

American Woodturner

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

PRESIDENT'S PAGE

Alan Lacer, AAW President

In the autumn issue of the English publication, *Woodturning*, I wrote an editorial concerning the issue of certification in the woodturning field. At the end of the article I had requested feedback, and I certainly have received some! Let me give the readers of this journal some background so you will be aware of the issue.

Like most turners in this country, just mentioning "certification" made my hackles rise, my blood boil, my hands reach for a sharpened skew. Who dared to say such a foul word, especially here in America? Wasn't that one of the reasons we fought the British, to get away from titles like "Lord This" and "Master That?" The last time I was with a group of turners where the subject came up I think the discussion lasted all of one and one-half minutes—idea rejected, case closed. That was me too! I was one of those shooting from the hip, firing as quickly as possible, praising the accomplishments of the absence of such "Old World" notions. I thought I knew all the issues, knew what shape it would take, knew who it was for, knew it could never work, knew it murdered creativity, knew it proved nothing. These insights had to be either a genuine show of intelligence, ignorance, or prejudice. Looking back now, I'm convinced it was prejudice (really just another form of ignorance).

My ideas were severely challenged last summer when a weaver described a certification program in their field. Weaving, like woodturning, does not have a strong academic base—the source of most credentials, accreditation, and certification in this country; therefore a program was designed "to provide guidelines for individuals to judge their own skills, to encourage research and exploration in fiber arts, and to provide a means of identifying technically qualified weavers and spinners."

What captured my attention was that their program was not just about technique and knowledge of the craft. The evaluation process also placed emphasis upon good design. I have always felt there was something fishy about approaches that only emphasized technique or only design—the

better turners I have encountered are strong on both points. I know that when you are beginning, technique is everything: bevel angles, lathe speeds, types of wood, etc. are the critical issues. There is a point that actually comes early, rather than late, where the issue of design comes into play. Such questions as how large, what shape, how thick or thin, or even what wood are really design questions. And when a piece possesses good design and shows good execution this really *is* far more important than how it was attained. But those turners versed in a wealth of technique have more design options open to them, although they may certainly not take advantage of the opportunities. I think both issues need to be encouraged and assessed in any educational or certification program; and the weavers have attempted to tackle it. The manner in which such questions are to be evaluated would be more in line with how figure skating, gymnastics, diving competitions, and the like are critiqued. This would be in contrast to how running a 100 meter race or hurling the javelin are determined. The weavers handle such evaluations in a manner that is common to the first group mentioned: a panel of qualified craftsmen serve as the examiners, with the pieces submitted bearing no name of the individual. The effort here is to make the judgement-making process as objective as possible.

Do we need something similar in the woodturning field? Who would be the target group? Obviously such a program is not aimed at running the Stockdales, Osolniks, Stubbs, and other accomplished craftsmen through their paces to see if they really are as good as we believe. Nor would it in any way prove who are the best turners. No, if it did anything it would primarily be on a personal level that would give individuals something to shoot for, a chance to challenge themselves and receive feedback on how well they performed. On another level it might give these individuals a little more credibility when they seek to demonstrate or to teach.

Another payoff is that it offers a type of achievement, much like gaining a degree from college. It doesn't imply that you are a "master" be-

cause you have a master's degree—it just means that you faced a task before you, performed at a sufficient level as judged by others and not yourself, and were awarded a merit badge of sorts. Where is the parallel in woodturning? It in the publishing world? Maybe in the world of exhibitions? I haven't found it in either of these areas. First, to write about something and to be competent at doing it are not necessarily related: many who are good at a skill either can't write well or don't write; there are many who write about subjects but really can't or don't execute well. Has there really been a broad-spectrum woodturning exhibition in this country to date? I mean one that places as much value upon the well-designed and executed porch column as it does on the hollow vessel with an 1/8-inch diameter opening? Would an item from the Pinto Collection in England (a wonderful collection of "treen" over a couple-of-hundred-year period) make it into most of the exhibitions here; or has there been a bias and prejudice as to what counts for good turning? Most of the exhibitions, until quite recently, were comprised of invited individuals with a small percentage of slots open for the many others to slug it out for a little notoriety and spotlight. I'm so glad to see that trend changing! I felt for years that one of the best exhibitions that could be mounted would be one on "Underground Turners" individuals whose one requirement for application was that their work could not have been shown in any of a list of shows from the last ten years. My point is that perhaps we need another avenue, one that does not limit skills nor talented individuals but rather expands or adds to the pool.

Should AAW be involved? Not at this time. There is little support on the Board of Directors or in the general membership for our organization to jump into the fray. Since writing the article for *Woodturning*, I believe that I would first rather see a school or other established educational program tackle the issue before national organizations get involved. This is very much in the same vein as the AAW not staging

(Continued on page 28)

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On the Cover

*Bob Drew as "Dan McClure" at Conner Prairie,
Indiana.*

Photo by Marsh Davis

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TURNED BIRDHOUSES, MARK 1 MOD 2 OR THANKS FOR THE AVIARIES

Robert Rosand

My variation of the turned birdhouse is very similar to the ones that Andy Barnum makes (see *Woodturning*, Issue No. 3, Spring 1991), but differs somewhat in construction methods and visual effect. Personally, I hate jigs and am too lazy to make them unless absolutely necessary, so the following method of turning birdhouses does not require them. Also, the roofs and bottoms have a different visual effect from Andy's birdhouses as each "layer" of the roof and bottom is constructed of eight individual segments. This gives the impression of shingles.

In Andy's article, he voiced his concern with the conservation of natural resources, and I, too, share that concern. The construction method I use results in very little wasted material. The roof and base sections are made from small, scrap pieces of wood, while the body of the birdhouse is made from dead trees (with no checks) or from small trees, either of which can make a lot of abodes.

My first birdhouse bodies were built by the stave construction method. I had no problem assembling two staves, but I did have difficulty obtaining a satisfactory joint when assembling additional staves: the angle became too severe with multiple staves. Now I seek out a dead tree of the proper dimension with no cracks (usually one or two inches larger than the final diameter desired) or find a suitable live tree that won't be missed. Incidentally, the birdhouse body used for the photographs that accompany this article is the guide roller from a reel-type lawnmower. The finished length of this body is 3 3/4 inches and the finished diameter is 3 1/4 inches.

Construction of the body section

Select a log section two or three inches longer than the desired finished length and place it between centers on your lathe. The grain should be lengthwise to the bed of the lathe. Remove the bark and true up the ends. Remove from between centers, then fasten one end to a faceplate with screws or lagbolts. (It might be a good idea to mark the length of the screws on the outside of the wood to prevent cutting too deep.) Again, true up the exterior.



Completed birdhouse, 9 1/2 inches tall by 4 1/2 inches wide

Before hollowing, drill two holes on the side, one for the entry way and one for the perch. The entry hole size should be appropriate for the species of bird you are trying to attract. The hole diameter on this birdhouse is 7/8 inch. *American Woodworker*, March/April 1990, page 22 gives a listing of various birdhouse dimensions. The perch should also be appropriate to the size of the birdhouse and the bird. (Note: For aesthetic purposes when using green wood, I generally drill the hole after the body has dried.)

Next, hollow the cylinder as you would a hollow form. I usually drill a hole down the center, followed by excavation with scrapers and a bowl gouge. A finished wall thickness of 1/2 inch or 3/8 inch is adequate. Keep in mind that as the wood dries, you will get some warping, but not much. None have warped so much that I have had to throw them away, and none have checked. I always hollow deeper than the desired finished depth which allows me to part off the birdhouse body in an almost finished state. The finished body will be a cylinder, hollow from top to bottom.

At this point, I dry the bodies in a homemade kiln (usually two days does it). When dry, I true up the exterior by holding it in a three-jaw chuck or by friction fitting it to a

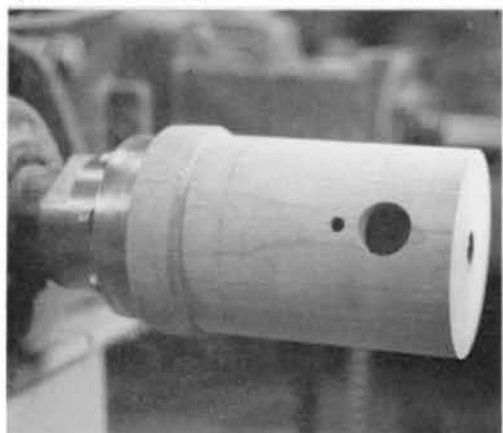
waste block. In both cases, additional stability is obtained by using a scrap disc of wood wedged between the body of the birdhouse and the tailstock center. I generally do not true up the interior, but do sand it with a pneumatic drum sander in the lathe.

Construction of the roof

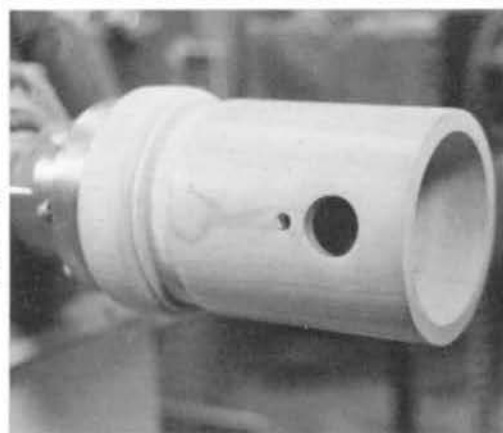
As previously stated, I was interested in obtaining a different look for my birdhouse roofs and bottoms, something that looks more like shingles than stack-construction. To accomplish this, I use a method similar to Dale Nish's segmented construction technique (see Dale Nish, *Creative Woodturning*, pp. 149-154). An advantage to using this method is the absence of endgrain on the outside of the turning.

First, determine the height of the roof you want to make. The one in the photograph is 3 inches tall and each layer is made from 1/2-inch thick stock. This results in 6 layers glued together. Each layer consists of 8 segments glued together at 45-degree angles. Each segment is triangle-shaped. To make the 48 segments required for the roof, rip 1/2-inch thick stock into 1 1/2-inch wide strips, then with the miter gauge set at a 45-degree angle, cut the 48 pieces. The width of the flat stock can vary within the roof, as I often use wider pieces towards the bottom of the roof in order to allow for more flare. You may, therefore, want to use 2 inch strips for the bottom two layers.

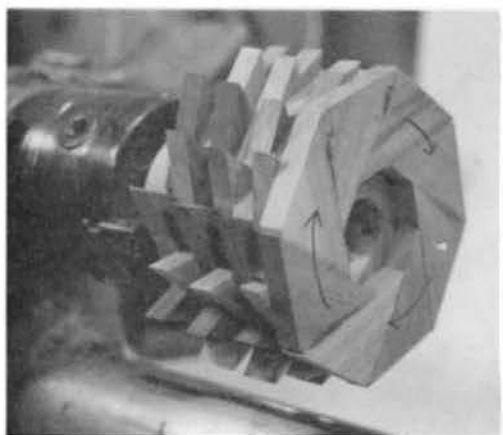
Start gluing the layers with what will be the top of the birdhouse roof. (If the birdhouse is to be used outside, I use epoxy to hold the sections and layers together.) Glue the first 8 segments together onto a waste block. These 8 pieces should be glued together without a hole in the center, as should the following two or three layers. Each layer should be glued up separately, then handplaned to make for good glue joints. The top 3 or 4 layers have no center hole to allow for the steep pitch of the roof. The bottom 2 or 3 layers will have a hole in them so that the roof can be made wider at the base. Be sure to orient the grain direction of each segment so that you will end up turning with the grain.



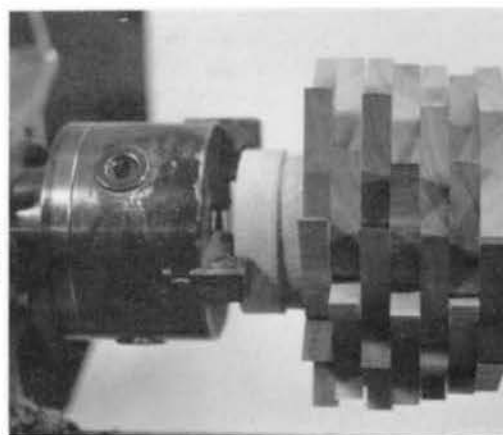
Birdhouse body prior to hollowing



Birdhouse body turned, hollowed, sanded, ready to part off



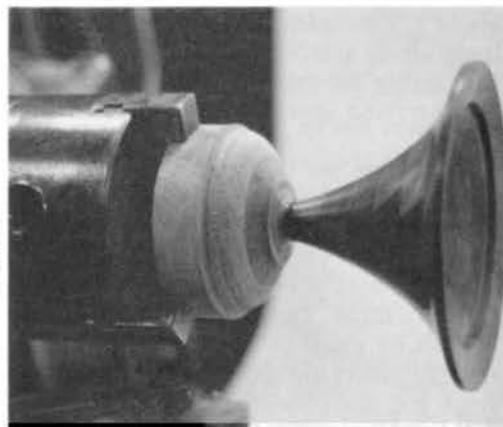
Roof prior to turning—note grain orientation



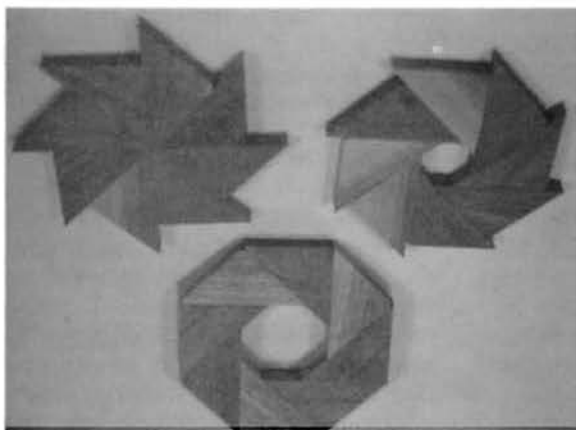
Roof prior to turning—side view



Birdhouse roof partly turned. Note ample material to prevent chatter



Birdhouse roof ready to part off



Bottom ring segments prior to assembly



Lip turned in bottom section to fit cylinder section. Ready to part off and reverse chuck



Birdhouse bottom—reverse chucked, sanded, hole drilled for finial

Fasten the waste block to a face-plate or a three-jaw chuck. Turn the exterior of the roof until the roof line can be established about half way. Then turn the interior and cut the lip in the roof where the roof will fit onto the main body of the birdhouse. The roof should fit loosely onto the body, otherwise expansion and contraction could cause the body to crack. Return to the outside of the roof, refine the shape, then go back to the interior and so on until the roof is complete, inside and out and held on to the waste block by 1/2 to 3/4 inches of wood.

At some point during this process (before too much wood has been removed) sand the roof. If you wait until you are ready to part it off, it will probably snap off on its own. Generally, I sand when the roof is about 3/4 complete and the roof line is definitely established. Then I finish turning the exterior, sand the remainder, and part it off the lathe.

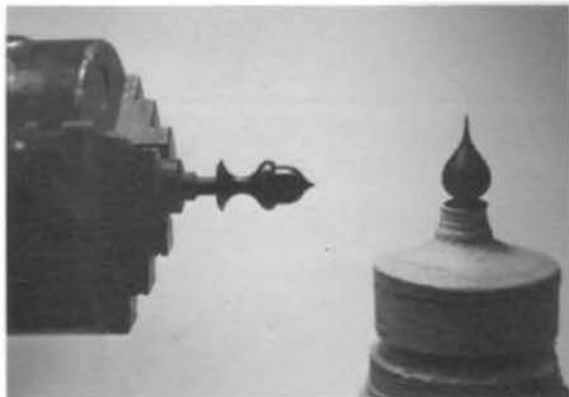
Constructing the bottom

The bottom of the birdhouse is assembled and turned in the same manner as the roof except that fewer ring segments are required—I typically use three. The closed ring is the first to be glued to the waste block and the others are glued to that. The rings are also oriented so that you will be turning with the grain. I proceed this way so that I can cut the lip to fit loosely into the bottom of the birdhouse and then part off the rest of the bottom, reverse it, and friction fit it (or hold it in a three-jaw chuck) then finish turn it, with the grain.

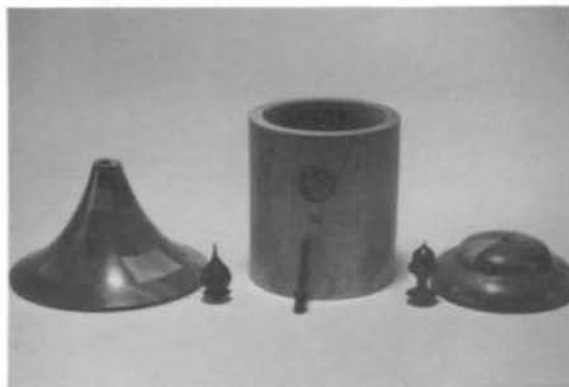
Turning the bottom and top finials

The bottom and roof sections can be friction-fit or held in a three-jaw chuck to allow for drilling a hole to accept a finial. Finials can be virtually any shape you desire, but I think that the onion dome and acorn are

Finial and acorn finished—acorn ready to part off



Parts prior to assembly



such classic looking shapes that I like to use them. Again, I resort to my trusty three-jaw chuck to hold the finial material. Cut the finials to the desired shapes, sand, then part off, leaving the appropriate size tenons. Undercut the finials to allow for a perfect fit. For contrast, I always try to use exotic woods for perches and finials (ebony, for example).

Making a spacer

Almost all of my birdhouses receive a spacer at the back to allow for the overhang of the roof when attaching the birdhouse. The spacer on this birdhouse measures 1/2-inch thick by 3/4-inch wide by 3 1/4-inch long. Glue the 1/2-inch side to the back of the birdhouse with waterproof glue. Drill a small screw hole through the spacer and birdhouse body. This hole should line up with the entry way hole so that you can use a longblade screwdriver to attach a screw through the entry way.

Assembly

The bottom should be loose fitting and is attached to the birdhouse body with silicon. At first I was not enthusiastic about loose fits and silicon to allow for expansion and contraction, but I have had no failures in the past year or so since I began

making these birdhouses. Outside birdhouse roofs should not be permanently attached, as you will need to remove the roof after each season to clean house.

Miscellaneous information

I spray my exterior birdhouses with an exterior polyurethane. Houses that will not be exposed to the elements are sprayed with a semigloss lacquer.

If you wish to have a birdhouse that swings from a cable, simply drill a hole through the top finial and attach a cable through that hole and through the spacer hole. The roof can still be opened up to allow for cleaning.

I hope that this method of making birdhouses helps those of you, who, like me, despise making jigs. And once again, I would like to thank Andy Barnum for providing the impetus for getting me started in the fine art of building birdhouses. ©

Robert Rosand is a self-taught professional woodturner living in Bloomsburg, Pennsylvania. He donated the birdhouse featured in this article to AAW. It will be included in the banquet auction at this year's national AAW symposium.

EARLY AMERICAN SAND SHAKER

Devore O. Burch

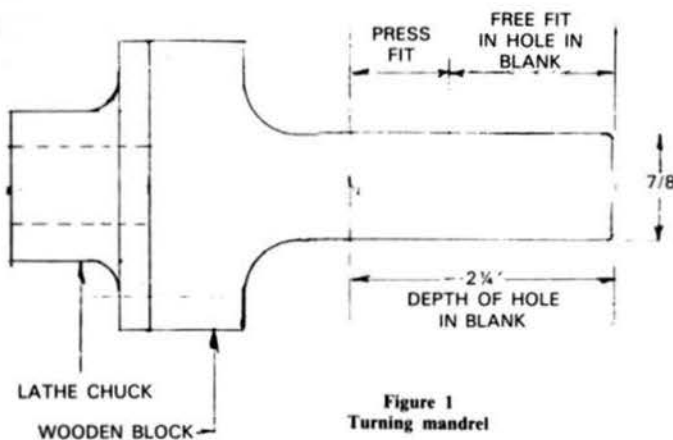
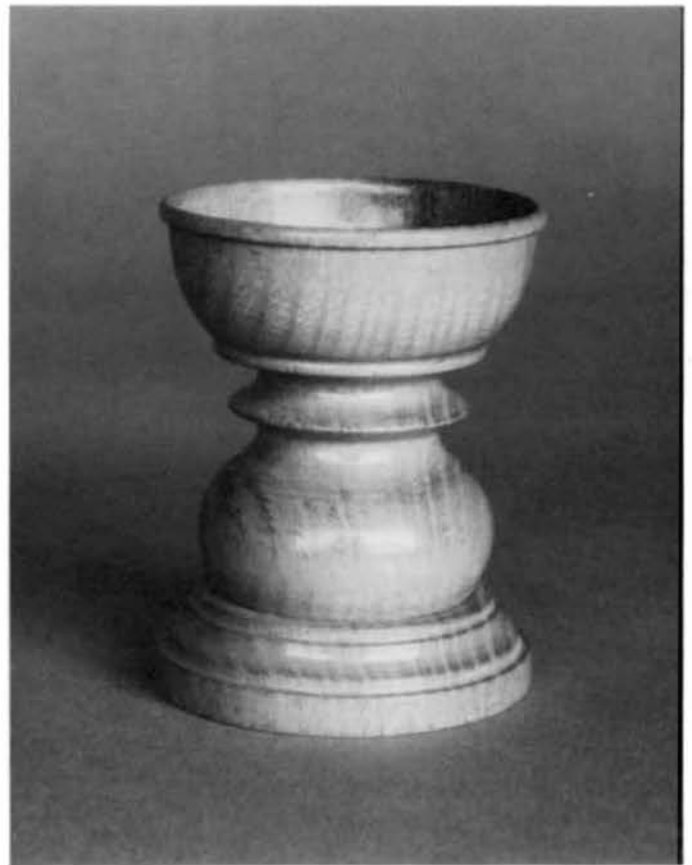


Figure 1
Turning mandrel

Years ago, my wife and I were leaving Galveston Island, driving north on I35. As we neared Houston from the south, we came upon a giant flea market, one of the largest we had ever seen. We decided to browse a little before tackling the Houston traffic.

One of the stalls caught my eye. The proprietor dealt in American antiques. He had the usual, such as butter churns, butter molds, old tables, and chairs, but one small item caught my eye. It looked like maybe a salt shaker with a very unique design, though it was in very bad condition. The wood was cracked and discolored and pieces were missing. My interest was peaked, however, by its very pleasant design.

The dealer told me that it was a salt or pepper shaker, but its unique design puzzled me. I thought it must be something other than a salt shaker or why the funnel-shaped top? Years later, Bill McGee, an authority on American antiques from Fort Worth, properly identified it for me. This thing is an early American sand shaker. In the days when liquid ink was commonly used and before paper blotters were available, fine sand was sprinkled on wet ink to absorb the liquid ink. The paper could then be cupped and the sand poured back into the funnel-shaped top. From there it would flow back into the hollow center.

These make great little gifts, and if made from wood such a maple and

walnut can serve as salt and pepper shakers. They are simple to make by using the turning fixture shown in drawing number 1.

First, turn a cylinder 3 1/8 inches tall by 2 3/4 inches in diameter. Remove from between centers and bore a recess in the bottom, 3/16 inch deep by 1 3/4 inch in diameter. Next, bore a 7/8 inch hole, 2 1/4 inches deep, using the center mark left from boring the recess as a guide. Push the blank onto the turning fixture and turn the design. When the turning and sanding is complete, slip the part off the mandrel, and drill the hole pattern as shown in photo number 1. Slip the part back on the mandrel and apply the finish of your choice. French polishing is a good choice here, since the lathe provides the elbow grease required for that most beautiful of all finishes. ©

Devore O. Burch lives in Fort Worth, Texas.

A BRIEF HISTORY OF THE POLE LATHE

Don Weber

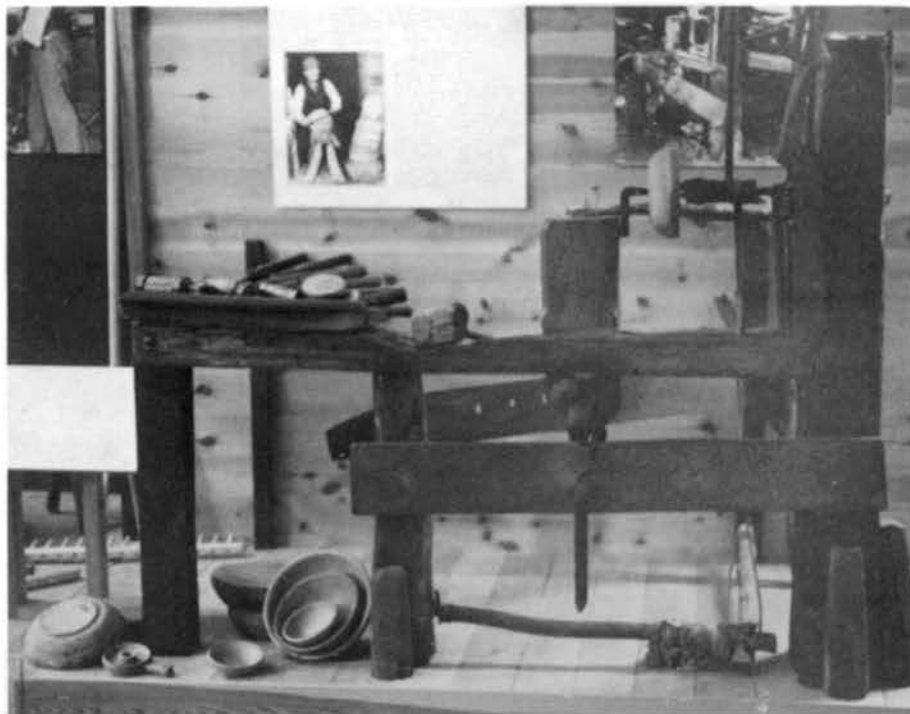
The lathe is probably the oldest of the developed machine tools. With the bow drill, it was the only complex tool known to antiquity, although the loom and the potters' wheel were developed at a similar time. The early Irish often called the lathe a loom for its similarity in construction.

Although there is evidence of early use of the lathe for turning nonferrous metal, its primary use was as a woodworking machine, producing articles for everyday use. Fragments of the waste or cores of turned bowls, that have been carbon dated to around 1200 B.C., have been found in the bogs of Ireland. Examples of Celtic arm bands turned of shale from the Glastonbury Lake villages have been dated back to the first century B.C.

The oldest certain trace of lathe work is a fragment of an Etruscan wooden bowl from the so-called Tomb of the Warrior at Corento (730-690 B.C.) now in the Berlin Antiquarium. In any case, it seems quite clear that the lathe was certainly in use as early as the eighth century B.C., probably as early as 1000 B.C. or even 1200 B.C.

By the second century B.C., the lathe was known throughout most of Europe and the Near East. Turning clearly spread in the Celtic world to the La Tene culture to the Glastonbury settlements in England.

The earliest representation we have of a lathe was carved in low relief on one of the walls of an Egyptian grave of the third century B.C. The frame of the lathe appears to have consisted of two longitudinal bars. At right angles to this primitive lathe bed are two other bars which act as headstock and tailstock. The workpiece was mounted between centers and the turner has a cutting tool with a handle resting on the front bed bar for support. A helper rotates the work with a cord wrapped around the work piece, moving it back and forth as the turner carves the design. A bow was also utilized to spin the work between centers. Both methods result in an alternating rotation of the workpiece.



Each of these methods has certain advantages. The simple cord leaves the turner both hands free to control his tool, but he must have an assistant or apprentice to provide the power. The use of the bow cord has the advantage that the turner can drive the work with one hand while he controls the tool with the other, either singly or in combination with his feet. There are many turners in the Near East or North Africa still using these methods.

The spring pole and treadle drive probably came into use during the Middle Ages, as early as 757 A.D. Bishop Joseph of Freising mentions turners in Bavaria during that period. The only clue to the use of the spring pole lathe prior to the thirteenth century was described about 1130 A.D. for making the cores for casting bells and pewter tankards.

The first illustrations of the spring pole lathe appear in the thirteenth century and show the pole lathe in use in turning workshops associated with monasteries or churches. A stained glass window at Chartres, given by the turners guild in honor of their patron saint, St. Julien, is the earliest representation of the pole

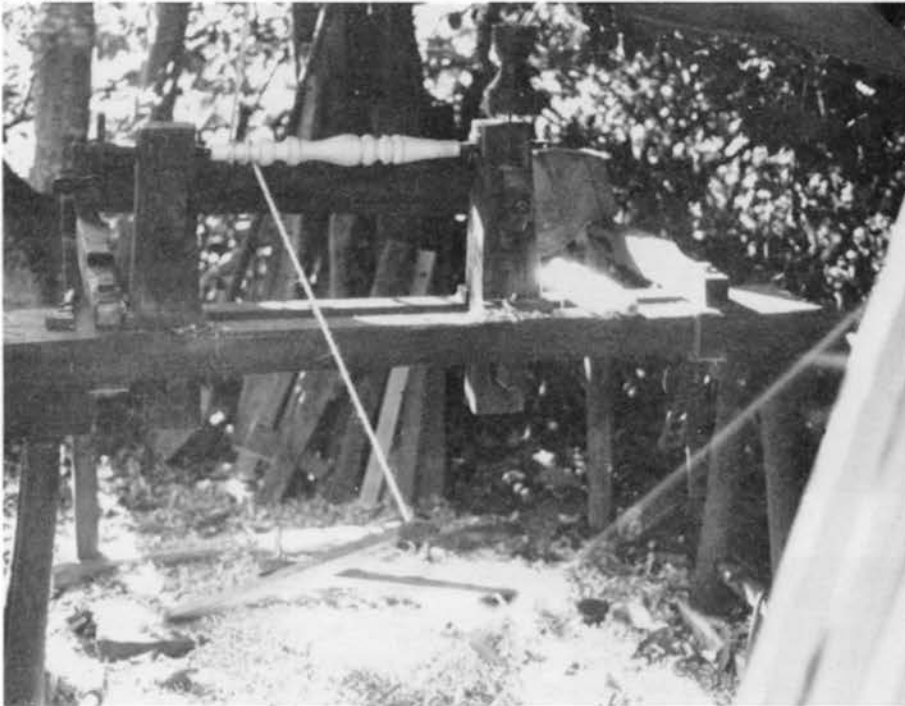
lathe. By 1395 there is an illustration of a turner at work on a lathe with the action of the spring pole, cord, and treadle in use.

Continuous drive of a spindle by means of a crank-flywheel and cord is first shown in an illustration in the second half of the fifteenth century; the "Great Wheel" lathe was certainly in use by 1568.

Leonardo da Vinci's specific contribution to actual machine tools, including the lathe, are difficult to establish, but in his drawing in the *Codice Atlantico*, is the first sketch of another important drive of the lathe—a treadle acting upon a crankshaft to turn a flywheel. While Leonardo's actual crank drive was abortive, the importance of the spindle drive was to change turning in the future. It is evident that by the beginning of the sixteenth century a continuous drive, heavier construction of bed and stocks, a mechanical tool holder, and carriage and spindle drive were in use, as in the modern lathe.

Although the lathe continued to be developed and refined to do ornamental and mechanical turning, such as cutting screw threads, the spring

Great Wheel Lathe



Don Weber's pole lathe

pole was still used as the main power source. Jacques Besson's screw cutting lathe, developed about 1578, shows the complexity of the mechanics involved in early ornamental turning, although these lathes were used mostly by hobbyists in the top level of society.

By the seventeenth and early eighteenth centuries, a rapid development of the industrial lathe was in progress. Plumier's *L'art du Tourner* was the first treatise on the lathe that we have. Plumier's avowed purpose was to describe various types of lathes in sufficient detail so that a man of intelligence could not only build one for himself, but operate it with some skill. The illustrations showed the lathe and its tools in some detail.

To return to the simplest pole lathe, the chair bodgers of Great Britain continued to use the spring pole and treadle well into the 1950s, when the last of the bodgers working in the Chiltern woods around High Wycombe built their lathes in the beech forests to supply the Windsor chair factories with legs and stretchers. In the West Country and Ireland, bowl turners such as George Laliey and Joseph Hughes were turning nests of

bowls, some as large as 24 inches in diameter, on lathes as primitive as the earliest machines.

In 1990, a group of lathe turners, most of them from Great Britain, gathered to form an Association of Pole Lathe Turners. To date, there are 56 members, only one of them an American, continuing this early form of turning using springy pole, cord, and treadle. ☺

Background information for this article was obtained from *History of the Lathe to 1850*, Society for the History of Technology, Cleveland, Ohio and *Hand or Simple Turning Principles and Practice*, Holtzapffel, Dover Publication Co.

Don Weber lives in Mendocino, California and is a member of the Association of Pole Lathe Turners. As part of AAW's 1991 symposium in Texas, Don demonstrated the construction of a pole lathe. AAW is pleased that he will be part of the 1992 symposium in Utah, where he will, once again, build a pole lathe during the course of the symposium.



Collection of the Mercer Museum of the Bucks County Historical Society

The Nor-Cal Woodturners' August 1991 newsletter printed a picture of "The Great Wheel Lathe" and noted that "Nor-Cal Woodturners is considering purchasing the lathe shown in the photo below for use at meetings and demonstrations." The caption was intended as a joke, however my curiosity led to an interesting story of this unusual hand-powered lathe.

Cory M. Amsler, Curator of Collections at the Mercer Museum of the Bucks County Historical Society, Doylestown, Pennsylvania, provided the history of the old lathe that is now in their collection.

"It was found by Henry Mercer in Hartsville, Bucks County. It was owned by George White, whose father, Samuel White, had purchased it from William Lewis, a wheelwright in Horsham, Montgomery County. The elder Mr. White acquired it about 1862. The White family used it to turn pump spouts, pump buckets, chair parts, and baseball bats. George White continued to use it after his father's death until about 1895. Mercer dated the lathe to about 1830-40.

Mercer acquired the lathe for the museum in 1927. Apparently a William B. Michener assisted Mercer in securing it for the collection."

While Nor-Cal Woodturners does not intend to buy "The Great Wheel Lathe" we've had a lot of fun at our meetings with those who believed we were going to buy it. The standing joke is: "It's your turn to crank the Great Wheel."

*Charles Brownold
Nor-Cal Woodturners,
Newsletter Editor*

CONNER PRAIRIE'S FLYWHEEL TREADLE LATHE

Betty J. Scarpino from an interview with Bob Drew

Photos by Marsh Davis

Bob Drew, who portrays a nineteenth-century woodworker and maker and operator of a flywheel treadle lathe in the year 1836, looks and acts the part he plays. His knowledge of historic woodworking tools, machinery, and methods makes him an ideal person to be a woodworking interpreter for a living history museum. Visitors to Conner Prairie, north of Indianapolis, Indiana, are treated to a vast array of woodworking wisdom when they visit "Dan McClure's" shop in Prairietown, Indiana.

When visitors ask him where he got his flywheel treadle lathe, "Dan" can honestly say that he made it, something that he wasn't able to do until recently. The treadle lathe, a copy of a lathe dating from around 1830, was built in 1990, not 1835. When visiting the old shop and talking to "Dan," however, it is easy to go back in time and believe that the year is 1835. Before constructing the new lathe, the shop contained an original 1830s treadle lathe that shook and groaned when used.

Bob Drew's dream of building a replica old lathe came true in 1989 when administrators at Conner Prairie gave him and his staff of volunteers the go-ahead to build a reproduction. The major change that Conner Prairie had to settle for in the new lathe was the type of wood it was made from. Much of the old lathe is constructed of chestnut—something not available today. Chestnut is a member of the oak family, so oak would have been a good substitution; however, oak is very heavy and the finished lathe would have weighed around 1,200 pounds. Bob decided to use white ash, a strong wood, but not as heavy as oak.

Early in his woodworking career, Bob learned that July is not the best month for harvesting wood for use in woodworking. In spite of this, when a huge ash tree near the village was cut down in July, and Conner Prairie could have it for free, he decided to take a chance. Conner Prairie sent a tractor and lowboy to the tree site and loaded up the huge log. It measured 32 inches in diameter and 11 feet long. It was hauled to a sawmill in Cataract Falls, Indiana,



"Dan McClure" in his woodworking shop in Prairietown, Indiana

and cut into planks. Except for parts of the flywheel, the whole lathe would be built from that one log.

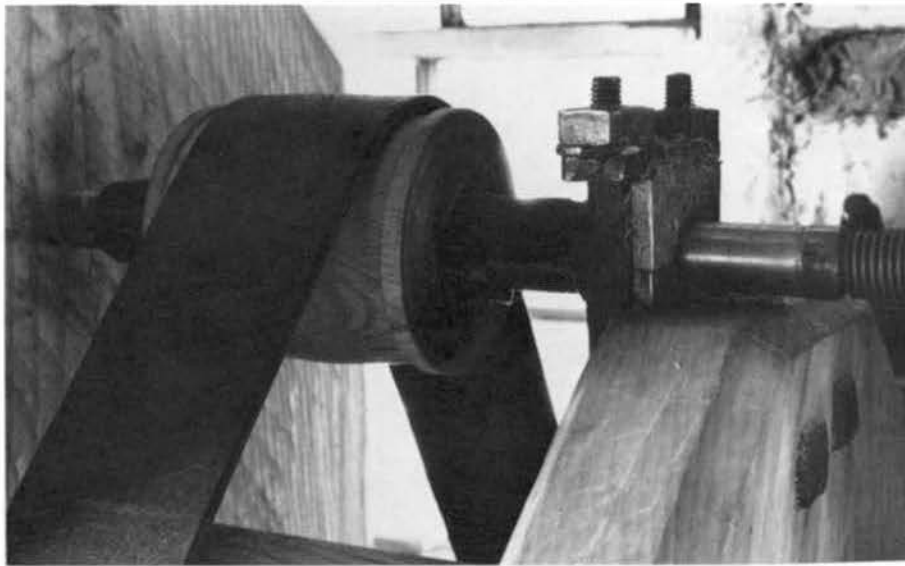
Determined not to lose even one of the ash planks to warpage and cracking, Bob and the volunteers in Conner Prairie's modern woodworking shop, Dick Waugh, Jim Hunter, John Edington, and Dale Richardson, painstakingly turned each plank every day to ensure that the wood dried evenly. The ends were not sealed for a good reason—Bob wanted the wood to dry out. This method, based on historic woodworking practices, works. That is the place to start with the story of the actual construction of the lathe.

Given the slightest opportunity, a green board will crack and split. Made from green ash, Conner Prairie's lathe is living proof that there are methods that can be used to keep green wood from warping and cracking. In January 1990, Bob and Conner Prairie's volunteers cut the rough planks into the major sections needed for the lathe. In Conner Prairie's modern woodworking shop, they used an old Stanley scrub handplane to smooth the flat surfaces of the boards, including the seven major sections of the lathe (two headstock boards, two ways, one endstock board, a large base section, and the long treadle). Scrub planing had two effects—it erased the modern-day sawmarks, and it created a smooth, wavy surface, ideal for maximum

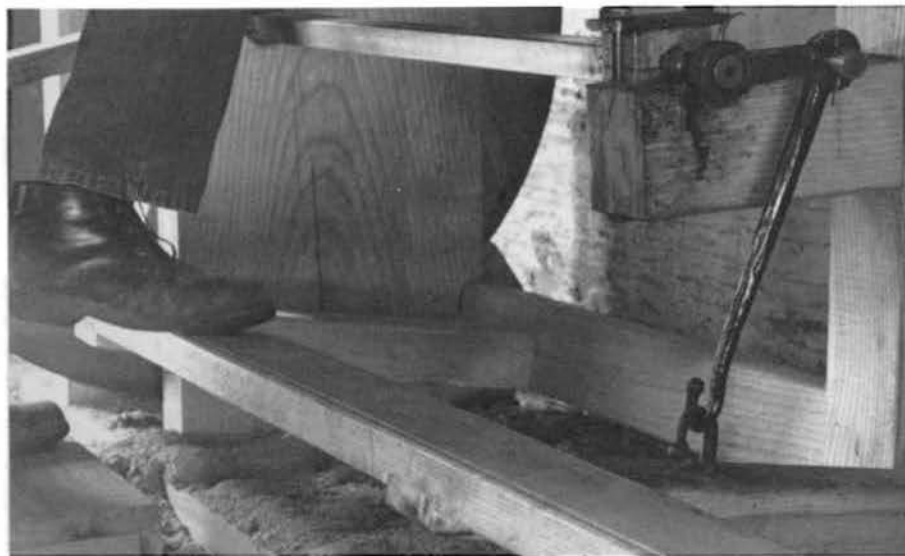
crack-free drying. Next, the ends were chamfered and beveled in order to create a larger endgrain drying area. Chamfering and beveling the ends causes that area to dry more quickly, making it harder than the rest of the board. This hard section then acts as a clamp to keep the rest of the board from cracking as it dries.

One more step needed to be done to prepare the boards for drying warp free. Using an old beading plane, grooves were cut along the lengths of the boards, near the edges creating a bead on each side. While the beaded edge looks decorative, it allows the wood on the edge of the board to dry more quickly, creating a clamping effect to keep the rest of the board from warping.

Now that the boards were ready, mortises and dovetails could be cut and the major structure of the lathe could be assembled. Using the old lathe as a pattern, Bob and his crew cut half dovetails for the ways to fit into the headstock and made mortise and tenons to attach the ways to the endboard section. In order to prevent the ways from warping, Bob put them in the lathe with the bark side of the wood on the inside of the lathe, then put a temporary wedge spacer between the ways. Any warpage of the ways would result in a curve with the convex side between the ways—the spacer would counteract that curving tendency. The half dovetails were lowered into place,



Drive belt is made of cowhide



then the mortise and tenons were wedged into the endboard. As the green wood dried, the wedges would hold the ways firmly into the endboard.

The head of the lathe has two major sections that the flywheel fits between. Similar to how the ways are connected, these sections fit together with a sliding dovetail and a wedged mortise and tenon on the outside section. The three major uprights were attached to the base with wedges. Each of the three uprights had two half dovetails on the bottom. Conner Prairie's modern-day woodworkers could now turn their attention to building the flywheel.

The forty-one inch flywheel from

the old lathe was a mystery for Bob to solve. He knew that reproducing the flywheel correctly was the key to building a lathe that worked for the turner, not against him. An unbalanced flywheel creates its own momentum and, combined with the greater weight of the treadle, makes it possible for a woodturner to operate this type of lathe all day without fatigue.

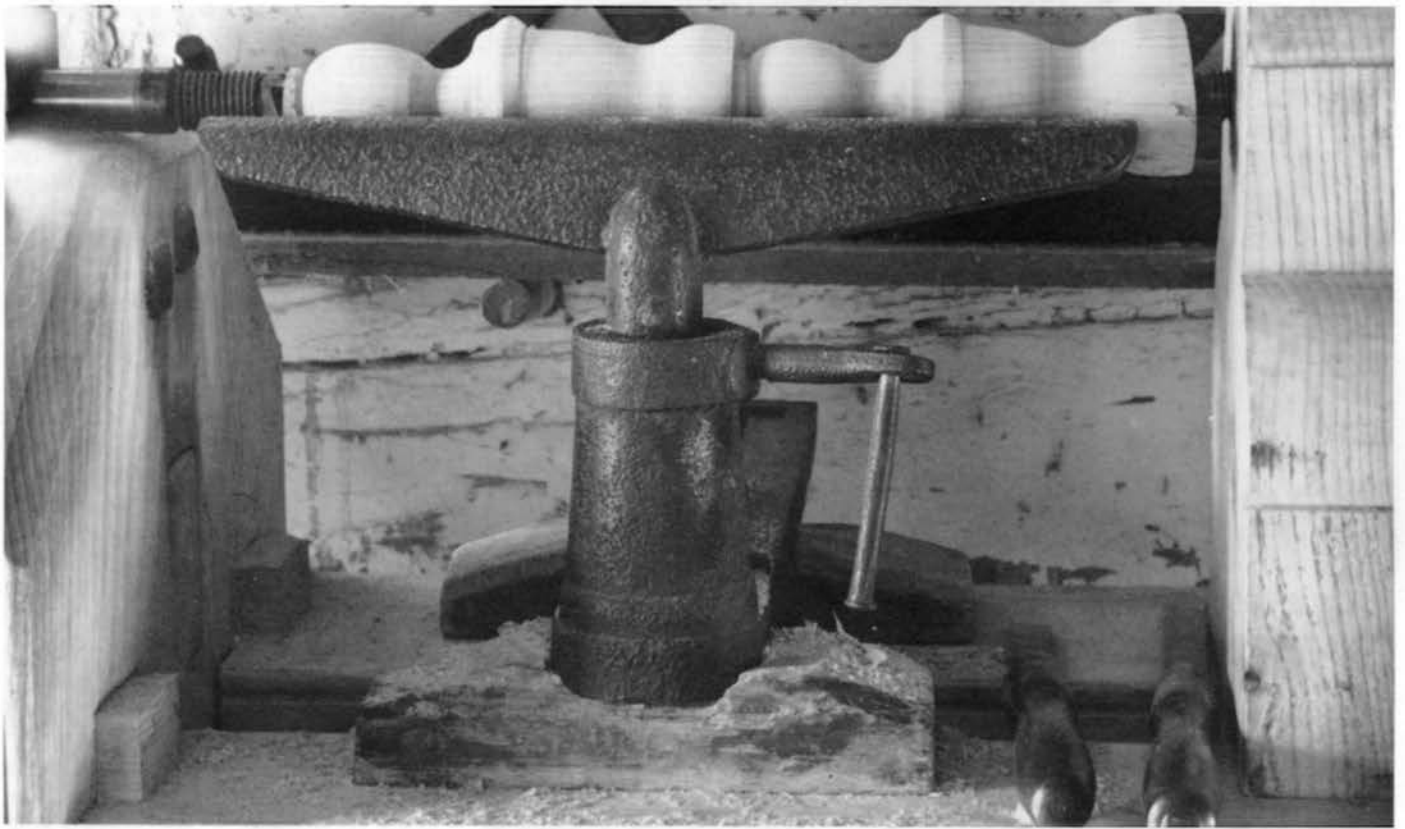
The old lathe he reproduced was not just a crude piece of machinery—there was a reason for constructing it one way as opposed to another. In each step of the reproduction process, those reasons were a delight to discover. Since the old flywheel could not be taken apart to unlock its mys-

teries, the curator of collections arranged to have it x-rayed at a local hospital. The x-rays revealed the size and location of the holes for the pins and which parts of the wheel overlapped each other. The new flywheel could now be reproduced as closely as possible to the original.

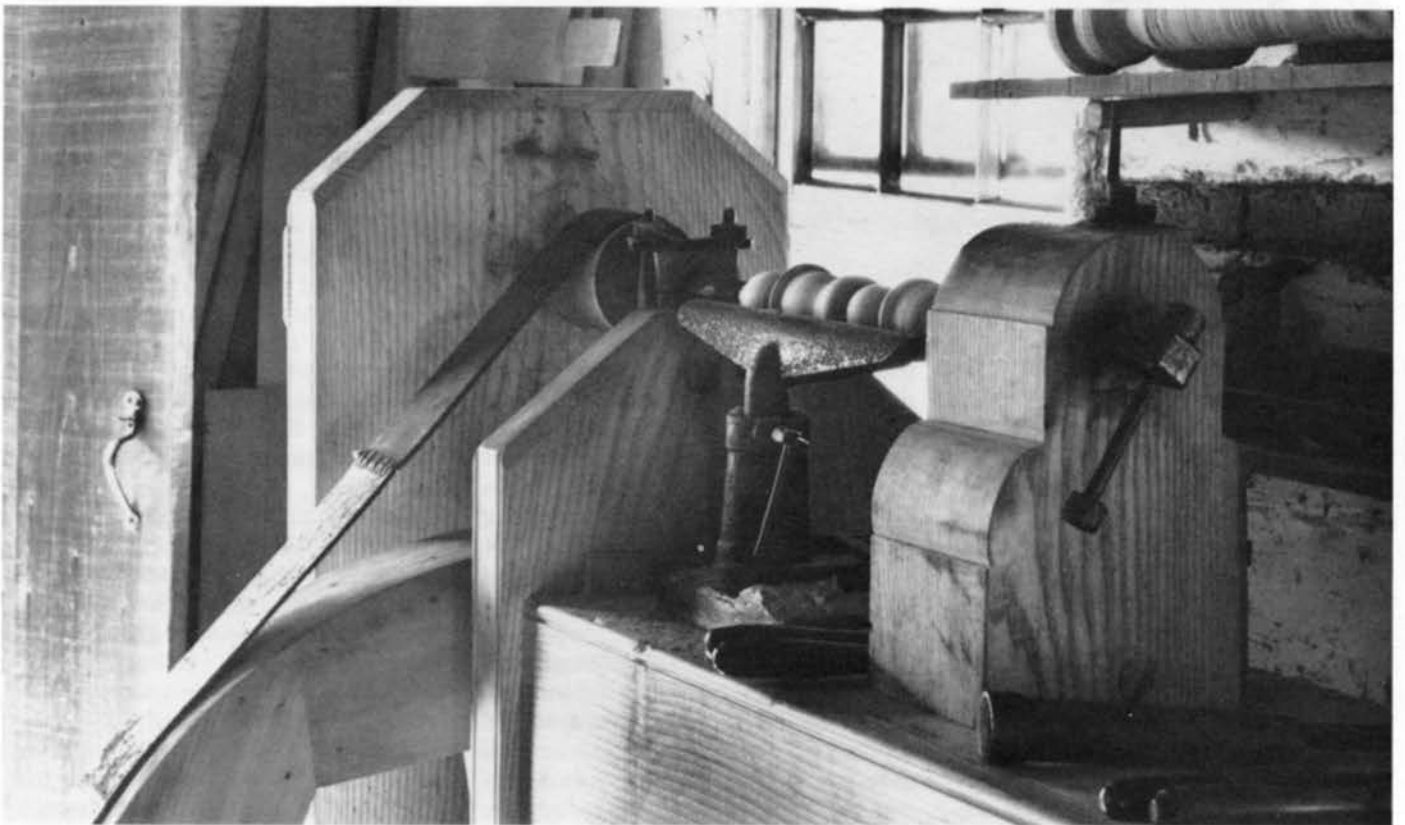
The original flywheel is constructed of several different types of wood. Six different woods were chosen to use in building the new wheel. The outer area where the cowhide belt runs (sandwiched between two more layers) is quarter-sawn red oak which bends easily. It makes a smooth, wear-resistant surface. Attached to the inside of the red oak are segments that hold the spokes. They are made of white oak, a very strong, heavy wood. The resulting weight on the outer edge of the wheel gives it torque as it spins around. These sections of white oak are lap-jointed together, a technique revealed in the x-rays. The spokes are made of white ash, strong yet able to bend before breaking. The hub is made of red beech. Bob turned and mortised the hub the day the tree was cut, then inserted the tenons (previously dried for six weeks) into the mortise hole in the beech hub. In two minutes, the joints were so tight that they could not be pulled apart. The center of the beech hub had been the center of the tree. Cutting the hub this way insured even drying, keeping the flywheel running true. The outer surfaces of the wheel that encase the red and white oak are made from poplar, a soft, closed-pore hardwood that is smooth to the touch. The white oak segments are attached together with hickory pegs.

Initially, Bob planned to make the spokes all the same length. The original lathe, however, is not constructed that way. When he laid out the white oak segments of the wheel, he realized that they were thick on one side and thin on the other. One side required shorter spokes than the other, creating the unbalanced flywheel that was so crucial to the ease of operating this type of lathe.

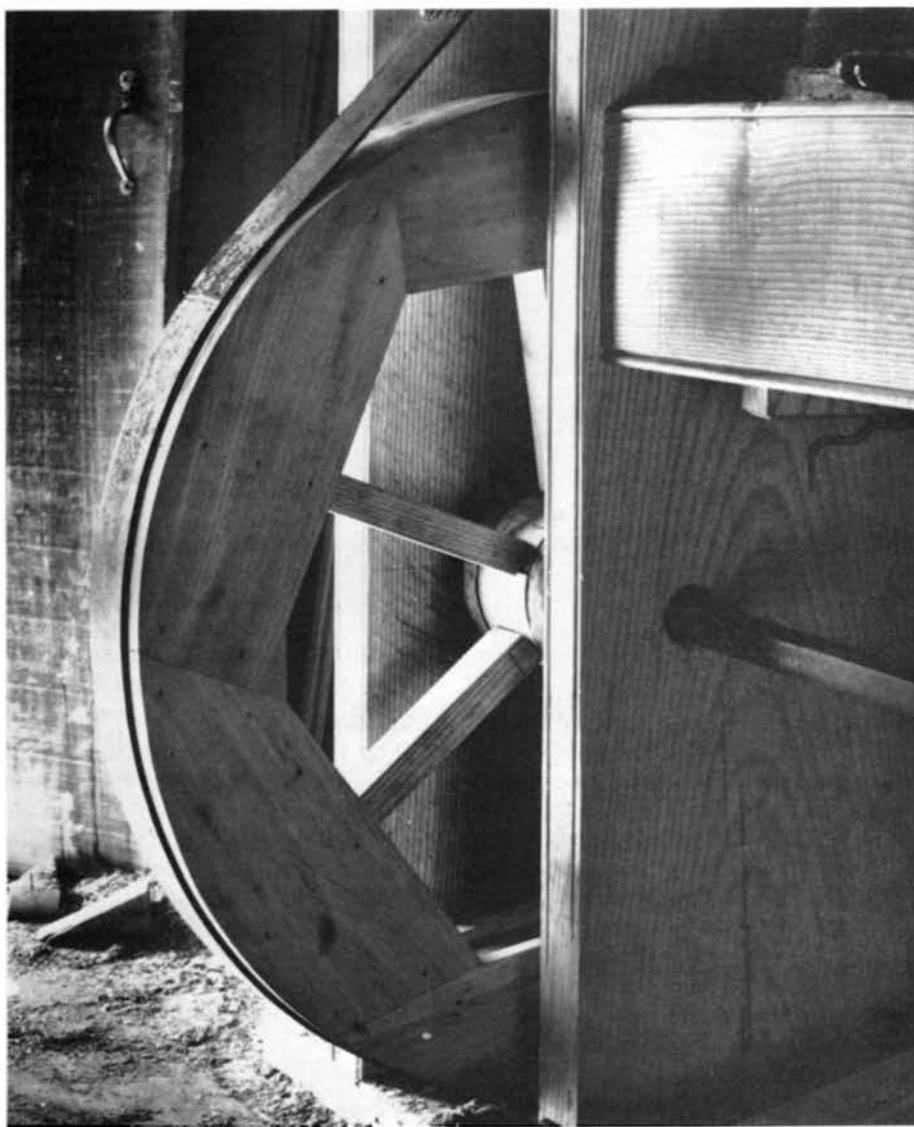
One more major problem needed to be solved. The shaft that goes through the wheel is four-sided and the wheel has six spokes. Bob did not know which way the flats should



Toolrest from the original lathe



Note the chamfered and beaded edges of the ash boards



Flywheel

go in relationship to the spokes on the wheel. He also did not know where the crank should be placed with regard to the counterbalance between the heavy and light side of the wheel. He started thinking. Since it is easier to push a wagon downhill rather than up, Bob used this same reasoning when he positioned the square shaft in the center of the flywheel. He then knew where to position the crank so that a woodturner would be able to push the treadle on its downward motion and let the flywheel and treadle do the rest of the work bringing the treadle up and just past dead center, ready to be pushed again. The torque of the unbalanced flywheel and the weight of the heavier treadle would do three-quarters

of the work, the woodturner one-quarter.

Bob has never measured the rpms of this flywheel lathe—it is not important. He has power at any “speed” and can change speeds by “kicking” (pushing down hard) the treadle once. This lathe has about eight “speeds” that range from slow to fast.

The flywheel is mounted on the lathe off-center with most of the wheel sticking out on the operator’s side of the lathe. Bob explained that this is most likely due to space considerations; the lathe can be pushed up against a wall. In addition, the wheel is accessible to the turner in order to pull it into position for the first push of the treadle.

One more item needed to be constructed in order to make the operation of the lathe easy for the woodturner. Bob built a box to stand on when pushing the treadle. Standing on the box allows the turner’s leg to extend full-length with the downward push of the treadle, therefore keeping leg muscles from cramping. A woodturner can treadle six hours on this lathe (three hours per leg) and not become fatigued.

Conner Prairie’s blacksmiths, Melvin Lytton and Mike Shult made most of the metal parts for the lathe. They made wooden molds and hand-poured the Babbit bearings for the drive center of the headstock. The toolrest from the original lathe is still being used, however, a new one will have to be made some day as the old one cracked and was repaired improperly some years ago.

When Bob is dressed in period clothing and working as Daniel McClure on the flywheel lathe, he is not just demonstrating for visitors to the village. He makes furniture parts and turned items for the other residents of Prairietown. He has made bedposts, rungs for chairs, and tool handles on this lathe. Sandpaper was expensive in 1836 (two cents a sheet) so “Dan” uses oak shavings to burnish his turned pieces, then finishes them with linseed oil and/or beeswax.

It is fascinating to see a predecessor to a modern-day lathe and realize that the basic principles of the lathe have not changed. A piece of wood is attached to a lathe, the wood is rotated, cutting tools are applied, and a piece of wood becomes a chair leg, bedpost, or bowl. ©

Bob Drew has worked at Conner Prairie for six years. He spends the winter months working in the museum’s modern woodworking shop. Five days out of ten, in the spring, summer, and fall Bob becomes Daniel McClure, woodworker in Prairietown, Indiana, in the year 1836.

THE SPARE-PARTS TREADLE WOOD LATHE

Richard Dunham and Lyndon Lampert

Whenever Richard Dunham hauled a load of trash to the dump, his father cringed. Invariably, Richard would return with more 'stuff' than he had taken away.

"My Dad considers this a fault," says Dunham, "but I call it recycling! If I see a leaf spring, an old axle, or any other 'treasure,' I can't help myself—I have to grab it! After all, I might just need it someday."

One winter's day in 1989, Dunham's recycling habits, a bit of imaginative engineering, and some inspiration from Leonardo da Vinci, combined to make a twelve-year dream come true . . . but that's getting ahead of the story.

Richard Dunham is an avid woodworker in the small Victorian community of Lake City, Colorado. Somewhat of a dreamer (a useful skill for surviving long winters at 8,700 feet), Dunham recalls his long fascination with the concept of a treadle wood lathe.

"For about twelve years I had wondered if it were possible to build a treadle flywheel wood lathe. I first had the idea after inspecting my grandmother's treadle sewing machine and began to ponder the possibilities. I had never seen such a contraption, so I had no model to work from and was blissfully ignorant of the fact that years earlier a man named Leonardo da Vinci had formulated the basic design of a flywheel lathe."

"One day I mentioned my idea to a close woodworking friend, David Winblood. He showed a strange little grin as I described my dream machine, and the next morning he returned with a copy of Roy Underhill's *The Woodwright's Workbook*. And there it was—a real treadle flywheel lathe. I was amazed how similar it was to my design and even wondered if Underhill was clairvoyant, for how else could he have know about *my* idea?"

That night, as Dunham read Underhill's book, he felt more than a little embarrassed to discover that he was not exactly the first to come up with the idea. In addition to da Vinci's invention, Underhill's lathe was a reproduction of a 1700s French treadle flywheel lathe. Dunham did believe, though, that his own design had some redeeming new variations,



Photo 1

and now he knew that such a machine could actually be built. The next morning he entered his shop with new vigor. "I was convinced that my design had merit, and even though it wasn't the first, it still was original. As I began the project, I strove not to be influenced by either Roy's or Leonardo's lathe."

After twelve years of mental designing, Dunham found that he knew exactly how the lathe would go together, and progress was amazingly quick and easy. Remarkably, the lathe was substantially completed in only three days—but, adds Dunham with a sly smile, "those were three, 24-hour days! I would work until 2 or 3 a.m., and being totally exhausted, would turn off the shop lights and go to bed. I would lie there trying desperately to sleep, but my mind was still running wide open, and there was absolutely no way to shut it off. So, since I couldn't sleep anyway, I got up, got dressed again, tossed another log in the stove, and got back to it!"

As he worked on the lathe for those three days, Dunham's packrat habits finally paid off. Between the odds and ends of wood scraps and various metal castoffs that he had accumulated, Dunham was able to build the entire lathe for a mere \$16.57. Only the spindle thrust bearing and the 1/4-inch round leather drive belt were

purchased.

For the basic construction of the lathe and flywheel frame, Dunham used Douglas fir, which he had on hand in his 'dry' rack. Douglas fir is a heavy wood that helps maintain stability under heavy use. The flywheel was made from 2- by 6-inch ash for its weight and to provide an aesthetic contrast to the fir.

Although the woods Dunham chose make for a beautiful as well as functional machine, he is most proud of the junk parts he was able to use. "I used the steering wheel shaft from a 1971 Chevy pickup for the spindle and the flywheel axle, and the truck's clutch and brake linkages worked for the adjustable flywheel crank assembly. All the pillow block bearings were obtained from the front rollers of an old winch truck, and I ground down a screwset bearing race to make the drive spur."

The lathe and flywheel are two separate bolt-together units for ease in moving and for compact storage. The traditional large square-treadle unit (such as found on antique sewing machines) is replaced by a single treadle bar across the front of the lathe. The treadle bar operates the pitman arm assembly (photo 3). The pitman arm allows adjustable torque setting to the flywheel, and it also allows adjustments to the treadle bar height.

The lathe includes three adjustable driven wheels (photo 2) to achieve average turning speeds of 750, 1350, and 1750 rpm. Dunham favors the 1350 rpm wheel for most of his turning, and with infinite variations possible via the treadle, one driven wheel size can cover a broad range of torque and speeds. With the 750 rpm wheel, a 14-inch swing over the bed, and the pitman arm set to high torque, Dunham says the operator can "spin some pretty gnarley blanks."

Dunham found the physical labor required to operate his lathe to be surprisingly light, since the carry-through of the flywheel does most of the work. The flywheel raises the treadle bar, and at the top of the stroke, the operator simply steps down as hard and as fast as he or she chooses. Changing legs increases the working time and after a little practice is easily done without missing a beat.

Dunham has been elated with the performance of his spare-parts lathe. "There is a 'feel' you get when operating this lathe due to being involved in every process of the turning and having total control of the working action. Two of the early lessons I learned were to keep a keen cutting edge at all times and to only guide the tool 'letting it cut' rather than 'making it cut.' If turning becomes work, it's most likely because I've been trying to force the cut."

Of what particular use is a treadle wood lathe in the 1990s? Other than its nostalgic value, Dunham cites the many enjoyable days he has been able to load up his lathe and set up shop in some remote aspen grove in the San Juans around Lake City. Wood chips fly into a Colorado blue sky and golden leaves settle around his lathe as Dunham creates another gorgeous turning from what had been just another dead aspen log on the forest floor. In such an outdoor workshop, the treadle wood lathe seems right at home. ☺

Richard Dunham lives in Lake City, Colorado. For more information about his lathe or to order plans and parts list (\$30) write to: P.O. Box 444, Dept. M., Lake City, CO 81235.

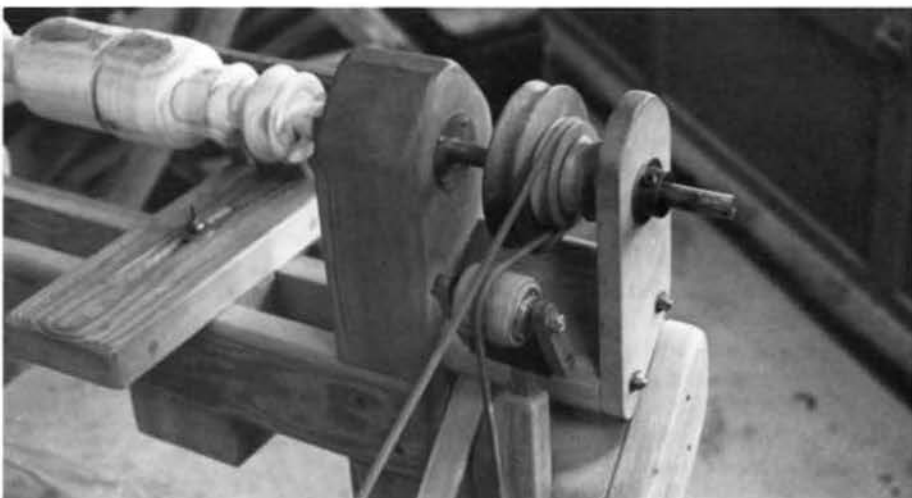


Photo 2



Photo 3

THE PATTERN MAKER

Ralph Knox

The industrial revolution brought greater mechanization to industries that had traditionally been established in market towns. Factories replaced workshops, and business grew in size. These events had conflicting effects on industry and the general economy of small towns. Some traditional industries disappeared altogether. Pattern making, for instance, had once been the principal trade in several small towns across the country. As the years passed, mechanization greatly affected this artistic craft causing the number of workshops devoted to pattern making to decrease. In the United States today, only a handful of pattern makers' shops still exist. Meyer Pattern Works is one of those shops.

Within the Bear State of California, deep in the expressways of Los Angeles, can be found the hamlet of San Pedro where Meyer Pattern Works maintains the old traditions of true craftsmanship. Located within walking distance of the village, this shop is primarily a one-man business. The number of employees other than the proprietor's family is small, often no more than one or two assistants and an apprentice. Gene Meyer spends at least as much of his time repairing old patterns as he does making new ones. Located within the large workshop are bundles of special woods and various tools such as the bow saw, auger, and spokeshave. His craft is part history and all American.

As the sound of the lathe and the smell of cut wood fills the large workshop one can instantly feel warmth.

LAYOUT MAN

Surveyor,
Pathfinder,
Mapmaker,
Perfectionist,
He reads his blueprints,
Takes his sightings,
Scribes his marks,
He compares what man would
wrought with
what man did wrought,
And cast again for perfection.¹

1. *Foundries and Foundrymen*, Ed Sacks, 1976



Gene Meyer turning a tool holder for a large milling machine.

Creative energy and imagination are displayed as Gene controls the lathe, and my mind wonders back into time before the industrial revolution. Here standing next to me is one self-sufficient woodturner, patternmaker, and true artist. Walking around his workshop you can see his knowledge. As they say, a picture is worth a thousand words, so with the accompanying pictures and my interview with Gene Meyer, I will introduce you to the world of a successful pattern maker. In the process I hope you come to understand his love for his art.

Interview With Gene Meyer

Ralph Gene, tell us how you go about making a pattern.

Gene Basically, we start with a print which the customer furnishes to us. From there we usually go to the foundry. The foundry tells us how they want the equipment built, what they want. From there we bring the print back to the shop, and we do a good layout of the print on a piece of plywood with a shrink rule. We make the pattern oversized, and when the metal cools it shrinks back down to where it is stable. Then we have an exact part. We figure all the shrinkage into that pattern when we are building it. Different metals have different shrinkages so we use different shrinkages for all the different kinds of metal that the foundry is using.

Then off of that we decide, after we get the layout, how we are going to build it. How are we going to break the job down so it is easier for

us to build or so we can build it the right way? From there we start constructing it. On complicated jobs there are a lot of things we do not see at first. As it progresses we can better see what problems we are going to run into and where we may have to change our mind on certain things. Most of the time if you start out with something basic and general, from there you can go and usually end up with something that is going to work and can be used.

Ralph What do you do when a customer gives you a design?

Gene We do the same thing. We make a layout then we glue; we segment all the wood to build the job up. When we segment, all of our wood is rough. We keep 1/2 inch of stock extra on everything inside and outside. We make rings, and we keep gluing these rings. The rings are made up into the segments. If they are small they may be in 4 segments; if they are a little bigger they are made in 5 segments. They can go all the way up to 12, 16, or whatever you want depending upon how big a ring it is. You don't want much end grain or side grain in your segments. You really don't waste as much lumber that way. You glue it all up in rings, and then you clamp all the rings together. From there they are put onto the lathe, and they start to turn them—the excess stock is turned off.

Ralph What was the diameter of the largest size that you have turned on the lathe?

Gene Approximately 90 inches. That was the biggest; and probably the heaviest we turned weighed 1,200 or 1,300 pounds.

Ralph What kind of wood do you use?

Gene Mostly mahogany, which is Honduras mahogany.

Ralph Because of its strength?

Gene Mahogany is used in the patterns because it is easy to work, and it is a stable wood that stands up real well for foundry use. Foundry sand has moisture, oil, and other things in it, and after we get the patterns painted the mahogany seems to stand up real well to the difference in temperatures. Heat and sand gets hot after awhile so there are a lot of different things that happen to the sand that could have an impact on

the pattern, and patterns seem to stand up real well with mahogany. If it is a real low-production job, we will use pine. Today there isn't that much pine used anymore because there isn't that much difference in pine. Good pine is very hard to get. This is why we have gone over to mahogany. Mahogany has been used traditionally for years as far as good patterns and production are concerned.

Ralph When you make these patterns and molds, can they be used repeatedly?

Gene Yes, time and time again. For instance we make 12-inch pump bowls. We make the patterns out of mahogany, put them on a hunter which is an automatic molding machine. Probably that pattern with some minor repair to it, could be made to run 10,000 or 15,000 parts before it might start to show a lot of wear around the edges. Patterns are used over and over. There are some patterns that been used thousands and thousands of times, it just depends upon the shape.

Ralph The lathe you have is something extraordinary.

Gene Yes, it is a Zimmerman lathe and it is made in Germany. Today's cost is \$77,500.00 We have had ours for about 12 years. It will turn 40 inches over the bed on the inside, and the outside will turn 90 inches.

Ralph How much does that lathe weigh?

Gene It weighs approximately 4,000 or 5,000 pounds. We have it bolted to the floor. That's what makes it stable. It is built strictly for patterns. Zimmerman is the only company that

I know of that is left in the world that makes machinery for pattern makers. They make a whole line. We used to have a company called Oliver Manufacturing that was in the States, but they have never updated their equipment. The German maker has updated all electronic variables.

Ralph How many of these lathes do you know of that are used in American right now?

Gene I just talked to a salesman recently, who said he didn't think there were more than 10 or 12 in the States. We had the first one on the west coast.

Ralph So you are more experienced than anyone else who would have one?

Gene Yes.

Ralph Gene, you were one of the first on the west coast to have such an elaborate machine. How many years have you been doing this?

Gene Thirty-six years.

Ralph You have built up a good clientele. Could you name some of your favorite customers?

Gene In the pump industry, we do a lot of work for Peabody Floway in California. We do a lot of work for National Pump which has been in Phoenix and has now moved to Atlanta and been bought out by an English company. We do work for Worthington which has been bought out by Dresser on the east coast. We do work for Cornell Pump which is in Oregon. That is just to name a few of the pump people. We also do a lot of engine work. We have done a lot of work in the past for Andy Granatelli for his Indy car which was a Buick V-6. We have done some

manifold work and some transmission work for True Sports. Their car was sponsored by Budwieser for their Indy car this past year. We do quite a bit of work for Gale Banks Engineering which does a lot of turbocharging on racing engines. That is our two main markets, the pumps and the engines.

Ralph With a clientele like that you are probably extremely busy.

Gene Most of the time we are. We are never slow.

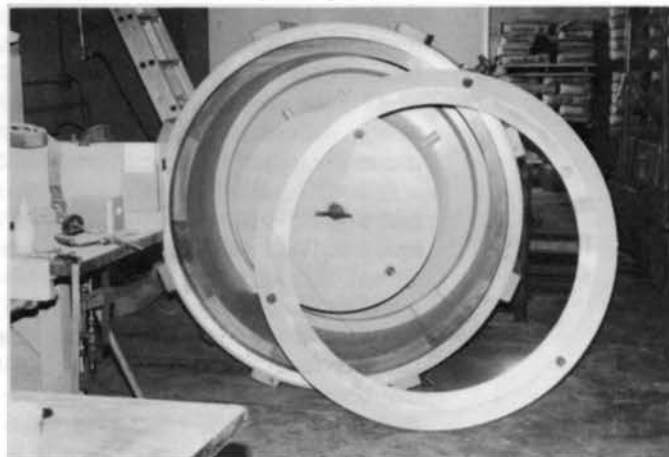
Ralph Some of the researchers nowadays say that pattern making is a dying art. What you are saying is contrary.

Gene Well, the market is definitely shrinking. A lot of business has gone overseas. Some of it has come back. Because of the environmental controls on the foundries, especially in Los Angeles, some of them have been moving out. A lot of restrictions have been placed on the brass because all brass has lead, and lead is a contaminant. It is a hazardous waste. It is hard to get rid of your waste.

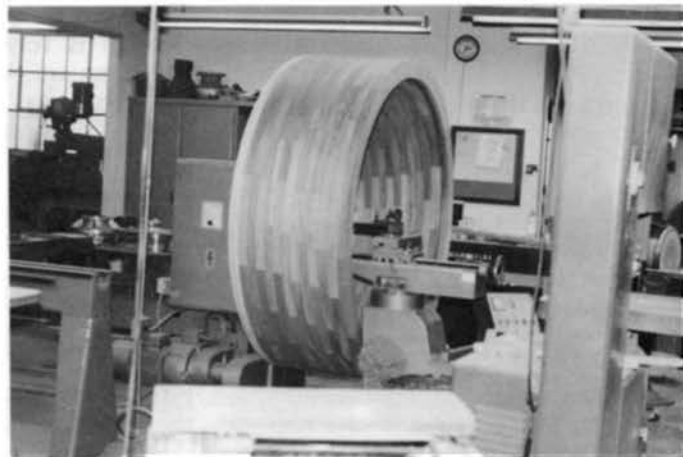
Overall, we have always stayed pretty busy. I always say its like the horseshoer—there are more horses now than there ever were. The good horseshoer is still here making a living. He didn't disappear. When I went into the trade 36 years ago there were about 10,000 to 12,000 pattern makers. Today, I'm not really sure of an approximate number. I think there are about 4,000 or 5,000 pattern makers.

Ralph So the supply and demand are there?

Gene It's there. It's just that it is hard to find a young kid who is will-



A finished core box for a 42 inch suction bell for a turbine pump



The unfinished out side of the core box.



Foundry pouring brass for vanes to be used in production impeller pattern.

ing to put in 5 years apprenticeship starting at \$6.00 an hour. If they have the ability, at the end of 5 years, they can make a very good living. It's just that no one can see 5 years ahead. I couldn't either. When I went into it I fell into it by accident. My uncle was a pattern maker. When a job opportunity opened up my dad told me to go and apply for the job. I was just about ready to go into the service when the shop called me and said I could start the job. I wasn't too happy about it but my dad said I should take it.

The first 6 months I swept the floor and painted, cleaned up old patterns, dragged old patterns out of storage to sand them up and paint them. After 6 months the boss came over and told me they were going to keep me. In those days there was a trial period. So he told me I better start buying some tools. My dad and I went downtown and bought a brace and a hammer, just a few of the simple things. Soon the boss put me with some of the old pattern makers to help them out. Then it got to be really interesting, and I've been interested ever since. It's really been good to me. I enjoy it.

Ralph In your shop, which is fairly large, how many square feet do you have?

Gene We have about 4,000 square feet.

Ralph Approximately how many tools do you have? It looks like hundreds.

Gene We have quite a few tools in there.

Ralph Along with that, you have an interesting collection of wood. Tell us about some of the woods that you have.

Gene I have collected a lot of woods over the years. Someday when I retire I would like to build furniture. I have quite a bit of koa which is a Hawaiian wood. I have lacewood, walnut, birdseye maple. Of course I keep a good supply of mahogany, pine, and poplar and some of the other woods we use in our pattern trade.

Ralph What is an estimate of how long it takes a pattern project from beginning to end?

Gene It can take from a day to 1,000 hours to build. I have one project now that is a small industrial faucet with a very intricate core on the inside. For something like that we have to make a master first. The master of the inside is called a core box. To make the core box we make a female in iron to get a male sand core out of it. When the metal is poured it makes the cavities inside the mold. To make the female cavity, rather than carving, it is easier for us to make a male plug and pour plastic over that male plug. The end product is a plastic female cavity which we put into a German deckel which is a tracing machine. Either a steel or cast iron slug is put next to it, and we can trace the plastic and duplicate it in iron. Thus, we have the iron core box.

Ralph How big is this?

Gene It is very small, only 4 or 5 inches square. We are working on a job right now, although I have the master done, it will probably take about 150 hours. I have also started a pump bowl with master work that will take about 80 to 100 hours, and the metal work will take 80 to 100 hours. We get jobs on the general pump bowl that will take 200 to 400 hours to produce for high production with aluminum equipment. Everything will be aluminum. We make the pattern and all the parts in wood, then we go to a foundry and get all the parts cast in aluminum. Later the

parts are brought back to the shop to be machined and polished and will finally end up being a high-production pattern.

Ralph On a job that takes 400 hours, do you make a substantial profit?

Gene Yes. The going shop rate is \$50 an hour which really should be more. Actually, there should be enough profit if you calculate right to keep everything going.

Ralph It doesn't seem like that's a lot of money per hour for the amount of work that you are doing.

Gene No it isn't, but it's like anything else—it depends on what the market conditions are. Years ago when I first began the trade, the pattern makers were getting around \$2.75 an hour, which was big money. That was more than the money made by the carpenters, the plumbers, and the electricians. Today it's not big money. Regardless of the money, if you are good, it's steady work. The person who has worked for me the longest has been working for 14 years. I don't think he has been off more than 2 or 3 weeks during that time with no work. It's a very steady job. We just don't let good people go because it's too hard to replace them. It takes too long to train them also. Even in 5 years of training you really never learn the trade. You learn all the time. I'm still learning—the learning process never stops. If you think you've learned it all, you're on your way down. You have to strive to find new, more accurate ways of doing things because the public has become more and more demanding. Most of the machines today are all automatic. The machine can't adjust the part once it's placed inside the machine. No two castings are the same. There is always a little variation. If the part is put in the machine wrong, wherever the locators are on the casting that's where the machine will start machining. If the locators are a little off, the machine can't sense it, and the part will be machined wrong. That's why the demand is for accuracy in the patterns. Also, if a piece is not good, the foundry won't take it back after it has been machined.

Ralph You basically have to maintain precision accuracy. There is no room for mistakes.

Gene On big jobs you can plus or minus 1/16 of an inch but on small jobs it has to be accurate. A lot of our masters are checked now before any equipment is made to be sure of accuracy.

Ralph I saw some photographs of a mold that you were making, and you were practically standing inside of it. What was that for?

Gene That was for another pattern shop (C & C Mill) because they couldn't turn it. The piece was for a big tool holder to hold all the tools that would index and feed the tools to the chuck itself.

Ralph So your colleagues come to you for help at times?

Gene Yes. In that case they just couldn't turn it. There are only two other shops in town that can turn large work. When the steel foundries were here in L.A. years ago, it was different. Now most of the steel foundries are gone and so has the large work. A great deal of the large work has gone overseas.

Ralph Do you find any of your patterns being sent overseas?

Gene Yes. This year we sent quite a bit of it over to England because the dollar was weak and we were very competitive. Now the dollar has strengthened again, and we are about even, but by the time the shipping cost is added in, we aren't competitive any longer. It all depends upon where you are and the strength of the dollar.

Ralph So your clients are not limited to the U.S.?

Gene No. It was at one time, but not any longer. The currency and politics have a lot to do with it.

Ralph I noticed on some of your plans there are a lot of mathematical numbers and a lot of graphs and angles. Not only do you have to be an artist in your work, but also a mathematician.

Gene Yes, that is right. Although I only hold a high school diploma, I have gained immense mathematical knowledge over the years. It is difficult, especially angles. But like I said before, you learn all the time, and that applies to the technical aspect also.

Ralph While working on the product with a blueprint that someone has drafted for you, have you ever had



Left to right: Jim Kelly, Tad Langlois, Gene Meyer, John Cogan, Dale Hackbarth

the occasion where you found the blueprint to be wrong?

Gene Yes, many times. I work with skilled engineers, and if you find something wrong they will look into it and happily correct it for you. I try to be very diplomatic when I approach them with my findings because sometimes I am wrong, too. So you see, it's a two-way street. They don't see the plan in 3-D as we do; they see it on paper which is flat. A lot of times something may look good on paper, but when you actually start to do it 3-D, it looks different.

Ralph You have shown me some of

the smaller projects that you have turned—vases and dishes and such. I was ignorant that some of these pieces are made in 15 to 20 minutes, yet they are so beautiful. I see a lot of art in them.

Gene They really are artistic. Most people do not recognize them as works of art. People that have an eye for art, shape, form, and design do see it and appreciate it. That is why someday I hope to build furniture. There are certain pieces that have a simple design, and those are the pieces that just don't go away. They have been around a long time, but will continue to be here because of the beauty and simplicity. ☺



Alum core box for high production pump bowl



Mahogany pattern equipment for pump section case.



High production alum and brass pattern for pump impeller.

WOODTURNING: WHERE DO WE GO FROM HERE?

Steve Loar

It doesn't worry me that things of the past have disappeared, because we are here and we are making new things.
—Dempsey Bob

The only way tradition can be carried on is to keep inventing new things.
—Robert Davidson

. . . even the President needs passion.
—Rod Stewart

A philosophical attitude expressed was that all objects we make serve; whether they serve absolutely a functional requirement of eating or drinking or whether they serve a more generalized function of life enrichment.

—from a seminar on "The Prospects of Production Crafts in America," Haystack Mountain School of Crafts, September 1976.

What is the role of the individual craftsman today, in an age of post-industrialization?

The broadest answer is relatively simple. It is essentially impossible for a handcraftsman to compete with mass-production in the "developed" countries. A person who only makes things well or "with skill," especially if it is multiples, is competing with industrial mass-production on its own terms. Although some individuals continue to try, it is an exhaustive pursuit. Craftsmen must, therefore, either create unique *types* of items that industry will not produce or they must invest *qualities* into their products that industry will not.

In order to address the question further, "craftmanship" needs to be defined. Craftmanship is the historic basis of comparing the quality of goods, and must be assumed. Craftmanship is the accepted levels of attainable results in a given time and culture. Ultimately, it has little to do with speed of production, the amount of "love" lavished upon the making, or even whether or not machines were involved (. . . go ahead, *try* to define "handmade!"). Craftmanship has to do with the appropriateness and the control of media and process. We make primarily objective evaluations of it in regards to accepted standards.

"Ironically when English arts and

crafts proponents crusaded for equality between the decorative and fine arts on the basis of craftsmanship, they unwittingly established the dominance of design over craft. The acceptance of common objects as art rested on visual appeal, not process, a criterion that aided style in gaining precedence over workmanship. The best arts and crafts objects pass muster as artworks because of their superior design, illustrating a unity of form and function that celebrates both the nature of the materials and the concept of construction as decoration."¹ Woodturning now has a "critical mass" of technically competent practitioners who can begin to seriously tackle the subjective elements of design, composition, and beauty as they relate to our time. Mike Darlow's comments once again seem pertinent: "Inevitably . . . modernism was exploited as a way to cheapen unit costs by merely streamlining away the sculptural precision and visual delight of detail and ornament, but without undertaking the fundamental redesign necessary to achieve a coherent modernist piece."² Modern is now, 1992; and the time has arrived for turners to address that "fundamental redesign."

Modernism, or the First International Style, pronounced the aesthetic past to be dead and ridiculed any reference to it. There were to be no more sentimental plays upon nature, emotion, and history. From this clear slate was to arise a new logical order. Seventy years later this credo has created a sterile landscape, whether one looks toward art or architecture or even the hardware store. Pretty grim stuff, by and large. Our culture is caught between this recent history of stark simplicity and the basic human need for decoration. It is notable that the last decorative styles prior to modernism's austerity were both attempting to resolve these very same issues: the integration of decoration with strong geometric forms. The Prairie School and Art Deco were styles that came about as designers pursued their particular visions of "modern" design. While one was somewhat formal and the other was an extension of Victorian eclecticism, each group established a dis-

tinct vocabulary of forms, motifs, colors, and textures. We find ourselves needing to solve similar design problems, but with no overarching reference of style or movement.

Woodturning is not, and cannot be, a style or movement; no more than its cousin studio glass is or can be. A craft revival or resurgence is technique or media-based, which is what *woodturning* is. A style extends beyond a craft revival to encompass common aesthetic or philosophical concerns. In order to flourish or go beyond being merely a revival of an old craft form, turning must become more than technique, tools, and media. There needs to be bodies of work by individuals who use similar forms, materials, and techniques, yet each having personal variations on a particular theme. This offers the potential for a number of styles to emerge and flourish.

Redirecting and focusing the goodwill, passion, and involvement that has typified contemporary woodturning will require a great deal of critique and commentary as well as a considerable lessening of egos. Accepting the work of one individual that is similar or interpretive of another turner's work runs counter to our culture's infatuation with what it perceives as uniqueness and originality. Woodturning has shown little willingness to pursue the exploration of a particular form, shape, or type of wood by more than one turner. The field has become fragmented and trivialized with regard to who-developed-what-first and precisely what constitutes someone's "signature." No one person can lay claim to a particular type of wood, even in relation to a certain form or a particular technique!

In a mere ten years woodturning has burst forth from industrial arts and hobby shops to become one of the most vital of contemporary crafts. This reputation is based upon a relatively small number of *individual* styles. My previous article (*American Woodturner* vol. 6, no. 4), was accompanied by examples of exceptionally clear, coherent personal styles. These innovators share a concern for creating distinct vocabularies of specific effects. The pursuit of unique creative turf is difficult and demanding; full of risk and potential rejection. Much of the larger body of woodturners would enjoy having a personal style, but for lack of artistic/design knowledge or a support-

tive critical environment typically must choose between copying or unresolved personal work. A great potential for growth and sophistication lies with interpretive work the application and exploration of established vocabularies.

Interpretive work would generate quantities of work which could be directly compared and their virtues debated, inciting further refinement, sophistication, and new growth. If craftsmanship can be assumed and an established form vocabulary chosen, then a style(s) could grow out of the comparison of similar pieces, each of which would present personal nuances and elaborations. This would take some of the pressure off of being the first or the most novel or the most Unique and focus the critique on what works for a particular style of turning. Any turner could study a style of his or her own liking and feel free to make personal adaptations to that style, thereby making a contribution to that body of work.

Design and aesthetics are, unfortunately, very subjective. While there are basic elements and principles, making sense of them and applying them is often intimidating. It is also far more complex than "looking at the classics" or "looking at what you like" as is often promoted, although these exercises will certainly help. There is simply no absolute right or wrong or better/best. It's all relative, so comparison and discussion are required. Considering interpretive work in this light, one could identify a style that is appealing, know how it looks, know what it is typically made of, and most likely even know how it was produced (given the level of sharing within the field). One would no longer have to "be first," risk all, or invent procedures. Instead, one could play; expanding, refining, and adapting the techniques and the form, within a framework of reference. With both the design and the technical parameters established, one could focus on making smaller incremental modifications. The central and critical factor in this argument (and this cannot be overstated) is a commitment to a purposeful and personal exploration of a variation-on-a-theme.

Any foray into interpretive work would require several things: a significant amount of the passion and energy so pervasively focused upon tools, techniques, and material being shifted to an ongoing concern for

what is made; individuals making definite choices and establishing clear personal preferences, with no sense of jumping from one reference to another; and very critically, *study*. With copying and plagerism being the result of casual or insensitive appropriation, one must *know* his or her subject. (Jay Miller discusses this issue in the previous edition of the journal.) In order to interpret *anything*, one must look, probe, question, compare, and evaluate. Again and again. Whether developing utilitarian objects or sculpture, enthusiastic focus and study must take place so that the source is fully internalized. This will help assure that personal variations are created, not ill-conceived derivations of someone else's work. It would also assist individuals to more fully express their own capabilities or insights. Interpretive work is more demanding than the current instant gratification/feel good approach underlying much of what is turned today. Interpretation requires a maturing and commitment; knowing the style, the maker, and the motivations, in addition to the more distinctly craft-oriented choices of technique and material.

The large number of workshops and symposia and the resultant amount of shared experience and information have potentially laid fertile groundwork for the interpretive transformation that I am taking about. I say *potentially*, because many of the workshops have unintentionally promoted copy work. Within those very copyist skills, though, *could* be the seeds of interpretive work. Many have learned "at the hand of the master," not from a book or article, but from working directly under the tutelage of a particularly skilled individual. Through such an experience, the attitude regarding the larger process of "making" was surely exposed, even if only partially and for a short time. This exposure to the *overall* sense of a style is a critical ingredient in any approach to interpretation. Along with demonstrating tools and techniques and personal styles, demonstrators must discuss the issue of copying versus interpretive work. Beyond a limited learning experience, copying cannot be supported and certainly cannot be tolerated in the marketplace. All of the physical techniques are for naught unless one knows *why* the forms look like they do. Vocabulary must become language, with

explorations of the language allowing us to communicate variety and subtlety of form and intent.

There will always be those who choose to make things primarily as therapy, with the products of their labors generally going to family and friends. While this approach certainly constitutes part of the overall field of turning, the principal concern of this article is the public domain where goods are seen by many, compared, exhibited, and sold. In this wider public forum, inequities between form and function or craft and design cannot be tolerated; "it's functional" is not an acceptable excuse for visual or technical awkwardness, any more than "it's Art" is a reason to justify compositions that do not communicate intent or whose novelty attempts to override unresolved technique.

There will also always be innovators who carve out niches of exceptional insight and daring. Much of their work can be seen as a series of plateaus which are investigated, tested, and developed, then left behind as new heights are perceived. Whole "schools" of stylistic thought based upon the discoveries of these explorers could radically intensify and sophisticate the field of turning. It is time to invent our own traditions and our own future. ©

1. Leslie Green Bowman, *American Arts & Crafts: Virtue in Design*, a catalog of the Palveski/Evans collection and related works at the Los Angeles County Museum of Art, 1990, p. 19, Introduction.
2. Mike Darlow, "Woodturning," *Woodworker*, April 1990, Vol. 94, No. 4, p. 319.

Steve Loar teaches two- and three-dimensional design in the School of Art & Design at Rochester Institute of Technology in Rochester, New York. He is also a turner/sculptor, author, and lecturer and lives in Warsaw, New York.

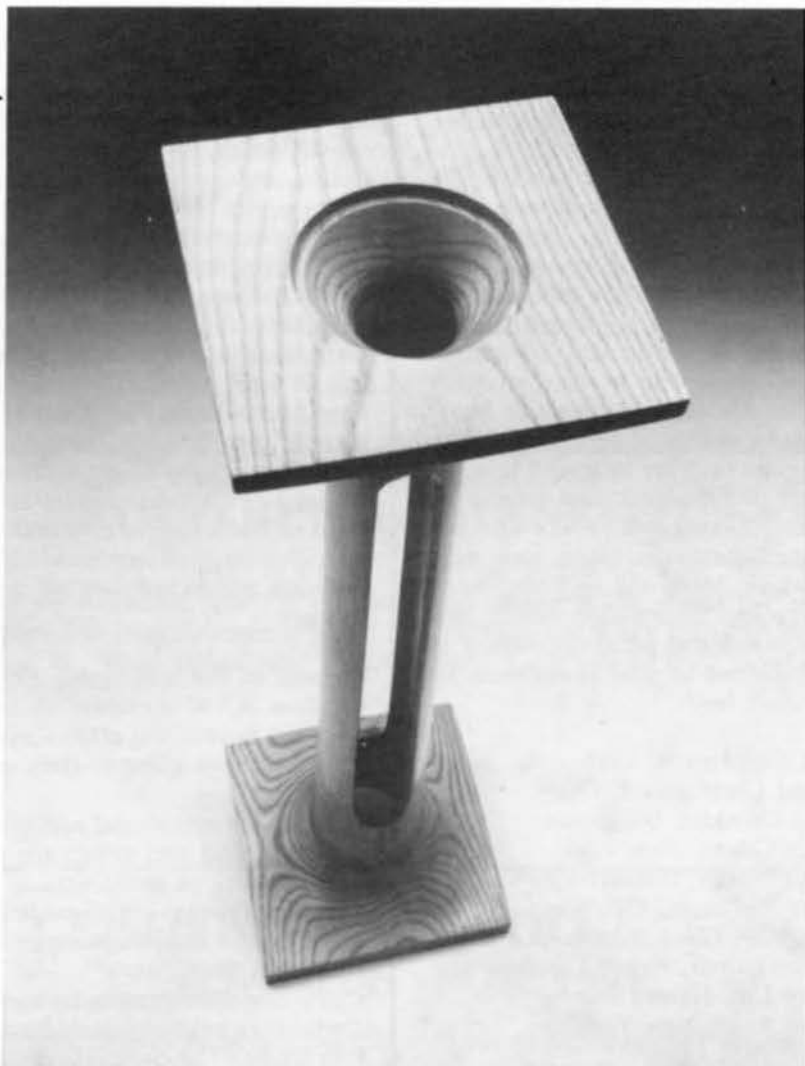
Author's correction: In the opening of my previous article, "Woodturning: Where Are We Now?" I was in serious error in leaving out the names of Mark and Melvin Lindquist. Their experimentation, determination, and longevity assures them of a place in this influential group.

A Focus on HIDDEN TALENT

Curated by Albert LeCoff

Judd Mosser
1272 Underhille Road
East Aurora, NY 14052

The hollow form represents qualities that I find important in my work. Strength, command of space without emphasis on mass, inherent lightness, and the revealing of an inner surface are all communicated by the hollow form. In these pieces, these qualities are demonstrated in alternately functional and nonfunctional ways.



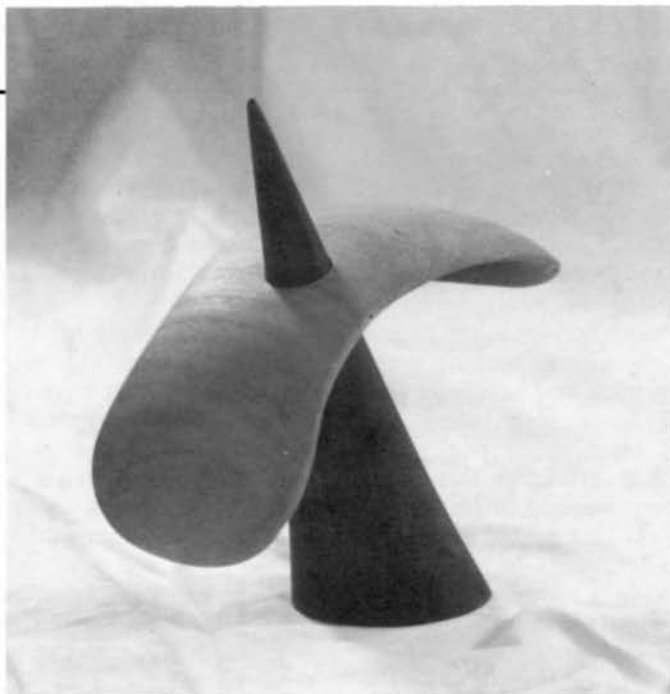
Untitled, 1991. Turned hollow pedestal, red oak, glass
H. 28" x W. 8"



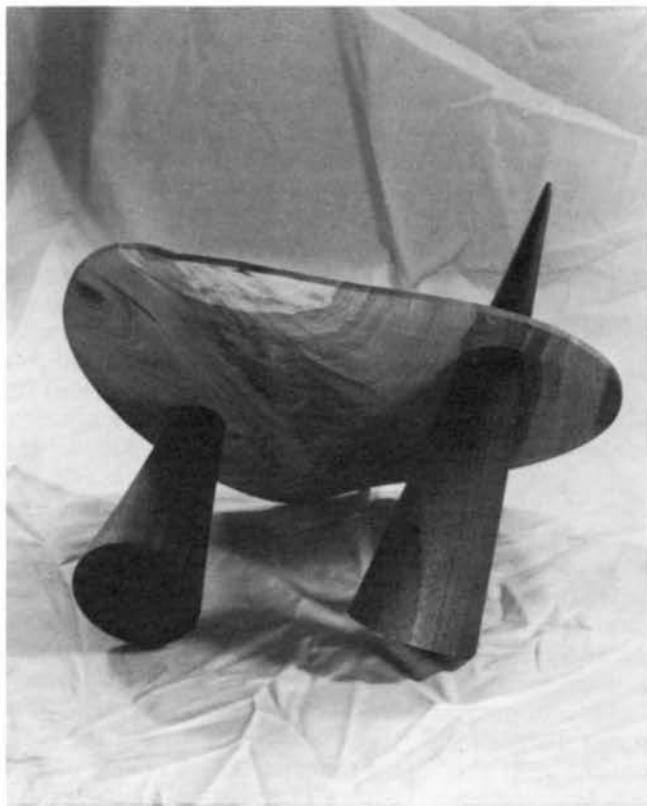
Untitled, 1991.
Turned and sculpted
vessel, willow, paint
H. 9½" x Diam. 11"

Steve Bishop
15113 Philip Lee Rd.
Chantilly, VA 22021

In the four years or so that I have been turning, I find that I don't like to be tied down to one particular style or type of turning. I'm always trying new forms and techniques in an effort to make something that is distinctly mine. I think purely sculptural turning is an area that is underrepresented. I find myself drawn to the works of Todd Hoyer, Dennis Elliott, and especially Stoney Lamar as examples of what can be accomplished outside of the vessel form.



Persistence of Vision, 1991. Cherry, Walnut
H. 6½" x W. 3¾" x Diam. 5¾"



Form Exploration #1, 1991. Cherry, Walnut.
H. 7½" x W. 7½" x Diam. 11"

These two pages are dedicated to those who make objects from the lathe. Photos are selected from the Wood Turning Center's archives. If you feel you are a Hidden Talent, send your 5" x 7" glossy b/w photos, resumé, and a personal statement to Albert LeCoff, HIDDEN TALENT, 42 W. Washington Lane, Philadelphia, PA 19144 U.S.A. Accepted photos will not be returned; unpublished photos will be returned if a self-addressed stamped envelope is supplied.

CHAINSAW SAFETY: Safe Tree Felling

Alex Holsinger, Illustrations by Jim Causey

Chainsaw safety discussions should not only touch on how to handle the saw properly, but also talk about the safe methods of getting work done with the saw. Studies of causes of chainsaw-related accidents show that almost as many accidents are caused by poor felling and bucking techniques as by poor saw handling. This article will cover some ideas and suggestions on harvesting a whole tree. The next article in this series will talk about bucking or getting the whole tree cut into usable pieces.

Many factors must be considered before making a decision to cut a tree. The natural tendency when given a tree is to get out the saw and get busy. Failure to carefully size up the tree and the area where it is located can result in major problems for people and property.

LOOK AROUND THE GENERAL AREA

A. Other people: neighbors, children, pets, co-workers, and friends can be at great risk if allowed to remain in the area when a tree is coming down. It is, however, unsafe to work alone and also handy to have help loading the wood. It is the responsibility of the saw operator to make sure only the needed people are close to the tree when starting to cut.

B. Most of us tend to disregard weather conditions. Even moderate winds can make felling very dangerous. Wind adds pressure to the top of the tree, sometimes causing the trunk to break and fall unpredictably. If the wind is from the wrong direction, it may be impossible to get the tree to fall in the intended direction. Wet weather causes saw handling problems. It may be impossible to get good footing to use the saw. Also, you may have a hard time getting the wood out without accidents in wet, slippery footing.

C. Will you be able to get the tree to the ground without damaging property or trees? Yard trees present many obstacles to safe felling. Power and phone lines, buildings, fences, flowers, and yard plants, as well as parked cars must be considered. It is

very important to provide a safe margin of error around people's property. One of the most common mistakes is trying to put a fifty-foot tree into a forty-five foot space.

If you are working in the woods, do you have a clear line of fall? Trees that hang in other trees or that bend over small trees on their way to the ground pose serious problems. Can you clear the fall area of small trees, stumps, and other obstacles before you start the felling cuts?

D. Will you be able to get the material bucked and hauled out easily? Is it worth the effort to get the material home?

SIZE UP THE TREE

A. Is there anything in the tree that may fall when the tree is cut? Loggers call dead limbs hanging loose in a tree "widowmakers." Look up into the tree and other trees nearby to make sure nothing will fall when the tree begins to move.

B. Is the tree sound? Does it have a rotten trunk that may cause it to fall early or in the wrong direction? Does it have spikes or wire that will damage your saw? Can you get enough material from it to justify cutting it?

C. Will you have a clear work area at the base of the tree? Can you clear exit paths at forty-five degrees to the fall line to allow you to get away from the tree if it jumps the stump?

D. Is your equipment adequate size and condition for the tree you want to cut? Large trees and small saws generally do not make for safe felling. There are many ways to get a large tree with small saws, however, these methods can be very dangerous if there are any problems with the tree such as excessive lean, rotten spots, windy weather, or slight lean in the wrong direction. If sawing time runs too long, stresses may build too soon causing the trunk to split or splinter. There is no way to control the tree if this happens.

E. Will the tree go into the area you

have chosen? Most trees do not grow straight up. Use a level or plumb bob to find out which way the tree leans. Lean may be obvious in a yard tree where there are many lines to use as references. In the woods, it is usually much harder to judge the natural lean. Trees can be taken against the natural lean. If the tree leans only very slightly the wrong way, wedges can be used to lift the tree over center when making the felling cuts. Trees that lean several degrees away from the fall line require a professional feller with special jacks and cables. Trees that lean heavily in the direction of the fall require bore cutting techniques that cause kickback if not done properly. The only safe way to learn bore cutting with a chainsaw is to have someone with experience demonstrate the cut and practice with that person several times.

By now you have a good idea about how to determine if a particular tree can be taken safely. Try to go through these questions with every tree BEFORE the saw is started. If you are concerned or even unsure about anything, LEAVE THE TREE to someone with more experience and whose judgment you trust. If you have made no cuts, you can safely leave the tree for another time. If you have started to cut and found problems, send for experienced help. The tree should probably not be left after it has been weakened. Many things could cause it to fall unexpectedly causing injuries and property damage.

FELLING CUTS

After you have determined that the tree can be taken safely, clear the area of any small trees and brush. Clear your work area at the base of the tree and clear a couple of escape paths. These paths should extend a good distance away from the base of the tree at some angle to the fall line. Be very careful not to get fenced in by yard trees. If things don't go according to plan, you should have at least two ways to follow away from the base. Check the area again for people and pets. It is good to have

someone watch for falling limbs, widowmakers, or any loose objects, but any spectators should be well away from the work area. Always make sure everyone in the work area knows what the saw operator is doing at all times. Nobody in the work area should do anything without being sure everyone in the area knows what is going on.

There are several methods of making the felling cuts. All these methods have some basics in common. All these methods use a face or notch cut and a slash or back cut combined to create a hinge in the tree. This is done to control direction of fall and the travel of the butt of the tree as it falls. All these cuts should be used for all but the very smallest of trees. A single-slash cut through a small tree risks a bound chain and a potential kickback accident.

There are three main types of face cuts. The face or notch is made up of two separate cuts made in the tree at different angles. The face is always cut first. The face cuts are made at ninety degrees to the intended direction of fall. Many saws have lines on the top of the saw or handles that are ninety degrees to the saw bar to help in lining up the face cuts. The operator sights across the line or handle to establish the location for the face cut. The tree will be controlled by the hinge at the back of the face cut. The operator aims the

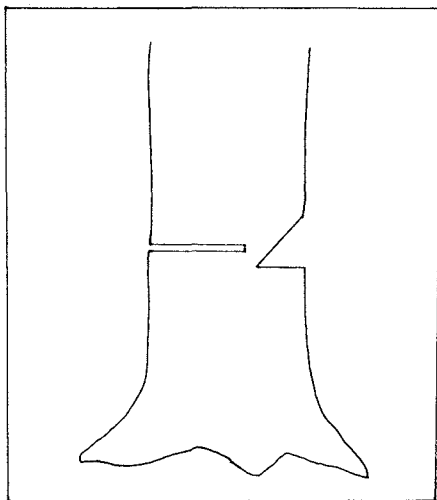


Illustration 1
Conventional notch or face

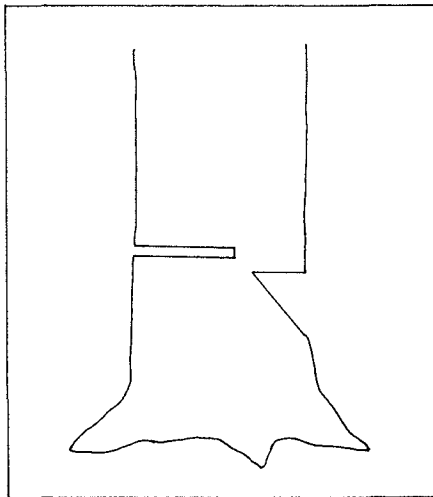


Illustration 2
Humbolt notch or face

tree at the area where he wants it to rest when he cuts the face. The difference in the three types of face cuts is in the shape and location of the notch.

1. Conventional (illustration 1) The undercut comes from the log with this forty-five degree notch face. The notch is cut about a third of the way through the tree. This is by far the most common face cut. It has a higher commercial yield and gives a low stump height. These factors make this cut popular with loggers.

2. Humbolt (illustration 2) The undercut comes from the stump on this forty-five degree notch face. The notch is cut about a third of the way through the tree. This cut is normally used on very large trees or trees that might jump the stump. The sloping undercut makes it easier to get large trees to the ground without cracking the butt log.

3. Scandinavian (illustration 3) This cut looks like a combination of the other two cuts. The notch is not cut as deep (75 percent of the width of the trunk). Most people who use this cut use a ninety-degree notch. I normally use less than ninety degrees so that the hinge breaks just before the tree hits the ground. For tall, thin trees, cut the notch about eighty degrees. For spreading trees, the notch may be as little as sixty degrees.

The Conventional and Humbolt

notches are designed to break the hinge at forty-five degrees to the ground. The Scandinavian is customized to allow the hinge to break just before the tree hits the ground. Make sure to cut the notch angle small enough so that the hinge does break before the tree hits the ground. If the hinge has to be cut, the tree will usually roll unpredictably. The Scandinavian is by far the easiest of the three types to cut. The operator makes the top cut first, then is able to look down through the top cut to line up the undercut. It is important that the two notch cuts meet to form a clean, level notch. Overcutting the notch weakens the hinge. Cutting the notch shallow puts too much weight on the wedges. Cutting the notch too deep makes the tree unstable. A notch that is not level will cause the tree to fall to the side of the intended line. A hinge that is thicker on one side than on the other will cause the tree to spin on the stump or fall off the line.

The next cut made is the backcut or slash cut. This is always the last cut made. On large trees, the backcut may be made up of several cuts that work together. On trees that do not have a lean problem and are smaller than the length of the saw bar, a single horizontal cut is made about an inch above the deepest part of the notch. A wedge is set behind the saw bar when possible. Use plastic or hardwood wedges to keep from dam-

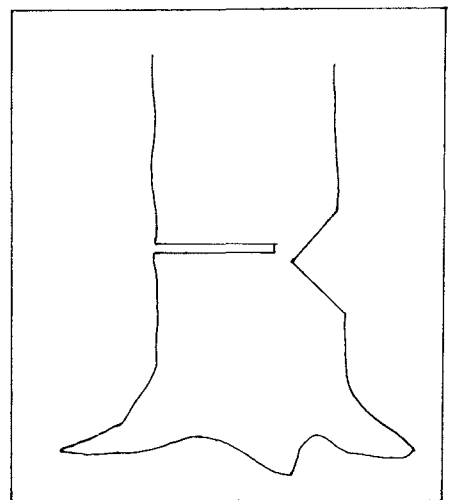


Illustration 3
Scandinavian notch or face

aging the saw chain. Use several wedges on large trees. The wedges hold the tree up off the saw bar and provide a way to lift the tree later.

Try to leave a hinge the same width on each side. Be very careful not to saw through the hinge on either side. The width of the hinge will vary with the type of tree, size of the tree, and season. When the hinge is about right, take the saw out of the tree and set it well out of the way. Knock the wedges into the tree. This will lift the back of the tree and cause it to fall. If you are unable to lift it with the wedges, cut a little more off the hinge. Never cut through the hinge. Never turn your back on the tree for any length of time. When the tree begins to move, leave the stump area by one of the escape paths you have cleared in advance.

Trees that lean heavily need a special type of backcut (illustration 4). On this type of tree, a normal backcut can cause the tree to split, peeling a long strip of wood off the back of the tree. Since the tree is no longer controlled by the hinge, the fall will be unpredictable. The practice of wrapping the trunk with chain or cable to stop the split is very dangerous. It is very easy to overload and break the chain. The best way to handle a tree that leans heavily is to make a bore cut just behind the hinge. Then cut the backcut **AWAY** from the hinge (illustration 5). The last wood holding the tree is now at the outside of the tree. This lessens the chance of a split trunk. Bore cuts are difficult to master and must be learned from someone with experience. **A bore cut that is started badly will always cause a violent kickback of the saw.** Get experienced help before you start if you have any doubts about safely handling a heavily leaning tree. ☺

The next article in this series will provide instruction on bucking the felled tree into usable pieces. A copy of the previous article, "Chainsaw Safety: Kickback Prevention," (December 1991) may be ordered by sending a self-addressed, stamped envelope to: Editor, American

Illustration 4
Splitting trunk of heavily leaning tree caused by conventional back cut

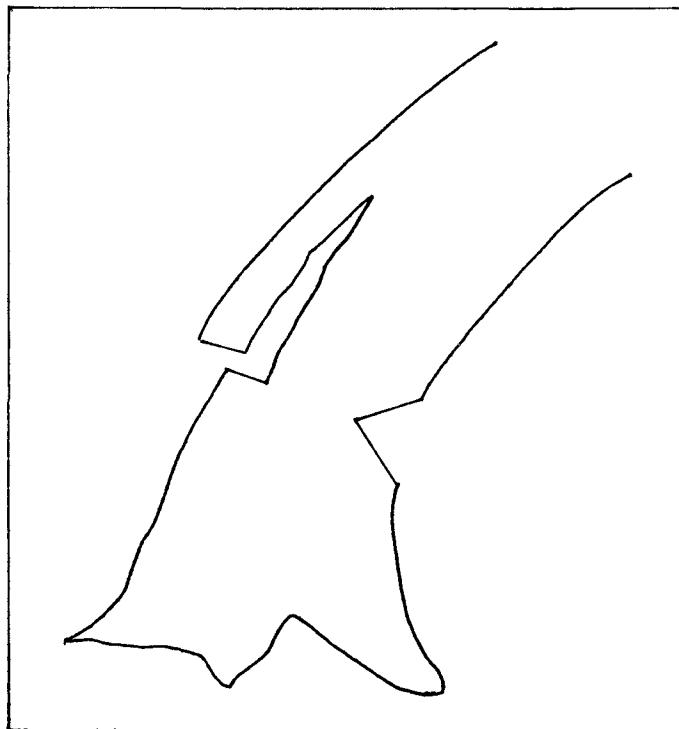
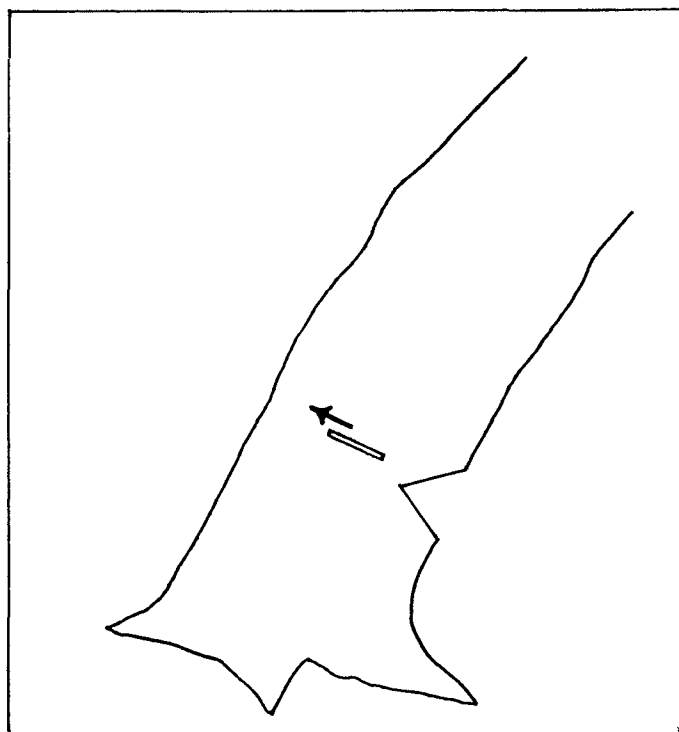


Illustration 5
Bore cut, then cut away from the back to prevent the tree from splitting



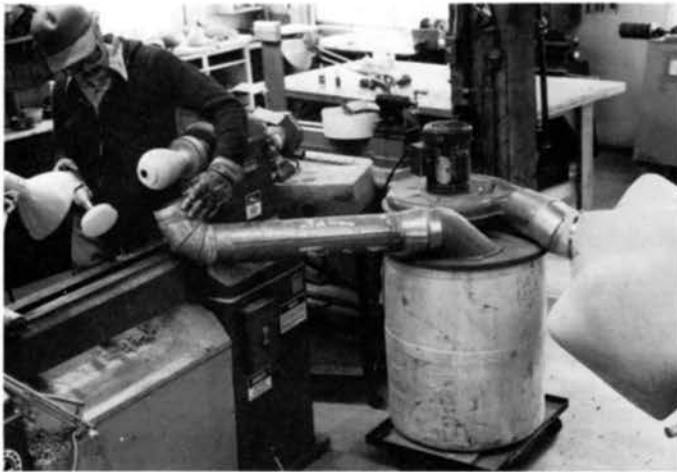
Woodturner, 5613 Ralston Ave., Indianapolis, IN 46220.

Alex Holsinger is an industrial contractor who lives in Tulsa, Okla-

homa. He has been using chainsaws for over twenty years and developed an interest in chainsaw safety because of chainsaw accidents he has seen. Alex will be one of the demonstrators at the 1992 AAW Symposium in Provo, Utah.

DUST EXTRACTION

Rodger Jacobs



Portable Dust extraction system

I have used both a high-tech and a low-tech dust extraction system. The high-tech system that I use now is a Delta, model #50180, 1 hp. industrial. I like the design because it doesn't exhaust the heated air in the winter nor does any object inadvertently drawn in go crashing through the impeller. I've rescued more than one sanding disc from the barrel. It is made to sit on top of a 50-gallon steel drum, but I modified it a bit to better suit my needs.

A cutdown 50-gallon plastic drum and a small cart with castors lets me move the unit to my different lathes, bandsaw, and other shop areas. Replacing the flexible hose with a couple of feet of metal stove pipe with

an elbow on the end lets me focus the inlet right where I need it.

I have used the Delta almost every day since 1986—it's portable, strong, and quiet. The only drawback that I have found is that our cats don't like it when the filter bag on the side inflates.

The low-tech method is inexpensive and works fairly well. I use a window fan with a furnace filter taped against the frame so that the fan pulls the air through the filter. If it is set up within a few feet of the sanding it will trap most of the dust. When the filter loads up, take it outside and knock it out.

Regardless of the system used, some dust always manages to escape

so I always wear a particle mask when sanding and once a week or so I turn on my window exhaust fan and use the air compressor to clean my studio.

My significant other will testify that I'm not a compulsive cleaner, but I have found that a dust-free, organized place to work really helps the creative flow. ☺

Rodger Jacobs is a woodturner equally at home with functional ware, production and piece work runs, teaching, and fine art. By concentrating equally on all aspects of lathe work, personal growth is slow, steady, and solid, and he is having fun.



Rodger Jacobs at home in Newland, North Carolina

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ABOUT WOOD

Cas Grabowski

PRESIDENT'S PAGE

continued from
inside front cover

Snakewood (Letterwood), *Piratinera quianensis*

Snakewood is another beautiful, very distinctive, super exotic. The common names of this wood are derived from the presence, in the reddish-brown heartwood, of brownish-black to black markings. Depending on the specimen, the angle of the cut, and the imagination of the viewer, these markings can resemble letters, Egyptian hieroglyphics, or a snakeskin.

Snakewood has been an article of commerce since the sixteenth century. In addition to adding elegant touches to furniture, it has been used to make choice walking sticks, bows for the larger string instruments, laminated archery bows, and veneer. Because it is expensive, woodturners primarily use it in small articles such as pens and letter openers.

This South American wood comes mostly from Surinam and has a history of importance and value. When the British surrendered Surinam to the Dutch in 1667, one of the terms of capitulation was that English settlers would continue to be able to collect snakewood in the colony.

Piratinera trees (also sometimes referred to as *Brosimum*) can grow up to eighty feet tall, but even in large trees the amount of heartwood is relatively small. The pale yellow sapwood is usually discarded before shipping. The black markings are not associated with any special anatomical feature of the tree, but are due to irregular accumulations of gumming deposits. When a single strand

of black material is traced along a radius, it can be seen to branch and fuse with adjacent strands. These markings can vary considerably not only from tree to tree, but also from one area to another within a single specimen. They can be coarse, fine, or even missing in adjacent areas. In other words, the overall quality of a piece, as measured by the nature of the markings, can vary.

This is an exceptionally hard, dense wood with a specific gravity of between 1.20 to 1.36 (water has a specific gravity of 1.0). A cubic foot of this dense wood weighs from between 75 to 84 pounds, and a board-foot weighs about 6 1/2 pounds. This makes snakewood slightly denser than *lignum vitae*. It is not, however, as resinous as *lignum vitae* and therefore not as easy to turn. It is somewhat brittle and has a slight tendency to splinter and split, but it can be worked to a smooth, highly polished luster. The reddish-brown portions of the wood darken slowly with age and the black markings become less distinct.

Snakewood has been a commercial wood for a long time, but never in abundance. Small to medium-sized chunks are usually sold by the pound. The going rate can vary from \$8 to \$30 a pound, depending on the quality of the markings. A median price is about \$14 per pound. At this rate, a board-foot would cost \$91, making this a decidedly expensive exotic. This kind of beauty does not come cheap.

its own woodturning exhibitions: we certainly encourage and promote the idea of holding exhibitions for all levels of skill around the country, but we don't get involved financially or in choosing who can and cannot be shown. This is based on the idea that we are fundamentally in the business of education and promotion of the field and not in determining who has the highest merit. I fear that a certification effort would push us away from our basic mission. And there are a few other critical areas that make such a program difficult from our standpoint: handling the logistics of evaluation (getting the panel together and shipping slides and pieces to the panel) and the problem of rejection—like school, athletics, and business, not everyone who attempts will be successful. Especially where the calls are made fundamentally on judgment, it will be touchy at best. Also, there is the dilemma of balancing—making it too easy (and therefore of any significant merit) versus making it too difficult—with the sponsoring body viewed as a gang of elitists. These are real concerns voiced from within our ranks as well as from craft organizations with experience in such matters.

Could it be done in a meaningful manner? If the concept was not rejected out of hand but was given plenty of time to be thought through and a variety of alternatives generated, fertile ideas would appear. At this point I find the idea not so foreign and not so outlandish as I once had. There are individuals and groups who have been giving this subject serious attention for some time now. I think the best example that I am familiar with is Michael O'Donnell in Scotland. He has wrestled with the idea for quite awhile and was recently selected chairman of a group to establish levels of competence in woodturning as the basis for national qualifications. This group will be facing the questions raised here, plus many more. Let us hope we will gain in our understanding of the process from their efforts.

What about the feedback I have received since writing the article in *Woodturning*? Surprisingly most comments have been favorable to the



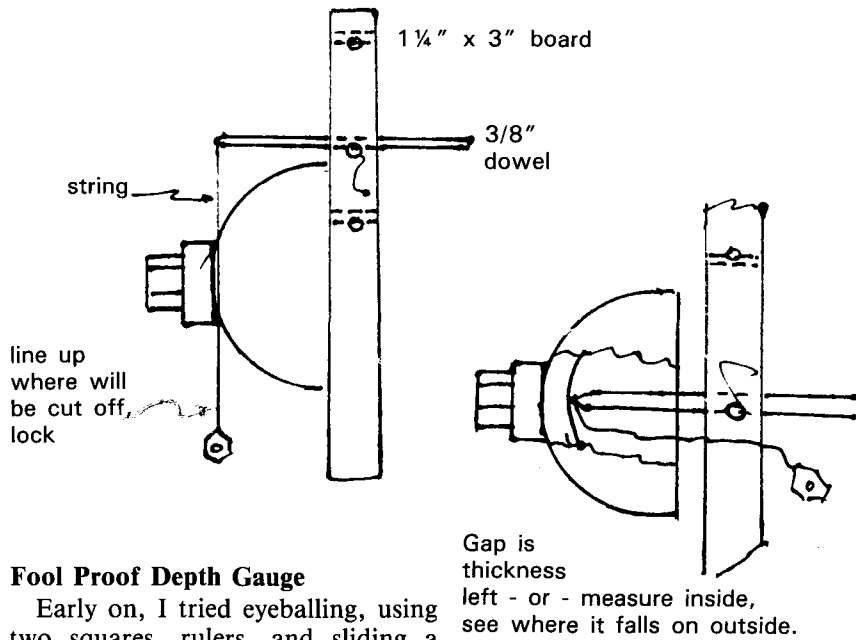
Lidded container, snakewood, Dale Chase, California

More than any other topic, readers have asked for more "tips" in the journal. Robert Rosand has offered to coordinate this important section

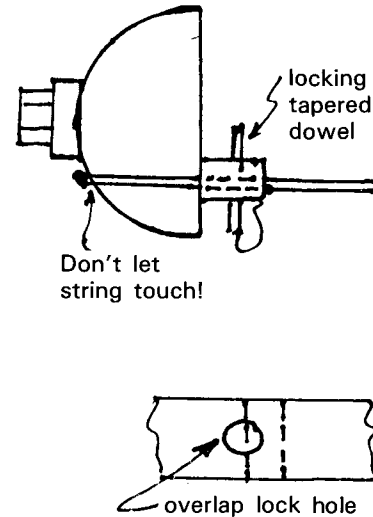
of the journal, so send your tips to: Robert Rosand, Ditch Hill Woodturning, Rd. 1, Box 30, Bloomsburg, PA 17815 717/784-6158

TURNERS' TIPS

Side View



Top View



Fool Proof Depth Gauge

Early on, I tried eyeballing, using two squares, rulers, and sliding a dowel in across another piece of wood to determine the depth of bowls and vessels. I still occasionally cut the bottom thinner than I wanted (translation: cut through the bottom).

The simple addition of a weighted string to the end of a dowel made the sliding dowel system essentially foolproof, as long as you don't let the string come in contact with the turned piece. All who have used this method have made their own. It also works on uneven-topped bowls if you mark the rim at the point the cross-piece crosses the bowl edge. I usually measure the outside and put masking tape on the dowel at the thickness I want.

—Paul F. Korbach, Kerrville, Texas

idea. Understandably, of course, these comments have not come from individuals who like the status quo. The greater part seems to be coming from individuals who would like to see another option added. And are there even options to a certification process? Certainly, yes, if we add a spirit of open-mindedness and free-thinking.

I welcome your comments on these matters and somehow I just know that I will hear from many of you.

—Alan Lacer

More Information on Optic Light for Use in Turning Deep Vessels

In response to your recent article on fiber optics (December 1991), I would like to offer a find, which may save some time and money. After taking a class in vessels with John Jordan, I had been looking for a way to light the inside of a vessel so that I would not turn through the vessel wall. I tried many different ways, but most proved to be too clumsy or difficult to use while turning.

At an outing with a few friends to a gun show, I came across someone selling lights for the inspection of black powder rifle barrels. These lights were the perfect answer for being able to see inside of any vessel or bowl that has a small opening. The light is about 1/8 inch in diameter and is attached to a 12-gauge wire. The wire is about 10 inches long with a threaded end for replacement of the light bulb. This, in turn, is attached to a battery case that requires two "AA" batteries. The whole thing measures 17 inches in length, but can be lengthened by attaching a 20-inch section (sold separately).

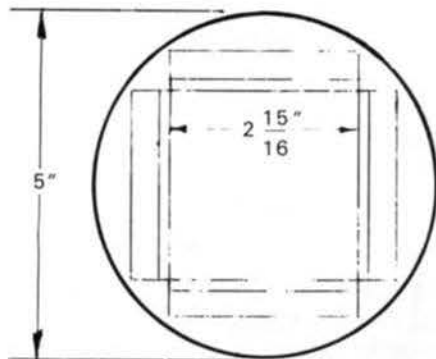
There are two different types of quartz halogen lights to choose from. One protrudes past the metal casing and gives a floodlight effect. The other is recessed inside the metal casing and gives a spotlight effect.

I purchased one with the protruding light and an extension and attached the whole thing to my Glazer boring tool with a few rubber bands. What a difference this light makes! There is no light attached to my head or any box to trip over or large light that can never be positioned in the right place. This light is lightweight and out of the way. Because the wire is a solid-core wire, the light can be adjusted in almost any position. There is only one problem, however. I now have no excuse for running through the vessel wall of my turnings—now what do I tell my friends?

A friend of mine, Howard S. Lewin, is marketing these lights as "vessel lights." His name is in the 1991 AAW membership directory (3825 W. 139th St., Hawthorne, CA 90250).

—Rudolph D. Ruiz, California

A Chuck for Insideout Turnings



The article on inside-out turning in the Sept. 1991 issue of *American Woodturner* inspired me. I had heard of inside-out turning before but never had it explained to me. We have a woodturning chapter here in Fort Wayne and this, I felt, would make a great demonstration. Another member and I decided to work up a program. He started out doing most of the work, but seven days before

the meeting he informed me that his work would take him to Texas. The pressure for me to learn inside-out turning became great.

The article, "Turn Your Christmas 'Inside-Out,'" was well written and well illustrated. I had no trouble following directions. Although my first few efforts were pretty humble, I quickly developed enough skill to successfully demonstrate the process to our group. They were quite pleased to see something different.

For those of you who might have difficulty carving a square recess in a hardwood block (in order to make the holding chucks), try making the chuck the way I did. Mount a scrap block onto a faceplate (about 5 inches in diameter) and turn it round. Cut a 2 15/16 inch square piece of 1/4 inch plywood and attach it to the scrap block, centered. Next, glue 7/8 inch thick, tapered strips of wood against each side of the plywood. About a 6-degree taper works well

to allow the three-inch square assembled size of the four pieces to slide into the chuck, hold firmly, and be centered.

Once I got started it was hard to stop. The next 30 days in my spare time I turned more ornaments. With so many lying about I hit upon the idea of making my own Christmas tree to display them. It turned out well enough to win a Christmas ornament contest sponsored by another club. A few of us visited the Indianapolis club meeting in November, and the tree went along. They received it well, and I was invited back to demonstrate to them at their January meeting.

I use the AAW journal to stimulate my interest in woodturning. The ideas run out quickly when I spend my time alone in my shop. The articles have been well written and well illustrated. With little difficulty one can follow the directions and come up with "something new."

—Dr. Robert E. Bahr,
Fort Wayne, Indiana

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Bob Bahr explaining his chucking method

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LETTERS TO THE EDITOR

Concerning shop safety,

The story in *American Woodturner*, December 1991, Vol. 6, No. 4, page 25, by Ron McEwen caught my interest. It is my opinion too little is written about "shop safety" and much is taken for granted by many. It would, in my opinion, be worthwhile to repeat . . . the suggestions I outlined in a letter in *Fine Woodworking* #90. "Install a push-button phone in the shop in a convenient spot—even with severed fingers, you could probably dial 911. Better yet, install an automatic dialer phone and program the first button for an emergency number. If the above measures are not practical, install a switch to sound an alarm outside the house so that if you get hurt when no one is home, the noise will alert the neighbors to call the emergency service."

—Robert J. McNeil, M.D.,
Cambria, California

Editor,

The article by Ron McEwin regarding the turning blank that came off his lathe causing a nasty head wound reminded me of an incident that happened to me some years ago. I thought I'd pass it on for whatever it's worth.

While roughing out a fairly large bowl blank, I became aware of a strange sound concurrently with an increase in the vibration of the lathe. I was turning left handed so I was standing to the right of the toolrest at the time. A gut feeling told me not to step in front of the blank to switch the motor off. I pulled the plug from the outlet, which was located near the tailstock end of the lathe. What happened was that the wood had almost completely worked its way out of the screws and was on the verge of flying off the lathe.

As a result of that incident, I took several steps to improve the safety in using my lathe. First, I installed a second switch on the tailstock end of the lathe so that the motor could be turned on and off from either end. I used a switch sold by Shopsmith because it has a large pad on top that you push down to turn the current off. This is a great feature because in a panic situation, all you have to do is bang down on the pad with

your hand. An extra plus with having a second switch is that if you turn from the back side of the lathe, you don't have to walk all around the lathe or reach over the headstock to turn it on and off.

Alternately, you might wire a switch on the end of a cable so that you can hang the switch at either end of the lathe much like the control box for Delta's electronic variable speed lathe.

The next thing was behavior modification. Aside from always wearing a face shield, I forced myself to develop the habit of standing off to one side before turning the lathe on when starting a new turning. I also wait until the turning is up to speed and I'm satisfied that there's no strange noises or unexpected vibrations.

Finally, I have a drum switch that's used to reverse the motor. To prevent myself from accidentally turning the switch to the reverse position, I installed a bolt that I have to remove before I can throw the switch to reverse.

Over the years, I've had several turning blanks either fly off the lathe or laminated turnings that broke apart with pieces going in very which direction. So far, knock-on-wood, I've been real lucky and don't have any scars.

I'd like to thank Ron for his article because it's all too easy for each of us to become complacent. We need jolting periodic reminders that accidents can happen anytime to anyone.

—Yosh Sugiyama, Redding,
California

In closing, Yosh asks for more information about dust collection systems. Although this issue of the journal has one short article, we would like more information on this important topic. Please send pictures and descriptions of any system that works well for you.

—Betty Scarpino, editor.

Dear Editor,

Many turning instructors advocate repetition as the key to truly mastering a technique. If you accept this as being the case then I have found a way to master sharpening a thumb-nail bowl turning gouge. But, first let me digress:

Sometime ago, about 3 B.C. (Before Children) I took a weekend woodturning course from Russ Zimmerman. One of the areas covered was turning bowls from green wood. After I went home I carefully followed his instructions such as waxing the outside, weighing them monthly, and checking for cracks frequently. I never had any trouble. Of course things change. Children came and time went. I grew sloppier. We moved.

The trouble started with a tornado in Reistertown. A neighbor of mine got quite a lot of soft maple from a tree that was blown down, and he let me have several pieces. I went eagerly to work and roughed out several 15 to 16 inch bowls. In keeping with the way my technique had degenerated I waxed the outside, wrote the date on the rim, and tossed them under my lathe bench. To my horror, the next time I found time to look, my wonderfully big (to me, anyway) bowls had all developed some substantial cracks.

I tried some futile measures such as putting the cracked bowls in plastic bags for awhile, but of course it was too late. Obviously, prevention was the only cure, and I wasn't sure if I could find the time to start doing things as I was taught. Then inspiration struck—what I needed was a better sealer than wax. I had seen some woodsealer in the Craft Supplies catalog, but I didn't have any. What I did have was leftover latex paint, so the next time I roughed out some bowls I put on a coat or two of egg-nog Spred Satin. Happily, it seemed to help. I still had some checking, at least on the deeper bowls, but it was nothing some super glue couldn't take care of.

The learning experience started when I started to finish turn these painted bowls. The paint totally destroyed the cutting edge on my HSS bowl gouge before I had cleaned up an inch of the bowl. I tried a cobalt steel cutter in my Stewart System, and the paint turned the edge on it long before it turned the bowl. So I went back to the thumbnail-grind bowl gouge and sharpened, and sharpened, and sharpened

I really did get quite a bit better at sharpening this particular gouge.

And as there was a fair amount of time between the inspiration and the learning experience—I still have material left for a refresher course in sharpening when I need it.

—David R. Smith,
Hampstead, Maryland

Editor's note: Of course David should stick with using a liquid-wax end-coat sealer, but that does not always work. What works for you in terms of achieving crack-free drying of difficult-to-dry woods such as persimmon, fruitwoods, holly, and Osage orange?

Left Handers Unite!

In the September, 1991, issue of *American Woodturner*, Randy Jenkins described his left-hander's lathe which had been adapted for him by Vega Enterprises, Inc., Rt. 3, Box 193, Decatur, IL 62526, 800/222-8342. Being another long-suffering left-hander, I called Vega Enterprises to ask them whether or not they would similarly adapt one of their lathes for me. Their response was that they could not do this again unless a number of people expressed interest, and that so far I was the only such person who had called them. Would any other interested left-handers please call Vega Enterprises and urge them to end the long-standing discrimination against left-handed turners? Does anyone know of other sources for such a machine?

—William A. Montgomery

Dear Editor,

What a refreshing review of the "Challenge IV" exhibition by Dave Ellsworth (*American Woodturner* Sept. 1991, Vol. 6, No. 3). It was great to read about personal reactions to the pieces rather than about the technical aspects of how they were made. This was most unusual, particularly in relation to woodturning. In his opening comments David gave valid reasons why the woodturner should learn to talk about 'why' they made their pieces rather than 'how,' particularly when they are in for the gallery and museum market. To buyers and collectors in this market, technical information is of minor importance; what they are looking for

is the aesthetics of the piece, how they react to it, and the message that comes through the piece from the craftsman or artist. In fact, what they are buying is a piece of the soul of the creator, so it is important to them that the piece is original, not made by a clone.

To represent themselves adequately in this market, woodturners not only have to learn how to put their self expression into their work, but also learn the language of the art market to express how they feel about the work in their artists' statements. David's review is an objective lesson to all who wish to make the step into the gallery and museum market.

—Michael O'Donnell, Scotland

Dear Editor,

I feel compelled to respond to your rejection of my article describing my use of aboriginal Native American designs and your expressed reasons for doing so. You refer to Jay Miller's article (*American Woodturner*, Dec. 1991). I read it with great interest naturally. I suspect from some of the phraseology in his 'editorial' that he had access to my article directly or indirectly. If so, I was not afforded a similar forum or courtesy. I also checked our membership directory and could not find his name so I assume his 'expertise' was solicited. I don't have his credentials, but I do have many years of research in and experience with Indian cultures.

First, use of Indian designs for cheap commercial 'appropriation' should be abhorred by everyone. The other side of that issue is that Indian artists do it also for tourism and commercial interests. I am not advocating such use, merely recognizing reality. Secondly, it is strange that we now want to advocate such rarified sensitivity to Native American religious beliefs considering the fact that our culture is responsible for destroying them. What is being advocated now is the opposite extreme. Either way we wind up never understanding these beliefs and a huge cultural gap still exists. Is the only appropriate medium for cultural understanding to be 'experts' such as Mr. Miller lecturing about them? I think it is important to distinguish between 'appropriation' motives.

Those of us who revive many long ignored symbols out of honor and respect for their author can hardly be stereotyped with cheap commercialism. On the contrary, some of us hope to educate our culture in achieving a deeper understanding and respect for Native American beliefs and values that our culture has destroyed. Is this not Mr. Miller's motives also?

Third, Native Americans are not a homogeneous whole. Very few know or care about symbols of their past. Only in recent years have some Native Americans attempted to revive their lost past and therefore have become sensitive to the use of traditions in inappropriate ways. Inter-marriage and assimilation has blurred both tribal heritage and exclusive tribal characteristics. Even revivals of heritage take on a generic 'Indian' tone that blurs tribal individuality. It might be instructive to attend a few pow wows or other tribal events here in Oklahoma if one has any doubts about my conclusion. The connection has also been severed between Native American peoples and their animistic religions. For that majority of 'Americanized' Indians as well as Americans in general, maybe there is some value in 'appropriation' for the sake of reviving that severed link with the past.

Fourth, I am at a loss to comprehend how using 'anything specific' would offend even the most sensitive Native American who still believes in aboriginal tribal religions. If such use is out of sensitivity for the belief, honors the origin, and teaches us all a deeper understanding and respect for that belief, where is the offense? I can understand the offense if used in cheap mockery, but not in respectful 'appropriation.' The question of using something from a personal vision of someone several hundred years ago is hardly sacrilege unless we plan to scrap all historical religious art. We certainly don't apply that standard to any other culture. Also, it might be a revelation to many to look at a lot of contemporary 'Indian' art and see how much of it is in the mystical 'personal vision' style. Anyway, many of the personal pieces from the past were explained to others by the author. They were passed

on to us in historical records. The author obviously felt that it was not so personal that the rest of us couldn't appreciate his vision. This extreme sensitivity in our own time is an invention in the minds of contemporary persons. I suspect it has something to do with militant civil rights advocates. They are the only ones I have seen who expressed such concerns. We need to analyze the historical perspective and not just jump to conclusions. I will honor the origin of the art but not some misguided contemporary. Also, splitting hairs over which symbols to use is pointless since all of them are religious on some level. We will eventually use none of them.

I certainly appreciate Mr. Miller's concern for the need to be cautious. But, there are those of us who feel both Indians and everyone else would be losing a significant contribution to the meaning that binds all humanity together if we avoid messages from the past.

Fifth, it seems to be acceptable to use some Indian art, if we are sufficiently vague as to its origins. Practically every woodworking book and magazine I have seen in recent years has something 'inspired' by Native American art. In other words, it seems to be acceptable to abstract the Native American artists' work into some generic form, claim 'inspiration,' and be honored as an 'artist.' And if I reproduce his art from some musty old Ethnology Report to Congress that nobody ever sees, carefully record and explain as much cultural meaning as possible, faithfully honor the author's meaning and vision, and hopefully teach someone else through his vision, I have become a reprehensible plagiarist. It seems clear now. I can steal if I do it in a way that glorifies myself as an artist and gives no credit to the author. Does this sound vaguely familiar Indian brothers and sisters? Now we have found a new way to rob you intellectually (to add to the long list of other ways) by vaguely tipping our hat your way with some off-handed comment about how we were inspired by you, get all the attention focused on ourselves, and no one will ever know the real meaning of *your* culture or genius. This is

beginning to look like a Greek tragedy. I know how it is going to end and it isn't pretty. White man wins again! In payment we will vaguely talk about how noble you are and how you inspire us. Bottom line—you stay out of sight Indian! We don't want any reality creeping out of the past to challenge our delicate conscience. Shades of Manifest Destiny! We will keep your vision hidden out of respect for you while we use your art. Now we have reached the philosophical pinnacle of contradictory abstractions. We have found a way to steal your mind and swear by all that is holy that it is done to preserve your holy past. I think I understand why my wife's Grandpa Weaver refused to sign the headright rolls and accept 'white mans welfare'!

Mr. Miller's philosophy has good intentions which I respect, but there are other perspectives on these issues. The same issue of *American Woodturner* (December 1991) that has Mr. Miller's article also has a picture of one of Giles Gilson's 'inspired from Native American culture' vases. No one is accusing him of plagiarism (including me). I think it is high time we did work that honors Native American culture. But I for one will continue to go a step farther and faithfully try to also teach the original meaning instead of just claiming inspiration with no refer-

ence to historical reality. I make no apologies! And I would hope a journal representing woodturners would allow alternative views to be expressed. I hope the journal does not get into the pontifical snobbery of assuming there is only one 'right' view on this or any other issue. If only one view is published that will be achieved by default.

This may all sound like sour grapes from a rejected suitor. I thought about that a long time and almost threw this reply away for fear it would be interpreted as such. After some soul-searching, I decided that the main issue is a difference of opinion. Even if my article had been published, I expected serious disagreement on some of the opinions expressed there. I even warned the editor to expect it. I did not expect the journal to just insert an alternative view and ignore mine. In my work (teaching) I am used to doing a lot of research and presenting students with all the various views on any relevant subject. It is daily fare to argue and evaluate different ideas. I guess I am a little surprised that a published journal that deals a lot with ideas (many of them very subjective) would be so shy about publishing alternative ideas on an obviously controversial subject.

—H.M. Horsman,
Ochelata, Oklahoma



"Egyptian Tear-Drop," a solid-segmented woodturning. 24 inches high by 20 inches in diameter. George Radeschi. *Better Homes and Gardens' Decorating* magazine will feature the woodturnings of George Radeschi, of Doylestown, Pennsylvania, in its spring issue.

TURNING IN THE U.K.

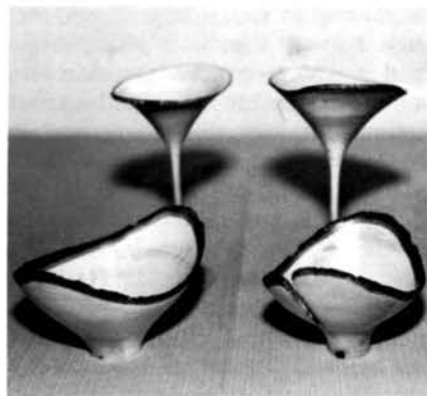
W. Geoffrey Heath

It's my own fault, really—I should never have volunteered. There I was, quietly reading the newsletter of the Association of Woodturners of Great Britain (AWGB), when I came across this request for someone to write a piece for your magazine about turning in the United Kingdom. Since I sit at my word processor when I'm not standing in front of my lathe, I wrote to your editor offering to be the fall guy. Betty Scarpino, editor of your journal, had suggested the sort of things she thought you would like to know about—how we learn to turn, what our native timbers are, which American timbers we regard as exotic

The more I thought about writing an article, the more difficult it seemed. It was Winston Churchill, I think, who said we were two peoples divided by a common language. It wouldn't be so bad if we *did* have the same language, but whilst (thanks to your films and TV programmes) we in Britain can understand American, my occasional business trips to the U.S.A. have taught me that you sometimes have difficulty in understanding our brand of English. You also spell differently, and the editor is going to have fun correcting words like 'centre' and 'colour'! If a 'pavement' is a 'sidewalk,' if a 'lift' is an 'elevator,' and if the 'bonnet' of a car is a 'hood,' how many woodturning words might be different, too?

This article will be written in 'British' English; but you can see what I mean when I say that I should never have volunteered!

How do we learn our craft? Judging by the turners I know in my local branch of the AWGB, most of us are self-taught. We probably were allowed to turn a small object in the woodwork shop at school, but for many of us, that was a long time ago. My fellow-turners are mainly retired people like myself. I suppose I'm fairly typical; having always been a handyman around the home, the time came when the children were no longer in need of toys and when all the obvious improvements had been made to the house. My wife had taken up hand-spinning as her hobby; what could I adopt as mine? I'd never been very good at joinery or cabinet-



Turnings by Geoffrey Heath

making, but a few visits to local craft fairs stimulated the idea of woodturning. I purchased a very simple lathe and a few tools, bought a book on the subject, and got started. Sixteen years and two lathes later, I think I'm getting the hang of it!

Many of us top up our self-taught skills by going on a course run by an expert turner. Look through one of our British woodworking magazines, and you'll find dozens of advertisements for woodturning courses: one-day, two-day, weekend The UK is a small place; Americans often have difficulty in realising just *how* small it is. (It is said that nowhere in the British Isles is more than 75 miles from the coast.) So no matter whereabouts in the country the courses are, there's bound to be one within a couple of hours' drive from your home.

The same is true of suppliers of timber, lathes, tools, and all the other accessories the turner needs. Perhaps I'm particularly well-blessed with Craft Supplies only twenty miles away in one direction and Alan Holtham about an hour's drive in the other. (Now don't tell me you haven't heard of Craft Supplies or Alan Holtham!)

Mention of local suppliers brings me to the next question: What are our native woods? It's interesting that many of them are one-syllable words: oak, elm, ash, yew, fir, beech. My belief is that the shorter the word, the older it is; it's only as we get more and more sophisticated that we have to invent words like 'disestablishmentarianism'! I therefore conclude that these trees have been

around for a long time. Certainly some of them figure in our history: Robin Hood gathered his band under a great oak in Sherwood Forest.

Yew, which is often found in our country churchyards (and there are plenty of theories about why that should be) was fashioned into the long-bows which brought us victory against the French at Crecy in 1346 (although we lost the home game at Hastings in 1066!). Elm, ash, and beech are traditional timbers for furniture, and elm has the added virtue of being relatively impervious to water. Elm was, therefore, used in earlier times for water-pipes and coffins.

There are, of course, some two-syllable timbers. Two fruitwoods spring to mind: apple and cherry. Then there's holly—a difficult timber to dry because it warps and splits all too easily—but it turns nicely, even though it is rather featureless. There's willow, the main use of which is in making cricket bats, and walnut—the *Juglans regia*, not your American *Juglans nigra*. Then there are the chestnuts: the horse chestnut, whose nuts form the essential element in a schoolboy's game, and the sweet chestnut (found mainly in gardens) whose nuts are roasted at Christmas.

Three syllables? Well, there's sycamore, a close relative of the maple—which makes good kitchen ware like salad bowls. And labrunum—another popular garden tree—which has an attractive greenish-brown heartwood and a cream-coloured sapwood.

The favourite native wood for turning is undoubtedly yew. Its wild grain, tan-coloured heartwood with splodges of purple and a contrasting creamy-white sapwood gives it a most attractive appearance. Second favourite? Burr elm, I would guess.

Now, having mentioned our most common trees, I am supposed to tell you which American timbers we regard as exotic. I must confess that we don't see many North American 'exotics.' There's plenty of American cherry, walnut, and oak, but most so-called exotics come from South America, Africa, or Asia. We even get some strange species (like raspberry-jam wood) from Australia. But North America? Oh, yes! How about

WOODFEST INTERNATIONAL

Lloyd Sumner

If you love working with wood, Woodfest International promises to be the sort of event you will enjoy. It will be held in Blacksburg, Virginia, June 7-11, 1992, at the Red Lion Inn located on thirteen private wooded acres in the Blue Ridge Mountains of Virginia.

Woodfest International is the 1992 annual meeting of the International Wood Collectors Society, a non-profit organization founded in 1947 for the purpose of exchanging wood and information about wood among its members all over the world.

Of special interest to turners will be demonstrations by Rude Osolnik, Del Stubbs, and Bonnie Klein. Jean Sumner will show how to turn hollow vessels with voids. David Yeatts will demonstrate how he makes tightly lidded boxes and kaleidoscopes. Bruce Hoskins will describe his techniques for finishes that prevent padauk, Osage orange, and other light-sensitive woods from losing their color. Lloyd Sumner will present an updated version of "How to Read a Tree" to get the best figure and shapes for turning, and will also demonstrate the turning of spirals, tree forms, and/or other wild, unbalanced pieces.

Osage orange and cabbage bark? Anything else? (This is where I resort to the latest issue of my favourite timber merchant's catalogue . . .) No, nothing else. Now I wonder what we're missing out on in the UK! ☺

Geoff Heath is a retired aeronautical engineer who took up woodturning as a hobby in 1975. He has a small workshop where he makes whatever takes his fancy, from light pulls to kitchen stools, however, he is trying to make more artistic items and fewer utilitarian one. He sells his wares at craft fairs and through three local shops, and his neighbours know that they can always drop in to buy a last-minute birthday present. When he is not standing at his lathe or helping in the kitchen or walking in the beautiful Peak District National Park nearby, Geoff enjoys sitting in front of his word processor, writing about woodturning, aircraft design, and local history. He often wonders how he found time to go to work!



Lloyd and Jean Sumner at home in Riner, Virginia—a Nut Bowl? Oh, yes, for WOOD nuts!

Spouses are welcome, and over a dozen programs ranging from Appalachian crafts to bonsai trees to clogging and creativity workshops are planned for nonwoodworking spouses or for woodworkers who want to ex-

pand their horizons.

Woodfest will get off to a rousing start Sunday night with a full-scale production of "Virginia Real," a radio variety show in the style of "A Prairie Home Companion." The theme will be a celebration of trees and wood with plenty of humor and music to tie it all together.

The total cost (registration, lodging at the nearby Holiday Inn, and all meals from Sunday dinner through Thursday breakfast) is only \$200 for I.W.C.S. members or \$215 for non-members, based on double occupancy. Registration deadline is April 1, 1992, or when capacity is reached. For more information contact: Lloyd Sumner 703/382-1974. 5900 Chestnut Ridge Road Riner, VA 24149 ☺

Lloyd Sumner is an avid woodturner and a long-time AAW member. He presented his talk "How to Read a Tree" at AAW's 1990 annual symposium at Arrowmont School. He and Jean Sumner (also an avid woodturner and AAW member) are hosting the 1992 I.W.C.S. annual meeting. Attendees will be able to tour the Sumner's Nautilus Shell House, built with over 300 different species of wood.

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MASTER TURNERS COME TO DEL MANO

Pauline Rogers

Melvin Lindquist, one of the premier woodturners in the country, will head the "Master Turners" exhibition to be held at del Mano Gallery from February 22 to March 29, 1992.

Lindquist, now eighty years old, began working with wood in the 1920s. While he worked at General Electric, first as a machine-lathe operator, then as a machinist, and finally in the quality control department, he developed an interest in creating, in his shop at home, utilitarian wood pieces such as wall-hung planters and collection plates for the church. He also began experimentation and exploration into the vase form, a pursuit that would occupy him for the next fifty years. Today Lindquist's work is in the collection of galleries and exhibitions throughout the United States and in London, including The Metropolitan Museum of Art in New York City, U.S. News and World Report Corporate Headquarters in Washington, D.C., and in Bowater Corporation in Knightsbridge, London.

Melvin's son, Mark, learned woodturning as a child from his father. He then went on to study the formal disciplines of sculpture, painting, drawing, and ceramics. "When Mark began expressing Japanese ceramic techniques and concepts in his wooden bowls," says Melvin, "I became interested in exploring the relationship between wooden vase forms and ancient ceramic vase forms and the correlation of the natural markings of spalted wood to the surface decorations of clay vases."

In the 1950s, Melvin Lindquist discovered spalted wood on his land in the New York Adirondacks. He began using it for turning. Up until he took an interest in this partially decomposed matter, turners did not consider it usable for turning because of the difficulty of working with the wood. Using his engineering and machinist's background, he developed new tools such as his carbide-tipped turning pieces and techniques such as blind boring and reverse turning for working with this unstable and inconsistent wood.

Spalted wood results when wet wood becomes the host for spores of fungi. "The fungi create zone lines



as the tree decays," says Melvin. "These carbonaceous deposits appear as distinct black or brown pen-like lines. Carefully exposed through turning, spalt lines create beautiful patterns on the surface of a vase."

Melvin Lindquist has become a master of adapting this spalted wood to one of the most difficult forms of turning, the vase. Working carefully and slowly, Melvin lets the wood piece suggest the form as it is turned.

For years Melvin struggled with the problem of creating hollow, narrow-necked vessels. Until his development of the blind-boring technique, most woodturners simply drilled a constant-diameter hole into a vase. Melvin, however, began experimenting with a technique that allows the craftsperson to create a narrow-necked vessel with thin walls of even thickness.

"Blind boring literally is what it sounds like," he says. "You turn out the interior without seeing the surface being worked on. Using push and plunge cuts, you cut the opposite surface of the inside of the vase through the center hole to remove the inner mass." It is a technique that takes a great deal of confidence and artistic mastery. Over the past twenty years, blind boring has been further developed and refined within the contemporary woodturning movement.

Melvin Lindquist's adaption of ancient Oriental, Greek, and Indian ceramic vases, as well as his

development of the blind-boring and reverse-boring techniques of turning, have been major contributions to the resurgence of interest in the art of woodturning in the past twenty years.

Turners Melvin and Mark Lindquist, Ed Moulthrop, David Ellsworth, Robert Stocksdales, and William Hunter will be featured in the "Master Turners" Exhibition from February 22 through March 29, 1992, at del Mano Gallery, 11981 San Vicente, Los Angeles, California. The exhibition is scheduled to coincide with "International Lathe-Turned Objects: Challenge IV" at the Craft and Folk Art Museum in Los Angeles, February 1 through April 12, 1992. ©

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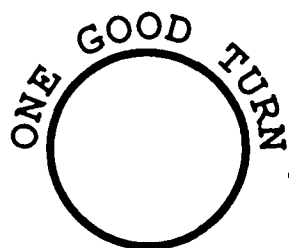
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STARTING A LOCAL CHAPTER

Palmer M. Sharpless, Local Chapter Chairman



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We are a growing organization with many groups of woodturners who have started local chapters in their own geographic area. Starting a local chapter might sound like a complicated venture, but it is really more of a ground swell and grassroots movement within our community of woodturners. When the AAW was in its initial stages of development, the founding members realized that local chapters would provide an opportunity for turners to meet and help each other. The first two chapters, North-coast and Bucks Woodturners, were started by members of the first AAW Board of Directors. As time went on, it became apparent that a Board member should take on the responsibility of guiding and watching over the local chapters. That person is the local chapter chairman.

At present there are forty-two local chapters, with several others in the formation stages. Each new chapter adds to the value of AAW and to its members. Some chapters have started with as few as five members, quickly growing to be thirty or forty strong. A few chapters are quite small or quite large. To help communicate with the local chapters, the local chapter chairman sends a monthly "Newsletter" to all chapter presidents, Board members, AAW advisory board, journal editor, and to individuals interested in establishing new chapters.

If you are interested in starting a chapter in your area, here is the procedure to follow: 1. Contact the local chapter chairman, Palmer M. Sharpless, 192 Durham Road, Newtown, PA 18940. (*This is Palmer's last year as chairman, a new person will be announced in June.*) You will be sent a packet of materials that includes a page of suggestions about starting a chapter, sample-bylaws format to help form local chapter's organization rules, and a list of objects made by turning. 2. Meet with some of your woodturning acquaintances and talk about meeting times, places, bylaws, and activities. 3. Obtain a list of AAW members in your area from AAW's national administrator or from last year's *Membership Directory*. Invite those woodturners to a meeting. 4. As your new chapter takes form with officers elected, submit a copy of your bylaws to the local chapter chairman. It will be reviewed, and if all is in order, your new chapter's request for official AAW status will be presented at the next AAW board meeting for approval. 5. A charter will then be prepared and sent to the new chapter's president. From that time onward, he or she will receive the local chapter "Newsletter." 6. Send a copy of each of your newsletters to the local chapter chairman for the AAW records to keep him or her abreast of chapter happenings, concerns, and special events that can then be shared with other chapters via the "Newsletter." Chapters are encouraged to exchange newsletters with other chapters.

Cooperation and exchanges of demonstrators, program ideas, wood, and other activities between chapters is growing. The response and success of our first "Great Totem Pole" project is a case in point. The two totems, constructed and assembled by local chapters, have become an attraction at Arrowmont School of Arts and Crafts. They symbolize the growing awareness and potential for woodturning in America. ©

PALMER SHARPLESS: A Gem in the Woodshavings

Bethann Morgan

For Palmer Sharpless, life offers so many opportunities that his days are too short to take them all in. AAW members have come to respect him as a production turner, master craftsman, and excellent teacher. We have certainly benefitted from his volunteer work in organizing the local chapter section of AAW and in helping to direct a fledgling organization. Palmer also enjoys being a gardener, hiker, father, collector of artifacts, canoeer, and lover of nature. This is Palmer's last year as a board member for AAW, and it is only fitting that we find out more about him.

Palmer's earliest turned pieces were two lidded boxes made for his mother when he was in seventh grade at Moorestown Friends School. After graduating from Westtown School, he furthered his education at Penn State University, earning a B.S. degree in industrial arts. His enthusiasm in working with wood and his value of the natural world continued to be a part of his life throughout all his schooling. Palmer's Quaker upbringing, which emphasizes the spiritual connection between people, caused him to register as a Conscientious Objector during World War II. While doing his alternative service, he sought opportunities to design, turn, and build. With a shop, lathe, and some intrigued buddies, Palmer taught turning and woodworking in his spare time. This was a great experience for his future teaching endeavors.

After the war, Palmer began his 38-year career as a high school industrial arts teacher at George School in Newtown, Pennsylvania. It was from this vantage point that he participated in the Pennsylvania Guild of Craftsmen and served as president of Bucks County Guild of Craftsmen. He also cofounded the Woodturning Symposiums between 1976 and 1981 and later became a founding board member of the American Association of Woodturners.

The concept of a national woodturning organization sprang out of the heads of a number of turners in



the fall of 1985 at Arrowmont School for Arts and Crafts. In February 1986, the group was incorporated, and the first Board of Directors was elected. Palmer began his service on the Board.

Each of the original board members chose an area for which they would be responsible, and Palmer chose local chapters. He was instrumental in organizing, managing, and promoting the AAW on a grassroots level. From the first chapters—the North Coast Chapter and Bucks Woodturners—to the most recent—East Texas—Palmer gives his suggestions and support about forming chapters, making connections, and arranging demonstrations for meetings. He inspires others to continue their involvement in AAW, and he gives of the most important thing—himself. Another member once reported hearing Palmer ask only for “a meal and a room” in exchange for a turning demonstration. Thanks to Palmer's commitment, over half of AAW members are able to benefit from membership in local chapters.

Almost anyone who has met him remembers Palmer's charisma—a firm handshake, kind words, and a wonderful laugh—that lets you know he is eager to talk, learn, and teach. And it is his teaching that is his most remarkable characteristic. One fellow member of the Bucks Woodturners was in the middle of turning a

bowl when a problem with it arose. He called Palmer who immediately opened his shop to the frustrated turner. During that evening the novice learned much from Palmer's lighthearted guidance.

Palmer's magnetic teaching style quickly involves those around him. He is an excellent “hands-on” teacher and can give the space and faith needed for students to work on their own. Less experienced turners often walk into Palmer's shop feeling frustrated; yet after one session, they are pleased to see their turning improve.

Throughout the years, Palmer's commitment to turning has grown. Through the influences of Paul Eshelman from Millersville University, Palmer advanced turning at George School from an application of design theory to an activity that introduces newcomers to woodworking.

Palmer's skill as a production turner developed from his interest in spindle turning. He received his first major commission from Independence Hall in Philadelphia to research and reproduce ballisters supporting the bannister in the East Room. While he remarks modestly that it was, “just another production turning,” his high-quality lathe skills and attention for detail proved to the historical group that they had chosen the right person for the job. During the late 1970s his reputation as a spindle turner grew as he honed his techniques and skills.

It is Palmer's knowledge of basic skills and his willingness and ability to share those skills that continue to be valuable assets for AAW. David Ellsworth, past president of AAW, praises Palmer's hard work and volunteer time. Palmer made AAW a priority in his busy life, communicating news and events to local chapters through his national newsletter. His contribution to the growth and development of woodturning and to the American Association of Woodturners is much appreciated. ☺

Bethann Morgan is a member of the Bucks Woodturners.

WOODTURNERS' ADDICTION

Gary D. Adams

Based on the stories that I have heard over the years of the antics, inventiveness, and determination of woodturners, it's easy to say that we are a very unusual breed or perhaps a new species. The following is a true story, very much the way it was related to me, however, names will not be used to prevent any further embarrassment.

It was a sunny but cool early spring day. I had been working on a fence line along the ridge separating a recently expanded field from some woodland, when I decided that it was about time to call it a day. While turning the pickup around I noticed that I had neglected to close the tailgate. I also noticed at the same time that a roll of wire had just departed on a downhill course to an unknown destination. Being the end of the day, I did not worry about the wire; wherever its resting place, it would still be there tomorrow.

The first order of business the next day was to retrieve the errant roll of wire. It was an easy track to follow as the roll of wire left a path of destruction among the smaller saplings of the woods. Using the convenient handholds provided by many of said saplings, I safely reached the bottom of the nearly vertical hill (or so it seemed) to find Mr. Barb Wire resting in the creek. While scouting the terrain for an easier exit I came upon a hollow stump of a walnut tree that was four feet or more in diameter. I stood there for a moment or two imagining what a wonderful tree it must have been, when I saw that it was not a hulk at all, but that the remaining material at the circumference was sound and still green for

a depth of six or seven inches. Well, it was back up the vertical hill (or so it seemed) to the truck for the digging bar, ax, and chainsaw. Several hours later my prize was free from its resting place in the ground and still in one large piece. I was determined to bring the stump back to my shop in one piece to make the cuts separating it into usable blanks. I carried the tools downstream to the mouth of the creek and returned for the stump which I rolled where possible, carried where not possible, and rearranged the terrain where needed to reach the less severe slopes at the mouth of the creek. Then back up the vertical hill (it really was vertical this time around) to the truck and on to the house for all the chain and rope I could find.

Returning to the mouth of the creek I collected my tools, passed the nylon ski rope through the stump, tied a knot in the other end, hooking the logging chain securely. I backed my trustworthy fourwheel drive over the crest of the slope till the chain could be hooked through the clevis.

Back in the truck, I watched in the mirror as I drove forward. Just as the stump became visible, it suddenly disappeared! The knot had slipped through the hook. Walking down the slope to find the new resting place of the prize stump I was crestfallen. (Did I mention the lake at the mouth

of the creek??) After my pulse slowed down close to my normal rate, I turned for home, bloody but not yet beaten, for the family boat. I did finally get my prize to the shop, still in one large piece, with the aid of the boat and the tractor to lift my prize from the lake.

I wonder if that roll of wire is still in the creek????? ☹

Gary Adams is president of the Blue Ridge Woodturners.

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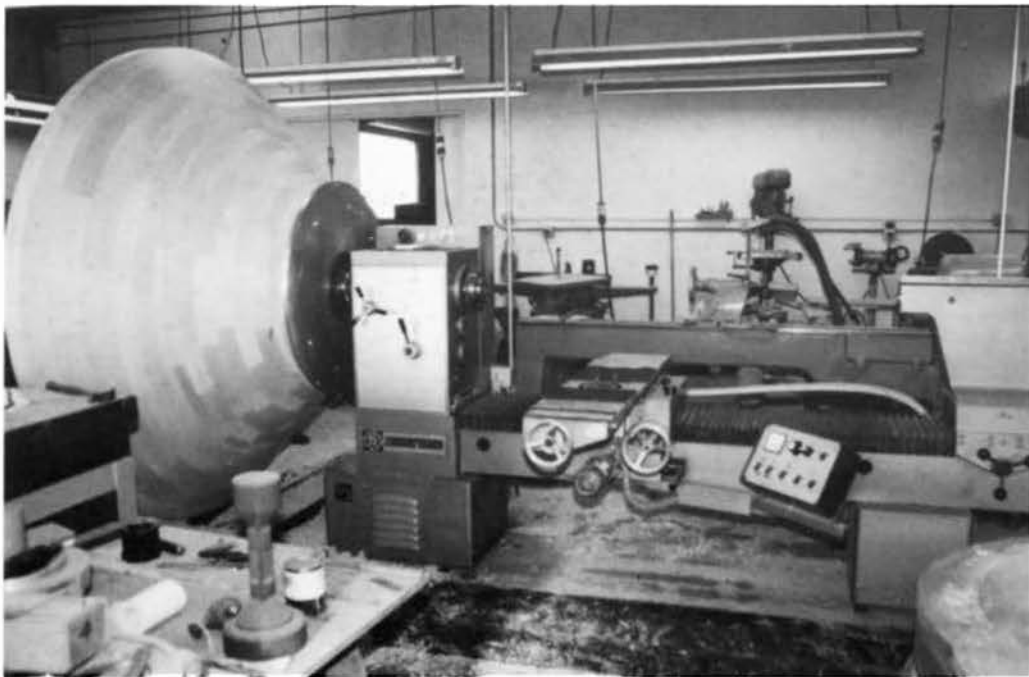
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