a boon to production.

Initial steps

To turn end grain begin with a whole log, limb, or branch, including the pith, taking precautions as discussed in "Turning the Pith Out of Wood" (*AW*, volume 8, number 3, September, 1993). Alternatively, split the piece through the center, and locate a square turning blank in each half. The blank can be as long as your tools permit and as thick as the swing of the lathe. Most designs begin best with a blank about one and a half times as long as it is wide. An extra thick waste end, at least 2 inches, will be needed for mounting a faceplate using long and strong screws.

Mount the blank between centers, rough it round, and shape it using whatever size or sizes of spindle gouges or skew chisels that may be required for the design. A cuplike shape may be a good design for your first several turnings. The shape of a tulip and that of a trumpet flower are easy designs to execute that give pleasing results. With experience, taller designs, such as vases, will become easier to take on.

Once the outside of the object is in the final form, make a light smoothing cut to get the piece ready for sanding a bit later.

Hollowing end grain

To mount the blank for end-grain turning, square the end of the waste area with a parting tool. Attach the blank to a faceplate using sharp (new) #10 or #12 pan-head sheetmetal screws, as long as the thickness of the waste material permits. Use all the holes in the faceplate, for you will later appreciate as much holding power as you can get from screws in end grain (which is not a lot). Expansion or compression chucks should not be used for diameters over 3 inches, unless you enjoy retrieving the piece after it has bounced around the studio. You may find success by turning a tenon with a stout shoulder to rest on the chuck's jaws or shoulder. The principle is the same as for jam-fit chucks: strength comes from the shoulder, not the tenon. With the piece back on the lathe, make any fine cut that may be needed to re-round the outside.

Removing the wood from the inside of the object is the fun part. Several professional turners have said that the best way to remove end grain is "any way you can!" and there is a lot of sense in that. I begin by measuring the final depth for the inside and drilling a hole down the center to the near final depth. Leave the bottom a bit thicker than the sides, at least $1/2$ inch thick. The size of the drill will depend upon the tools you will use to turn the inside. For a bowl gouge the hole serves only to mark the depth of cut, and a $3/8$ inch diameter is fine. If you're using a roundnose scraper, the hole should be $1/4$ inch larger than the width of the tool, for clearance.

There are several tools and cuts described in the literature for turning end grain. The two methods I'll describe here work well most of the time and are probably safer than other cuts that require more skill and/or special tool grinds. Once you become familiar with turning end-grain, and you have a spirit of adventure, you might experiment with the more advanced cuts described by Richard Raffan in *Turning Wood* and by Mike Darlow in *The Practice of Woodturning*. When you do, take care to note the grind used on the bowl gouges.

The first method I use employs a bowl gouge with a ladyfinger grind, cutting across- and slightly up-grain. The technique is similar to that used in conventional bowl turning, except that you take lighter cuts. Begin with the tool on the rest, the handle level with the lathe bed and angled away from you, toward the back of the lathe. Rotate the tool so the flute faces the back of the lathe. Start the cut about $1/8$ inch from the near edge of the drilled hole, push in, and swing the handle toward the front of the lathe. The cutting edge will arc toward the center of the piece, and the cut should end when the

handle comes in line with the lathe bed. Take additional cuts, beginning about 1/8 inch from where each previous cut began, and cutting as deep as possible. When you have cut about halfway toward the rim of the piece, the depth should be about half the total depth. With perfect timing the final cut on the inside will be concurrent with the final depth...but it never seems to happen quite that way.

About midway in your series of cuts, expect the tool to begin grabbing and bouncing across the end grain, especially as the bottom flattens. This vibration is normal and makes for a wild ride. Try grinding a sharper angle on your tool. Increase or decrease the speed. Sharpen often. Check the faceplate to make sure the turning blank is still securely fastened. All of this helps. The vibration is, in fact, chatterwork, but it is not desirable. The humps and bumps will need to be removed by another cut with the bowl gouge, or the vibration problems will only get worse. Continue cutting until all the inside material is removed, then sharpen your tool and make a fine finishing cut from the top to the bottom center. The piece is now ready for sanding and finishing.

The second method uses a roundnose scraper to remove the inside, and is often called "shear scraping." First, sharpen the scraper, leaving the wire-edge intact; the wire-edge, and only the wire-edge, will do the cutting. Straight from the grinding wheel this edge will be quite aggressive. You can form a less aggressive edge by removing it with a fine stone and forming a new wire-edge with a burnisher—a 1/4-inch smooth steel rod harder than your tool steel will do nicely. Move the tool from side to side holding the burnisher at 90° to the top surface. Essentially, use the same technique as sharpening a cabinet scraper.

The scraper removes wood from the object from the bottom out. With the lathe on a very slow speed, insert the tool into the hole in the center. Hold the tool on an angle so that only one corner is in contact with the tool rest. Move the cutting edge into the wood, gently, and draw the tool out, removing a shaving along the way. Continue making these fine cuts until the wall is the desired thickness and shape. Some turners will find this style of cutting to be awkward and tiring. Once you develop strength in holding the scraping tool in position, it gets easier.

Quite often, using the bowl-gouge for most of the removal of the inside wood followed by finishing cuts with the scraper will be a dynamite combination.

Specialized tools

End-graining turning was quite common from around 1900 to 1930, when factories produced vases, urns, and other large vessels from log blanks. Unfortunately, much of the knowledge about this type of turning went with the demise of the businesses. We do know that ring tools and hook tools were the tools of choice for end-grain turning. In parts of Europe, notably Sweden, many of these tools, along with an understanding of their use, have survived.

Ring tools, just as the name implies, have a circular cutting edge. Hook tools have a portion of the ring missing. The intent of the design is to form a cutting edge at 90° to the length of the shaft. Thus, this class of tools is sometimes called "right-angle gouges." The angle of the cutting surface permits slicing across the end grain.

There are a number of ring tools available on the market. Many are really too large and clumsy unless you happen to have the strength of Atlas. The ring should be between 1/4 inch and 1/2 inch for the average person to hold and master.

Sharpening ring tools has been another problem until the Oneway Termite tool, manufactured in Canada, became available with its own sharpening system as well as three sizes of interchangeable tool tips. You might find the handle of the Termite too short and small, especially when you are extended over the tool rest, reaching into the bottom of a deep vessel. These tools can now be ordered unhandled. Make your own at least 18 inches long and 2 inches in diameter (you can always make it smaller). The Techni-Tool, which originates in New Zealand, is similar to the Termite.

To turn the inside with a ring tool, start in the center of the blank, holding the tool at about a 15° angle from the centerline toward the front of the lathe. Rotate the ring about 30° clockwise from vertical. Pull the tool shaft toward the front of the lathe with your left hand until the cutting edge bites into the wood, and move the handle toward the back of the lathe until the tool is parallel with the centerline. Continue pulling the tool toward the front of the lathe making a clean cut until you reach the inside edge of the wall. Continue these cuts until the inside is hollowed to the desired depth.

As you cut deeper into the vessel, you will begin cutting across the bottom before cutting out along the side. As you approach the side, move the handle toward the back of the lathe so that the cut up the side is at about a 15° angle, keeping the rotation of the tool around 30°. Listen to the cut. The hissing sound tells you that the tool is cutting properly.

Learn to work with smaller ring tools first, and with the lathe at its slowest speed, not over 200 rpm. Make sure the tool angle remains correct. Catches are more common when the cut is wider than about 1/8 inch.

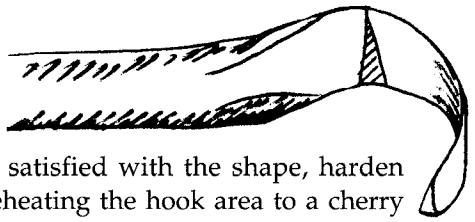
The ring will clog with shavings as the cut becomes more aggressive, a disadvantage that is partially solved with hook tools. The open side of the hook permits the shaving to clear. The technique for using the hook tool is the same as that for using ring tools.

As you gain experience and develop skills with right-angle tools, you can progress to larger tools and more aggressive cuts. Tools greater than 5/8 inch in diameter are intended for use in softwoods. Remember that a sharp tool is essential for smooth cuts across end-grain.

In issue 14 of the English magazine *Woodturning*, Kurt Johansson, an expert in the use of hook and ring tools, discusses and illustrates a number of hook-tool designs. For a way to make your own hook tools, see the sidebar, below.

Bill Stephenson is a professional forester who has been a serious woodturner since 1988. The author greatly appreciates the information and experience about turning end grain that have been shared by John Jordan, Alan Lacer, and David Ellsworth.

Creating a Hook Tool



For the past several years, Alan Lacer, has been demonstrating the use of hook tools and his method of making them. Lacer says he learned to make hook tools from Del Stubbs, who learned from Søren Berger. Here is Lacer's method, as I understand it. —*W.L.S.*

A SERVICEABLE HOOK TOOL can be produced with the equipment available in most woodturning studios or, if necessary, at the local metal working shop. The steps are to cut the blank, grind a flat, bend and harden the hook, clean and temper the metal, sharpen the tool, and mount the tool in a turned handle.

Cut the tool blank from oil-quenching or water-quenching steel drill rod stock about 12 inches long. Stock 1/4 inch in thickness will produce a small-diameter hook, and 1/2-inch stock will yield a rather hefty tool for making deep cuts in larger vessels. Use whatever is on hand or buy a piece of 3/8-inch stock to produce a medium-sized hook tool.

Grind two flats on the end of the rod about 2 inches long so that in cross section the end tapers like a wedge. Grind the profile to a rounded end, like a butter knife. Don't worry about overheating and bluing the steel during grinding because the drill rod stock is annealed and will be tempered after bending and hardening. File the inside surface smooth.

Heat the end of the blank with a butane torch attachment on a cylinder of MAPP gas, which burns hotter than propane or butane. When the tip is cherry red, use an old needlenose pliers to bend the hook to the desired shape. The preferred shape is the same as the inside flute of a bowl gouge, whatever size you wish.

Once you are satisfied with the shape, harden the steel by reheating the hook area to a cherry red and immediately stir it in the quenching medium, either oil or water. For oil-quenching steel, olive oil is safer than motor oil, as it has a higher flash point. Test the hardness with a file; it should skate across the hardened area and bite into the unhardened area. Clean off the oxidation with soap and water and fine-grit wet/dry sandpaper. The cleaner the tool, the easier it will be to see the colors during tempering.

Tempering the hook is tricky for anyone, experienced or not. It is critical in establishing a durable cutting edge. Perhaps the easiest method is to place several tools you have made in a 475° to 520° oven until the steel is evenly heated (about one hour), then allow the steel to cool to room temperature. Alternatively, heat the tool shank 3 to 4 inches away from hook, allowing the heat to run up into the blade. Go slowly. Watch the colors develop and when they begin to change from a deep straw to bronze, quench immediately. If you heat too much and the color turns to blue or purple, the cutting edge has lost its temper, and you must start over with rehardening.

Sharpen the tool on the outside cautiously or with a slow-speed grinder (1500 rpm) and a medium (60-grit) wheel, taking care not to grind away the shape. The inside (flute) edge can then be honed with a slipstone. During use, touch up the sharpness with slipstones to prolong the life of the tool.

Mount the tool in a handle that has been spindle-turned to a comfortable shape. Length should be at least that of the tool shaft.

Halo Desk
Curly yellow birch, cherry, pear veneer, madrone burl, maple and pear marquetry, leather
30 x 42 x 24 inches
Anything will sell if you veneer it in quilted mahogany, and there is no substitute for the visual orgy of a plank of old-growth Brazilian rosewood. To stay in business, I decided to develop designs, techniques, and materials that would compete with the romance and natural beauty of exotic tropical woods. To that end I have used layered gesso finishes, iridescent glazes, metallic auto paint, light-emitting diodes, colored epoxy, dyed wood and veneers, temperate-wood burls and exotics, and phosphorescent paint.

This piece can be considered a complex work with simple materials.

—Stephen Daniell, Easthampton, MA

CONSERVATION BY DESIGN

Not saving the rainforest, but telling the story

"It is not within the power of artists or craftspeople to stem the tide of environmental degradation. The causes are many, and actual consumption of timber by artisans is probably negligible. But if politically correct bowls and cabinets won't save the rainforest, they will help tell the story." So explains Scott Landis in his introduction to the catalog that accompanies "Conservation by Design," the exhibition now occupying the new wing at the Museum of Art at the Rhode Island School of Design through January 16. RISD, in conjunction with the Woodworkers Alliance for Rainforest Protection (of which Landis is the president) and others, have organized this powerful show, gathering seventy-one invited and juried artists, to promote wood conservation. Their challenge was to employ under-utilized native or lesser-known tropical species, wood from a certified well-managed source, recycled materials, faux finishes simulating precious woods, or a sculptural design that addresses forest conservation.

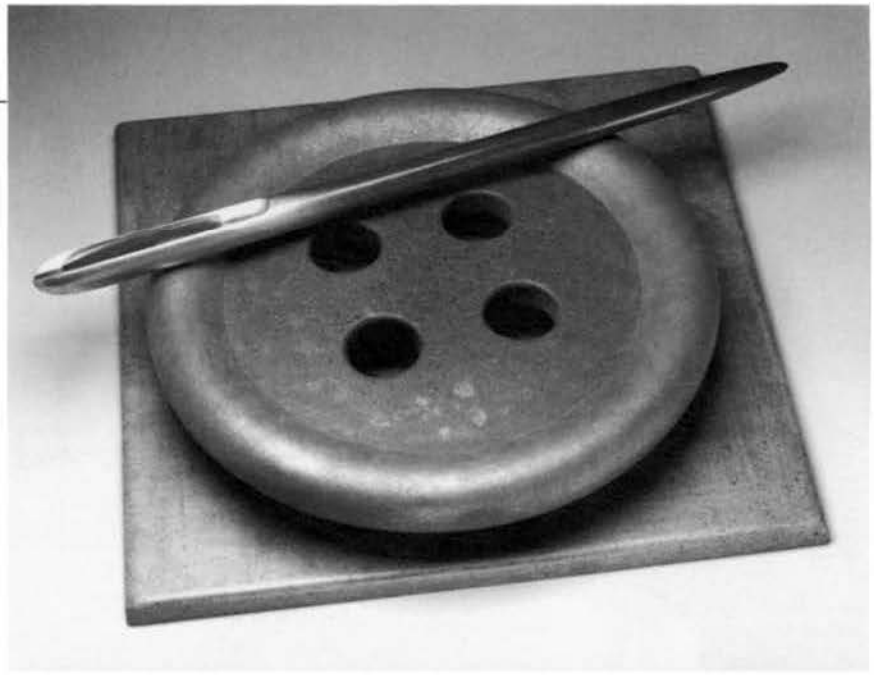
The show includes stunning, exquisitely executed, and immensely thought-provoking work. It ranges from the poetic to the practical, from heady symbols to real, innovative alternatives. This show rethinks techniques and materials as well as attitudes.

Some pieces are blunt: Henry Black's wood chainsaw incorporates a rifle muzzle on one side and shark teeth along the chain. A belt of bullets backed by bills of international currency feeds the saw, which sits on a stump découpaged with advertisements. Other pieces, such as Michael Brolly's "Our Mother Hangs in the Balance" (photo, facing page), are sublime.

Perhaps as important as the work itself are the often substantial artist statements that accompany each piece. The show catalog, which includes these statements in toto, is more than a catalog. It's a 160-page book with eight major essays discussing the issues of our environment from various perspectives. The overriding concern, whether from scientists, historians, educators, or the designer/craftspeople in the show, is to make people, all of us, more aware that as consumers our choices have an affect on global welfare.

The exhibition, which consists mainly of fine furniture and sculpture, includes a goodly amount of woodturning. But this show's impact goes beyond its impressive woodworking. It's a show that everyone should see and reflect on.

This article was developed with help from Pam Vogt. For information about the show, call the RISD Museum of Art at 401/454-6348. For information about WARP, write 1 Cottage St., Easthampton, MA 01027. Either location can supply the catalog for $30 plus $2 shipping and handling.



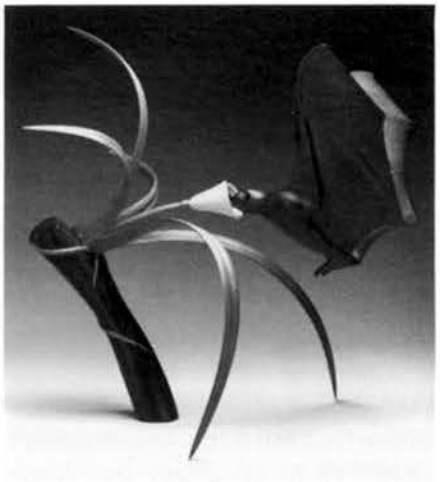
Buttoning Wood
Chacahuante, fir, MDF
23 x 19 x 5 inches
"Buttoning Wood" refers to mending, revival, and renewal. I have been interested in images that are metaphorical or mediate concerns of the environment. "Buttoning Wood" demonstrates the progress of stasis. Standing still, being rooted in place is fundamental to understanding conservation.

The needle, button, and fabric have no thread, which requires the viewer to sew an imagined thread through the subject. Conservation by design demands an ability to thread together not only things, but also concepts.

—Stephen Hogbin, Owen Sound, ON

Nahele Keiki—Child of the Forest
Macadamia, handmade paper of macadamia and cotton
14 x 9 x 9 inches
Part of a grove of macadamia nut trees needed to be removed for a road to a housing project. Gary cut down one tree and made a hollow turning in the shape of a macadamia nut, leaving some bark attached. Martha sculpted the surrounding leaves from the chips and shavings left over. She made the paper pulp by reconstituting the wood chips and shavings with cotton fibers.

—Martha Chatelain and Gary Zeff, Rancho Santa Fe, CA



Our Mother Hangs in the Balance
Walnut, mahogany, holly, brass, veneers
12 x 18¾ x 18¾ inches
The bat's three-inch brass tongue holds it in the turned flower. Remove the bat, and the tree falls down—a symbol of the interconnectedness of all things and all actions.

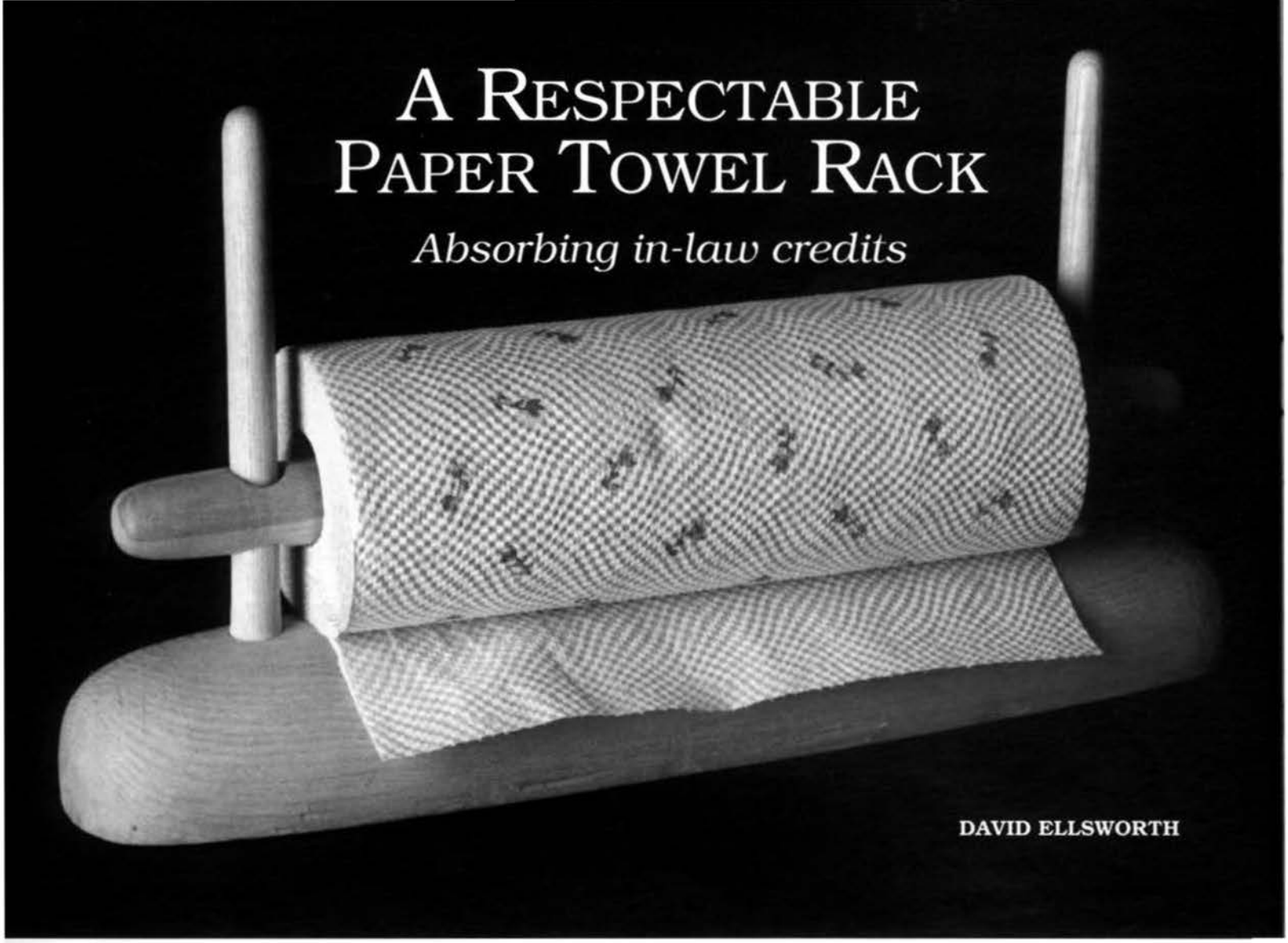
The walnut is from a local hedgerow (complete with buckshot), the veneers were retrieved from the trash where I went to school. I purchased the holly and the mahogany for the bat locally. The mahogany was part of a huge pile of checkered and wormy stock, dumped at the local lumberyard and sold for eighty-five cents a board foot. (How much did the people in the country of origin get for cutting down those huge trees?)

I believe I did the right thing by saving these large timbers from becoming transient molding, turning them into beautiful objects that I hope will be cherished for a long time.

—Michael Brolly, Hamburg, PA

A Respectable Paper Towel Rack

Absorbing in-law credits



DAVID ELLSWORTH

Ah, winter. The holiday crunch. A time for giving. Time? Time for a little "elving" down in the ol' workshop. Let's see now...last year I made them a salad bowl and the year before a rolling pin; or was it a tree ornament? I don't remember. Yaaach... these annual "in-law credits!" This year, I'm going to make them something they will like and that they'll use.

What people like most about this paper towel dispenser is that it's a handsome object and it works! What I like is that you can cut down an ash tree, go to the lathe, and be finished in about an hour! Also, I quite like the idea of getting that roll of most-honorable-kitchen-clean-up paper out from under the sink and into a place of prominence—I'm talking respect, folks. Now, if I could just get the manufacturers to make a decent-looking roll of paper towels.

Base

Cut a section of log 20 inches long, about 10 inches in diameter, and with the pith running through the center. Split it into three pieces so you end up with a half log and two quarters, then cut one quarter in half lengthwise. Flatten the face of the half log on the jointer to about ½ inch above the pith, then trim off the bark and cut the sides down leaving a billet that's about 5 inches wide.

With a ¾-inch diameter multi-spur bit, drill two holes to within ¼ inch of the flat surface. Center them 12½ inches apart and equal in distance from the ends. These will receive the vertical posts.

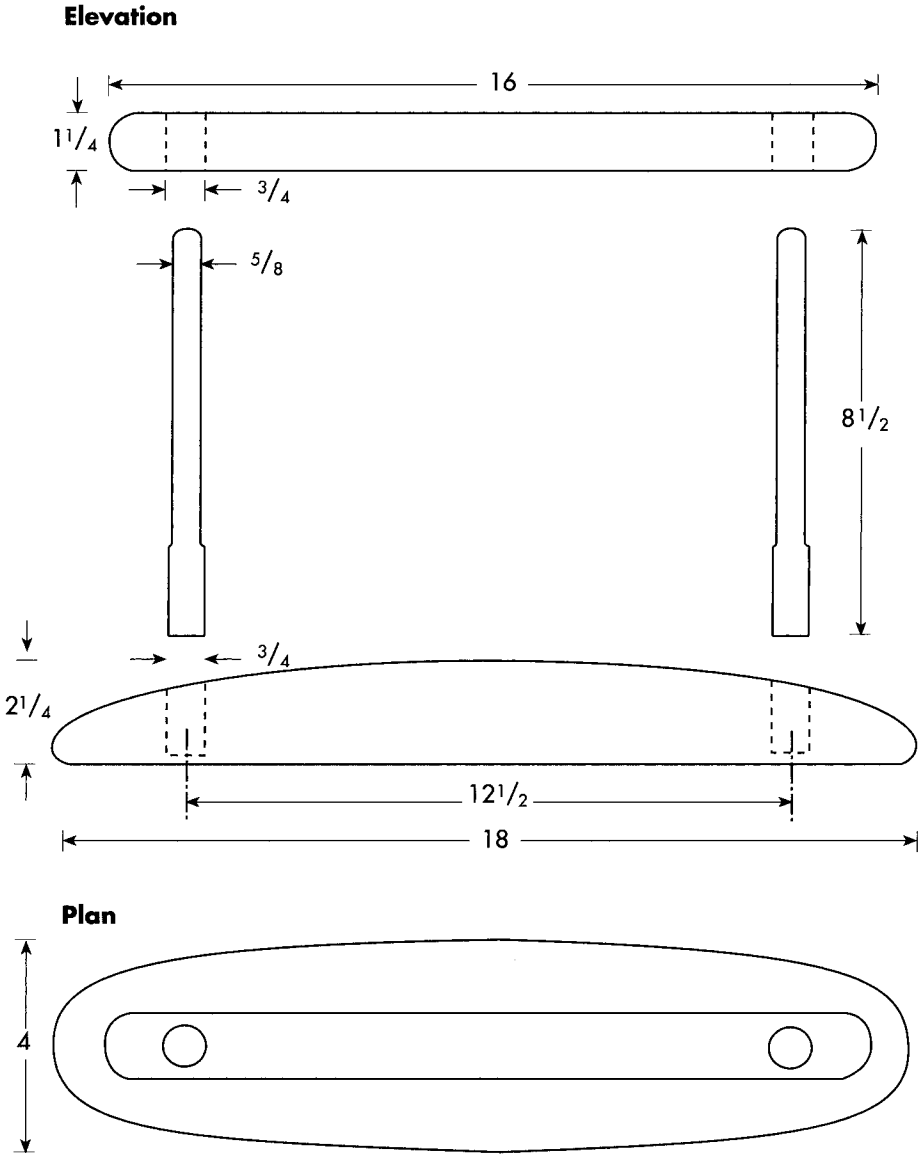
This is an off-center turning (the flat will remain flat), so make a few safety checks on the lathe before you begin. First, slow the speed to 300 rpm, *maximum;* be sure the blades of the 4-prong spur center are sharp; and use a cup center with a long point in the ball-bearing tailstock center—don't use the cone center; it will split the wood! Finally, be sure the tailstock doesn't creep backwards under the pressure while turning. (Obviously, one could simply turn a tapered sausage shape and plane the base

flat after turning, but that wouldn't be half the challenge! Nor would it as efficiently utilize the shape of the half log.)

Mount the base between centers so that the points of the spur and tailstock centers are ½ inch above the flat surface and equal in distance from each side. You may wish to use a small-tipped gouge to begin the cutting, as a larger gouge may tend to grab the wood.

The shape of this base is totally up to your imagination. Here, I've placed the highest point in the middle of the form. This single point of contact provides enough friction under the weight of the cross bar and towel roll so that individual sheets can be ripped off without a mile of paper ending up on the floor. A greater challenge would be to turn a series of beads in this area.

The finished base will be 18 inches long, about 2¼ inches thick and 4 inches wide at the base. This gives it plenty of weight so it won't fall over when used. And notice that because this is an offset turning with tapered ends, the edges tuck nicely under the form. Sand while spinning at slow speed, then cut off the stubs on the ends and finish sanding by hand.



Cross Bar

From the quarter section of the log, cut a piece about 17 inches long and 1½ inches square. Drill two ¾-inch diameter holes, 12½ inches apart to match those in the base. Finish-turn this cylinder 16 inches long and 1¼ inches in diameter, being sure the holes are centered in the cylinder.

Posts

Turn the posts from the remaining two pieces of the log. They should finish out to 8½ inches long and just slightly less than ¾ of an inch in diameter so they can slip into the holes of the base without wobbling. Then turn the exposed length above the base to a ⅝-inch diameter. This allows the cross bar to slip easily down the full length without binding. When the posts dry, they shrink into a slight ellipse. Simply place them in the holes and give them a quarter turn to lock them in position—no glue needed, and they're easy to take apart for shipping.

Mopping up

Why have I used ash? Because it doesn't crack. Just apply several coats of your favorite furniture oil to retard the drying process, and while the wood and oil are drying, you have something to wipe up any messes on the kitchen counter. Next year I'm doing a smaller version for the bathroom.

David Ellsworth turns holiday gifts, among various other things, in Quakerstown, PA. Photo by the author.

KALEIDOSCOPE 101

An introductory course

STEPHEN R. GARAVATTI

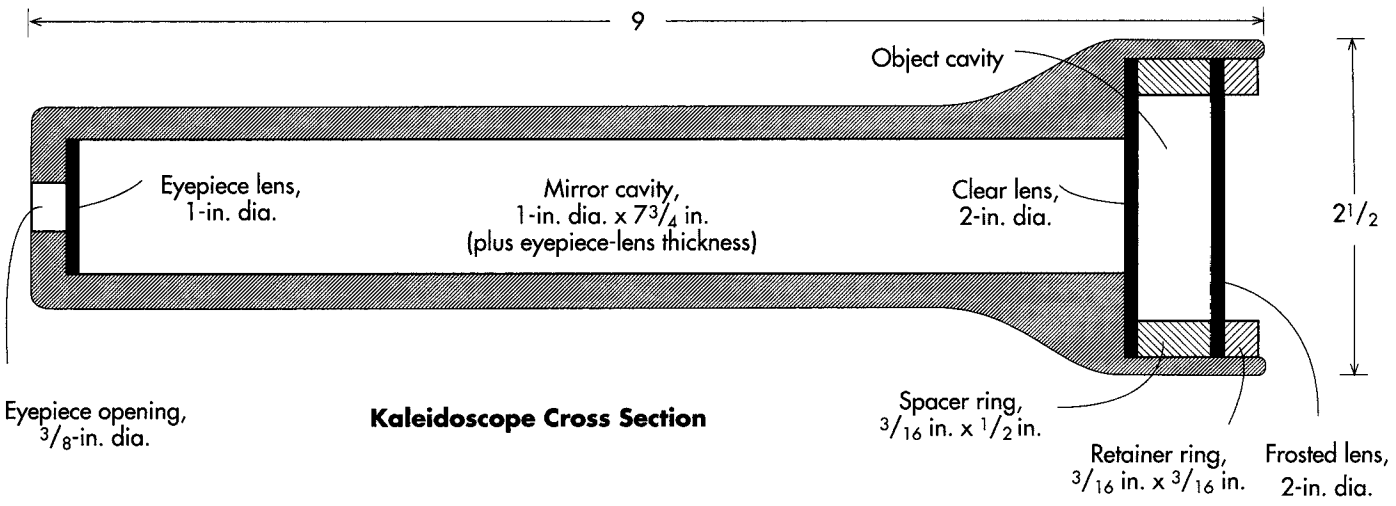
This simple kaleidoscope avoids the complications of making a rotating chamber. You tumble the colored bits, and thereby vary the images, by rotating the whole scope.

Photo: Deborah Fillion

When I first saw kaleidoscopes that used a glass sphere as the lens, I decided I had to make one for myself. What appealed to me was their simplicity: they did not incorporate the traditional rotating chamber filled with colored bits. The view through the eyepiece changed by rotating or otherwise moving the whole scope. I wanted to make a more traditional kaleidoscope with colored bits creating the images, but the rotating chamber seemed too difficult to construct. By combining the simplicity of the glass sphere design with the more traditional use of colored bits in a chamber, I arrived at this hybrid. By rotating the entire scope, you tumble the colored bits, and the images transform themselves into a myriad of ever-changing patterns.

History tells us that one cold night in 1816, Scottish physicist Sir David Brewster, unable to come up with a quick turning project, discovered that the infinite reflections bouncing off of certain arrangements of "front-surface" reflective glass created symmetrical geometric pattern. Brewster arranged the components into a viewer and, calling on his knowledge of the Greek language, named his creation by combining the words *kalos* ("beautiful") and *eidos* ("form") with *skopein* ("to view"). Kaleidoscopes have entertained the young and the young at heart ever since.

Now that you know *why,* let's find out *how.* Collect your materials. Kaleidoscope mirror kits can be found at most stained glass



Kaleidoscope Cross Section

stores for about $10. They are also available at Craft Supplies, USA (801/373-0917). Remember that regular mirrors reflect off the back surface and will not work correctly. Kaleidoscope mirrors in these kits are generally $^7/_8$ inch wide by $7^3/_4$ inches long.

You will also need glass lenses. Precut round lenses are difficult to locate; however, round mirrors that can be found at most craft stores work quite well. The paint can be stripped off the back surface using lacquer thinner, and the reflective silver removed by soaking in Liquid Plumber. (Liquid Plumber is caustic, so be careful.) Your kaleidoscope will require two round lenses for the front of the scope (I suggest using $1^1/_2$- or 2-inch diameter lenses) and a 1-inch diameter lens for the eyepiece. The outside front lens should be etched, or frosted, to eliminate background distractions. Craft stores usually carry glass etching compound.

Select dry timber approximately 3 inches square by about 11 inches long and mount to a screw center or a collet chuck. Bore a 1-inch-diameter hole approximately 9 inches deep using a spade bit. This hole will accept the $^7/_8$-inch mirror assembly. Adjust dimensions for any other size mirrors. Turn a plug to fit the 1-inch hole so that you can rough-turn the shape between centers.

Now at the tailstock end, turn a recess the same diameter as the front lenses and about 1 inch deep. Make sure that your 1-inch diameter shaft ends up exactly the same length as your mirrors, plus the thickness of the eyepiece lens.

Remove your scope blank from the lathe, mount some $^3/_8$-inch thick stock on a faceplate, and turn a spacer ring, first the outside to fit loosely in the recess, then part off at the inside diameter. This spacer ring separates the two front lenses and creates the cavity for your colored bits. Finally, turn a retainer ring that will secure the entire assembly in the front of the kaleidoscope. This ring should be close-fitting enough to glue in place.

Fit your clear lens, spacer ring, etched lens and retainer ring to determine the exact depth of the lens cavity. Remove all the pieces and turn the scope to finished length and shape. You may want to turn another plug for the open end to provide stability as you finish-turn the outside of the piece. Sand the length of the scope.

If you carefully measure down the shaft of the scope, you can part off the scope right into the hole made by the point of your spade bit. Be careful that you do not part off into the 1-inch-diameter shaft. The opening at the eyepiece end will be for viewing. To finish the eyepiece end, reverse-chuck the scope, and drill or turn the opening no greater than $^3/_8$ inch in diameter. A larger hole may expose the edges of the mirrors inside the scope. Sand the eyehole end and apply your favorite finish.

The kaleidoscope is now ready for assembly. Slide the 1-inch-diameter eyepiece lens down the shaft of the scope. Tape the mirrors into a triangle and slide them down the 1-inch-diameter opening. Insert the clear lens and the spacer into the recess. Fill the cavity about one half to two thirds full with beads or colored glass bits. Install the etched lens and secure it by gluing the retainer ring in place. Now hold the scope up to the light, rotate, and enjoy the infinite variations of color and patterns.

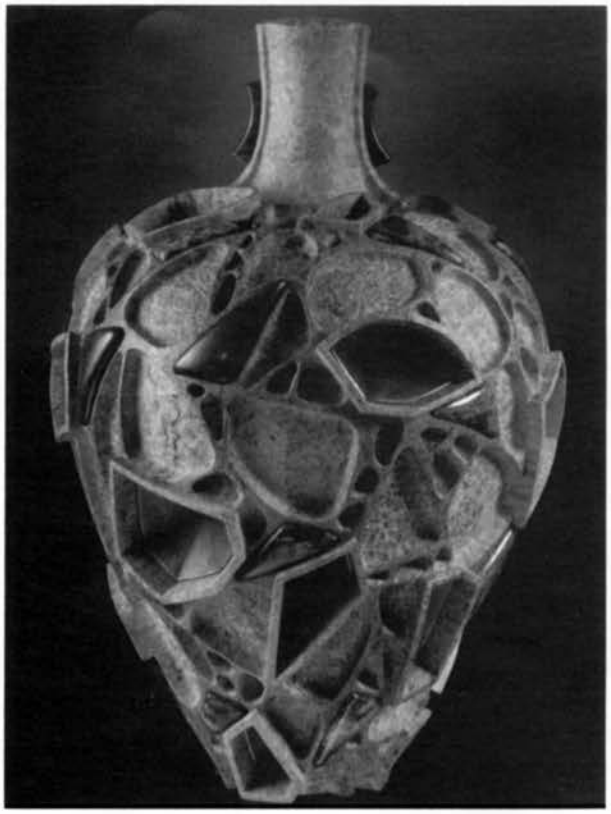
Congratulations! You've passed Kaleidoscope 101.

Stephen R. Garavatti is a bank examiner and President of the Utah Association of Woodturners.

PHOTOS FROM THE MAILBAG

With a name like mine, it's no wonder I fell in love with wood. One of my biggest problems is storage. I raised my bed four inches to store wood underneath it, and I have some behind the couch. I like contrasting color, and I like my work to tell a story. This piece is called "Desert Spirit Box" ($10\frac{3}{4}$ inches by $6\frac{1}{4}$ inches). It's made of wenge, and the twelve segments, each a different design, are bordered with Parallam and inlaid with turquoise, malachite, red or black coral, spiney oyster, and sterling silver.

—Betsi Packwood, Sun City, AZ



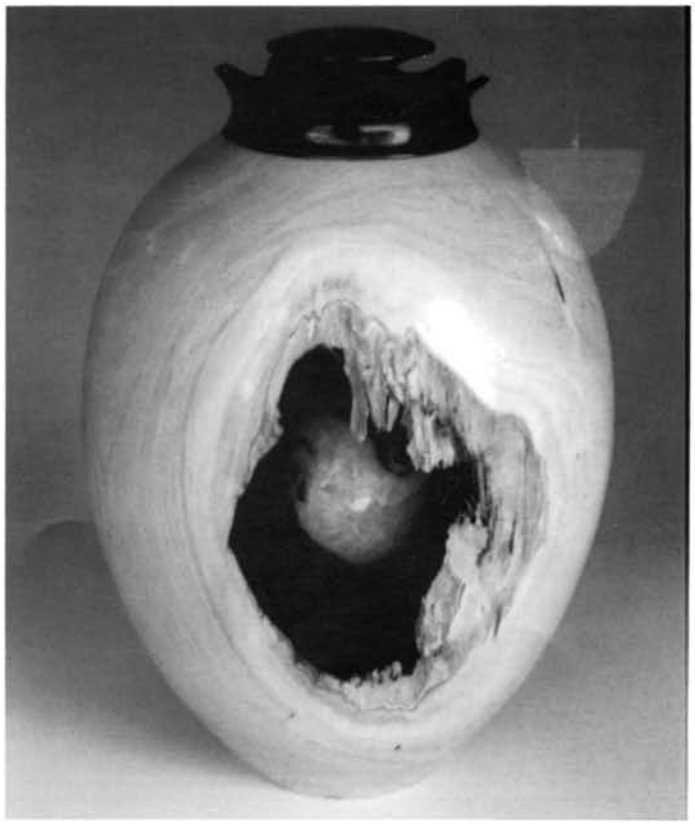
"Aeon" won the Ruth Greenburg Woodturning Award for 1993. It is madrone burl, cast lead, and soapstone and measures 21 inches high by 14 inches in diameter. The techniques used include turning, hollowing, carving, sandblasting, sand-casting, inlaying, and polishing. *—Hugh McKay, Gold Beach, OR*

I sell my craft under the name "Perfect Imperfections" because much of my work features natural imperfections. I search for the hidden treasures most commonly found among the ugly. I use burls, spalted wood, knots, bark, bark inclusions, crotch patterns, wild grain, and more. This piece is spalted maple, 10 inches high by 10 inches in diameter.

I get ninety percent of my wood in log form at embarrassingly low prices or free. At first I thought I would have a hard time finding wood at a cost I could afford. I now have so much wood that my wife is threatening divorce if I bring anymore home. I live in a big city and I keep my eyes open. Nature is full of surprises, but like all treasure, they are well hidden.

—Gary Hinrick, San Jose, CA

PHOTOS FROM THE MAILBAG



I began turning in 1987, two years before I retired. Virtually all my pieces are made from green wood from trees that grow in Central Florida. The urn at left (12 inches high by 8 inches in diameter) is spalted maple with ebony trim; the piece at right ($10\frac{1}{2}$ inches by 7 inches) is dyed melaluca with ebony trim and a septarium stone mounted on an inner pedestal.

—Bobby Phillips, Kissimmee, FL

Segmented turning of Honduras rosewood, maple, and claro walnut, 11 inches by 4 inches.

—Bill Giese, Eureka, CA.

PHOTOS FROM THE MAILBAG

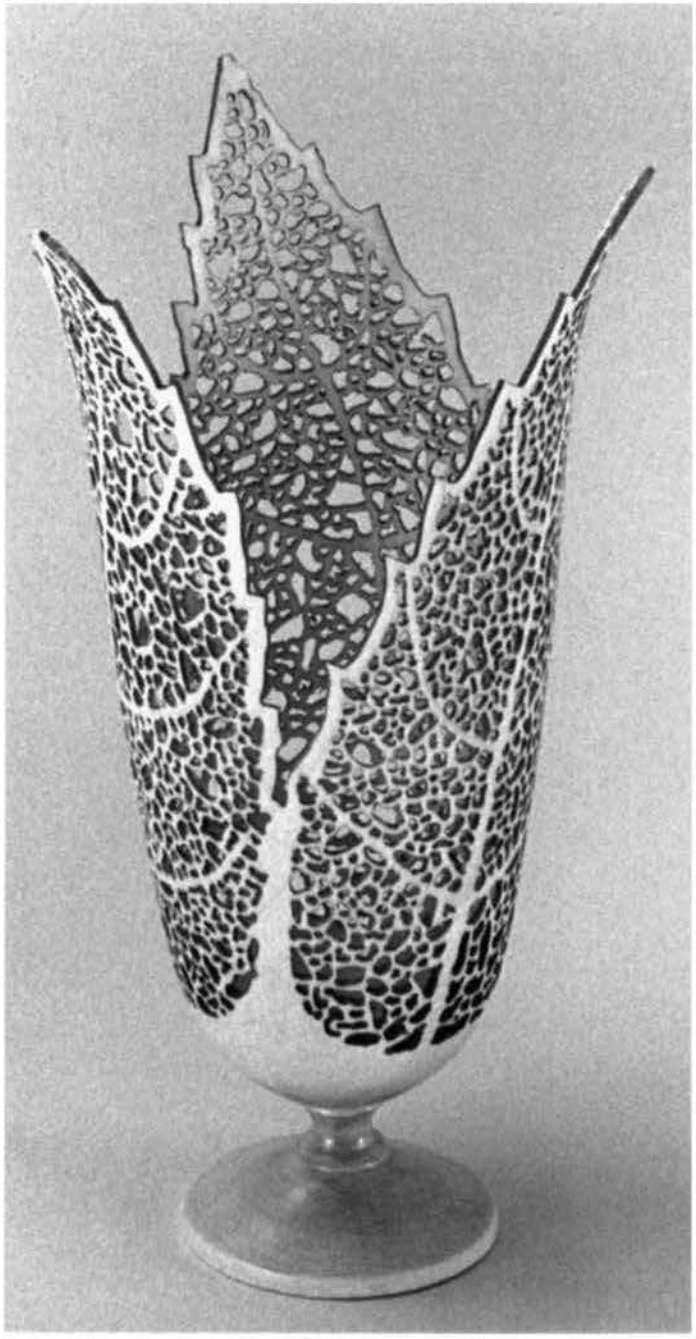
I have been doing woodturning for five years now, and it's a thoroughly relaxing hobby. I own a 36-inch Sears lathe with a 12-inch swing, and it does the job I want. I turn many bowls, vases, and candy dishes from birch, oak, and maple burls. When I received last March's issue, Ray Allen's segmented bowl inspired me to try something different. I glued together 235 pieces of ten different kinds of wood: bird's-eye maple, walnut, wenge, oak, birch, bocote, aromatic cedar, padauk, cherry, and India rosewood. I call the piece "Segmented Inspiration."

—Don Handke, Pembroke, ON

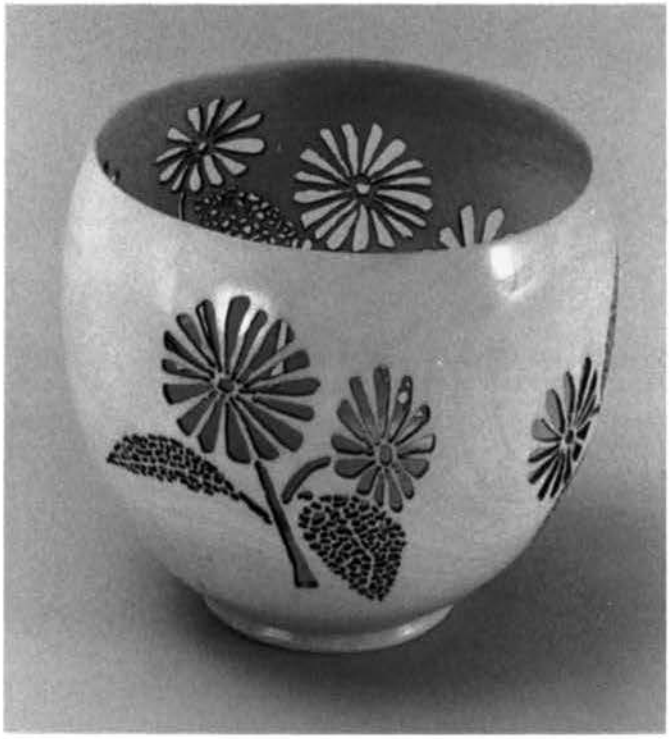
These are from my "Thorns" series. Above is the first, an oak bowl, 7 inches in diameter; at right is a cottonwood burl, about 5 inches long. Each rests on a stand of honey locust thorns. I'm now leaving more of the piece rough, even roughing it up and burning it with a blow torch. I'm trying to emphasize the inaccessibility of the work, contrasted with the smooth, inviting dished area, while adding a visual lightness.

—James Tracy of Fridley, MN

A Piercing Perception



These lacy vessels are of birch, turned green to $^{1}/_{16}$-inch thickness and pierced with high-speed drills. (Photos: Jim Frank).



You couldn't help but notice how quiet people became around the work of Frank Sudol in the Instant Gallery at last June's AAW symposium, as if they were in the presence of something that required treading lightly. It wasn't Sudol himself who inspired such awe; he was standing by, easy enough to talk with. He's a retired botanist, now working wood in a log home he built in a forest where he grew up in Paddockwood, Sask. Well aware of the scientific constructs of what the rest of us call nature, and relying as he does on a thorough understanding of natural forms, his work nevertheless has none of the formulaic rigor or analytic complexity of science. Its power, its meaning, lies in its piercing delicacy. Through such disarming fragility, he hopes that people will recognize how precious is the earth and how deserving it is of respect and carefulness. As he put it, "you need to be simple to be powerful. You can't impress people with the facts anymore. There is too much to know. You have to confront them with the mysteries."