American Woodturner

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

President's Page

David Ellsworth, Page Editor

If you've had trouble contacting us by phone since the first of the year, it is because our offices in Eastsound, Washington have moved—again. Over the past several months, Bob Rubel's "real" job, as he calls it, as Administrator for the National Alliance for Safe Schools, has taken up more of his time than ever before and less time to devote to the AAW. As such, Bob has resigned his position as our Administrator as of December 31, 1988.

Our treasurer, Ernie Conover, jumped in to assume the temporary duties of the office, and the Board began an immediate search for Bob's replacement. That search is now complete, and we are pleased to announce that **Dennis Hormann** of Lynnwood, Washington, has assumed the duties of AAW Administrator. Please refer to the inside back cover of this Journal for our new address and phone number.

I want to take this opportunity to thank Bob for his devotion and dedication to the AAW, which began at the very beginning—the Arrowmont School of Crafts in 1985. Bob came to the Arrowmont Conference as a beginning turner and listened to our discussions about forming an organization. He stood up and volunteered to give us two *free* years of his life to help get the AAW on its feet. Without his guidance in preparing our by-laws, acquiring our 501-c-3 "non-profit" status with the IRS, and teaching us woodturners how to become board members, the AAW would never have gotten off the ground as quickly or efficiently as it did. We owe him a lasting debt of gratitude and wish him well in his future adventures.

I was reminded by one of our members after the Philadelphia Symposium that many of our new members may not know that this is a *volunteer* organization. This includes the Board of Directors and Presidents of local chapters, everyone except our administrator and secretary who are contracted on an hourly basis. So, thanks again for everyone's dedication and hard work.

Please note Denver Ulery's announcement about the '89 Symposium in this issue. We're goin' West as promised—a small college campus in Redmond, Washington, just outside of Seattle. Many thanks to the members of our Seattle Chapter who will be doing all the work of hosting the event. Carry on Denver Ulery, President; Bonnie Klein, Secretary; and all our friends in Seattle who are making preparations for the invasion. *October 13th, 14th, 15th*—mark it down and look for the details in the June issue of the *American Woodturner*. This will be a good one!

In the December issue of the Journal, I hinted about making video tapes that would show the many ways that things can be done on the lathe. My idea is to give examples of how professional turners approach their own problems in turning. We will prepare a list of topics for each tape, and let these turners demonstrate their own approach to the topics. Among other things, these tapes will cover how to select wood, the use of tools and chucks, sanding and finishing techniques, sharpening, etc. We will also cover how mistakes are made and how to prevent them from happening in your own workshops. AAW members will then be able to rent and/or buy the tapes for their own use. The problem is the camera! What we need is to raise the money for the highest-quality portable (remote) camera available—in the neighborhood of $1,500. Just think of all those high school kids, members of our local chapters, and yourself, who will benefit from these live-action demonstrations!!!

Finally, we would like to recognize three new Local Chapters to the AAW:

Mountain Woodturners: Charles Brown, President
5 Willoughby Ave., Huntington, WV 25705
(304) 525-2735

Tri-State Woodturners: Pat Norris, President
11798 Schmidt Lane, Walton, KY 41094
(606) 485-6780

Utah Woodturners: Clead Christiansen, President
3086 North, 150 East, Ogden, UT 84404
(801) 782-5105

Congratulations to you all, and welcome aboard. That's 29 chapters, now, and growing!

American Woodturner

The Journal of The American Association of Woodturners

The American Association of Woodturners is a non-profit corporation dedicated to the advancement of woodturning. It includes hobbyists, professionals, gallery owners, collectors and wood and equipment suppliers.

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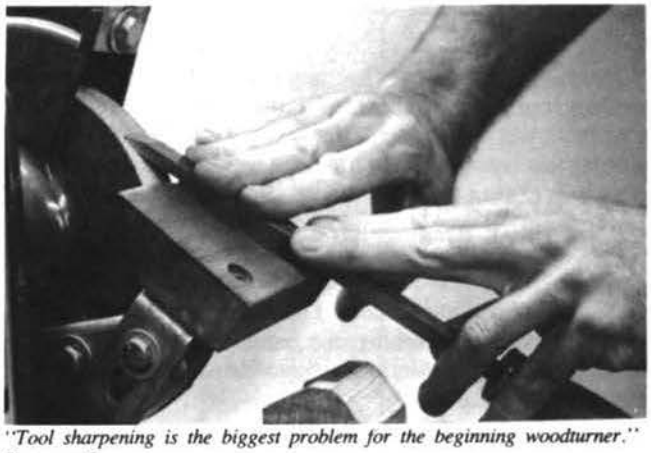

"Tool sharpening is the biggest problem for the beginning woodturner." *See page 6.*

On The Cover

"Ceremonial Bowl" by Dennis Elliott, Maple Burl, 8½" high 17½" diameter.

Finishing

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Finishes

Wayne Raab and Students
Haywood Community College
Production Crafts Woodworking Program

Finishing is not just the last step in doing a piece of woodworking; nor is it the step which is rushed through to complete a piece so you can get on to the next project. Finishing is the process that enhances what has already been done, or if done with lack of care and enthusiasm, can ruin all the work that preceeded it. It would be nice if there was one finish that could do everything for all kinds of woodworking, simple and easy. However, herein lies the challenge and excitement of exploring the making process. The more you learn about the techniques of woodworking, the more possibliities you have to design. Finishing offers many possible techniques to extend this creative process.

Choosing a finish may be approached from a number of directions. Consider that each application presents the woodworker with a number of choices to make. Finishing provides both esthetic and functional choices. Consider the objects function: is it exposed to frequent handling; to direct sunlight; to high or changeable moisture levels; or does it have to enrich the natural beauty of the wood or make an otherwise dull wood more vibrant. Also, consider what type of surface is desired. Matte non-glare surfaces expose grain and color; semi-gloss provides a smooth, easy to clean surface; high gloss imparts a very smooth and shiny surface which can play with the light, shadow reflections, and color around the object, as well as creating a surface which may offer protection. Finishes can be enhanced or altered with stains, dyes, coloring pigments, bleaching, etc., all of which extend the maker's design potential.

To make appropriate choices one must understand available finishing products and their differences. Finishes fall into two categories; solvent release and chemical reactive finishes. A solvent release finish will dissolve in a thinner, which evaporates in the drying process, and will leave a solid finish behind. Common examples are lacquers and shellac. They are generally considered surface finishes, and can be redissolved quite easily. A chemical reactive finish is a mixture of ingredients that go through a chemical reaction during the drying process, changing from a liquid to a solid. Common examples are oil and varnish. They tend to dry slower and result in more penetration of the wood. The table represents the common finishes available and used by Hayward Community College.

See table on page 3.

Wayne Raab teaches woodworking at Hayward Community College, a small 2-year technical and vocational school in North Carolina.

FINISH	Kind of Finish Solvent Release (SR) Chemical Reactive (CR)	Penetrating (P) or Surface (S)	Drying Rate	Water Resistence	Surface Quality	Application Method	DESCRIPTION OF CHARACTERISTICS AND USES
Boiled Linseed Oil	CR	P	6-12 hrs.	Low	Matte - Semigloss	Brush or rag Rub out	Darkens natural color of wood, can be mixed with dryers or thinners inexpensive
Pure 100% Tung Oil	CR	P	3-6 hrs.	Med	Matte	Brush or rag Rub out	Dries faster, harder, more water esistent than linseed oil, good base coat, expensive
Watco or Synthetic Oils	CR	P	2-4 hrs.	Med	Matte - High gloss	Brush or rag Rub out	Fast, efficient, darkens wood, moderatly good water resistence
Martins Wood Preservative	CR	P	2-3 hrs.	Med	Matte - Semigloss	Brush Rag rub out	Good for surface in contact with food, darkens wood
Mineral Oil	CR	P	Does not dry	Low	Matte	Brush Rag rub out	Good for cutting boards or surfaces that are used with food, must recoat often
Alkyd Resin Varnish	CR	S	3-6 hrs.	Med	Semigloss Gloss	Brush Rub out	Can be thinned to penetrate, good interior use, flexible for movement with wood
Phenolic Resin Varnish	CR	S	3-6 hrs.	Med-High	Semigloss Gloss	Brush Rub out	Exterior use, ultraviolet inhibitors, flexible
Polyurethane Varnish	CR	S	3-6 hrs.	High	Semigloss Gloss	Brush Spray	Hard, tough, high water resistence; recoating problems, follow directions on can
Oil Varnish Thinner Mix	CR	P/S	3-6 hrs.	Med - High	Matte Semi-gloss Gloss	Brush Rag rub out	Mixture of ingredients, promotes penetration of first coat, can be used in dusty area, variety of applications, may use any varnish in mix
Nitro-Cellulose Lacquer	SR	S	1/2-1 hr.	High	Semi-gloss Gloss	Brush Spray	Clear, does not darken wood, builds up on surface, fills pores, easy repairs, also may be tinted with color
Acrylic Lacquer	SR	S	1/2-1 hr.	High	Semi-gloss	Brush Spray	Clear or in variety of colors, automotive lacquer, flexible with wood movement

Finishing with Lacquer

by Giles Gilson

"What you see is what you get," summarizes, in a few words, all that is important about finishing with lacquers. Before discussing lacquer techniques; however, filler must be addressed. If you expect a coating material to cover and hide some flaws, you may be disappointed. For those of you who haven't encountered it, coating materials, fillers, etc., shrink as they cure. The "air drying" fillers do this mainly because they lose the solvents, which is why they dry. This process can take as much as 30 days. The "chemical cure" or "cross-link" materials such as epoxy, polyester, etc., also shrink, but for different reasons and often take less time.

Lacquers and associated materials are very fast drying but will shrink even after they are dry. Top coats and fillers will shrink for 10-30 days as they continue to flash off. For this reason, it is wise to minimize the need for fillers. It is impossible for dents, tear outs and voids to be filled with wood putty and painted over without the problem showing through the paint. Also, remember lacquers will telegraph 400-grit sanding marks.

Lacquering involves three steps. 1.) preparing the surface; 2.) applying primer or sealer; 3.) finishing with the top coats.

A prepared surface will depend on the desired outcome, assuming that you want a traditional lacquer finish. The fillers have been allowed to dry and shrink and then leveled (block sanded), and the entire surface is then sanded to 320 grit. This means that all sanding marks are aligned and the entire surface looks consistent. Also, if the natural wood is to show (clear lacquer finish), remember that paste fillers and stains contain color except for some chemical stains. The wood itself is translucent, you can see into the surface of the wood; therefore, when you paste fill and/or stain, you may minimize the lively quality of the wood surface.

The second step is the application of a primer. I use clear sanding sealer if the wood is to show, or a lacquer primer if a solid color is intended. The function of these materials is to: a) fill very minor imperfections such as sanding marks, etc.; b) to act as a bonding agent for the topcoat; c) to even out the textural variations of the prepared surface. Use automotive primer to even out spotty color variations as well, for these often bleed through color coats. These coatings should be applied (spray as recommended) and allowed to dry and shrink before leveling. I apply up to four coats at a time. Although they can be sanded within a very short time, I let them dry at least overnight unless I am in a hurry and sometimes for weeks just to be sure they will not shrink after I have sanded. Then I level the primer/sealer with 600 grit, keeping the sanding marks lined up and consistent, and proceed to the top coats.

Lacquers normally need thinning in order to spray, and the thiners are usually blended for different evaporation rates. There are also retarders available so you can blend thinners yourself. Check suppliers for these. The evaporation rate is controlled in order to avoid blushing (the fog that appears on the surface as moisture condenses), to allow the paint to flow out to a glossier surface, and to allow the solvents time to penetrate the previous coatings for a better bond. These factors are also controlled by the amount of thinner added and the amount of paint applied with each sweep (see manufacturers recommendations for gun adjustment). This means that your technique for spraying will develop through a balance of choosing the thinner (speed of drying), the amount of thinner used, and the gun adjustment or how much you put on per pass. The distance that the gun is held from the surface will also affect the amount of paint applied, but this you will find by watching how the paint goes on. The pressure used will affect the distance, but start by setting recommended pressure (usually 35-40 PSI). I find that for small objects I use less and for large surfaces a little more because the fan will be broader, at the widest setting, with more pressure. I usually use from 15 to 25 PSI. If I am using metallic or pearlescent pigment, I prefer lower pressure because the pigment looks less grainy.

The angle between the gun and the surface is not critical, but should be consistent, so practice keeping the gun at the same distance and angle to the surface throughout the pass. Pretend that the gun is running on a track that follows the surface and you'll get the idea. Also, practice triggering the gun at the end of each pass. Start the paint just before you are over the surface, and release the trigger after the other end of the surface, then repeat for the next pass. Don't expect the paint to completely hide the surface with the first coat; it may not. Instead, think in terms of building the coverage with several layers. Practice getting an even coat of liquid sprayed on, just enough to look wet. If it looks solidly wet and smooth as you put it on, it may run and make a mess—practice. Also, have good lighting because you need to see the reflection of the lights to tell how the paint is going on.

If you are using acrylic lacquers, you may find that nitrocellulose lacquers do not mix well with them. Also, test products of different brands before using them even if they are the same type of base. I have had some problems with one brand of thinner that did not mix well with a different brand of lacquer, even though they were both acrylic based.

After the lacquer dries and shrinks, the surface is not as shiny as enamel or polyurethane, but can be rubbed with rubbing compound (check auto body stores) to a fine finish. Remember this rubbing is essentially fine sanding, it removes paint and levels the surface. Be sure there is enough top coat or you may rub through. Try preparing a few small pieces. Don't worry if they don't come out. Learn from them, and also remember one big advantage to lacquering is its speed. You can usually spot repair it because it dries so fast.

For safety reasons, read the labels, use common sense and ventilate the area. A spray gun atomizes the paint. Atomized lacquer, while airborn, dries very fast, becomes much like dust before it settles, and is very explosive.

Finishing

Finishing With Waterlox

by David Ellsworth

The product I use for finishing my hollow turnings is called Waterlox Transparent*. This is a tung oil-based sealer with an excellent drying agent which cures in 24 hours between coats. It does not discolor wood, which adds to its versatility, and can be thinned with Naptha for greater penetration into the wood fibers. Waterlox can be rubbed or polished to a satin luster or left standing for a high gloss.

Virtually all of my pieces are turned from freshly-cut green material, including some exotic woods which are too thick to be kiln dried. For this reason, I begin the finishing process immediately after sanding, before I hollow the interior. Otherwise, the surface of the solid form could check from a combination of the heat produced from internal turning, rapid loss of moisture, and internal stresses within the wood fibers as they dry.

My first coat of Waterlox is mixed 50/50 with Naptha and applied liberally to the sanded surface while the piece is still on the lathe. Once dry, I buff off the residue with a 6" diameter (stitched) cotton buffing wheel mounted on an automobile body grinder. This smooths the surface in preparation for succeeding coats of oil and reveals any scratches I may have missed during the sanding stage.

Once I have completed turning the interior, the walls of the piece still retain moisture from the loose water within the cells. As the wood dries, I apply more coats of Waterlox, straight from the can, until the wood no longer absorbs the oil (the number of coats depends totally on the species of wood and its porosity). In effect, the oil and the wood fibers dry together. I then remove the built-up residue of hardened oil with the buffing wheel. Here, I load the wheel with a cutting agent of Red Tripoli for dark colored woods or White Diamond for lighter woods. Final buffing is done with a 6" diameter 'clean wheel' (unstitched), that is, used without a cutting agent.

For smaller objects, one can mount these buffing wheels on tapered mandrels that are connected at both ends of a 12" long jack shaft. I use a 2" diameter pulley in the center of the shaft and a 4" diameter pulley on the motor (1725 rpm, 1 hp min.). This puts the shaft speed at around 3500 rpm, which is ideal. Because of the high wheel speed, this shaft is best supported with pillow block bearings (ball). One must take special care to remove only the residue of the oil and not burn the wood from the speed of the wheel.

Note: Waterlox is *not* to be used on any wooden object intended for food service, and I recommend the use of rubber gloves for any chemicals which make contact with the skin. Also, the oil will dry in the can once opened and exposed to the air. I purchase it in one gallon quantities and decant the oil into plastic lidded coffee cans, full to the top with minimum air space. A thick film will eventually develop on the top of the oil. When the oil is used, I break this film, then allow it to settle back on top of the oil and reseal itself. I generally lose about 1/8th of a can which is acceptable.

*Waterlox Chemical & Coating Corporation; 9808 Meech Ave.; Cleveland, OH 44105; (216) 641-4877. Available in quarts or gallons at most decorator and paint supply stores, as well as woodturning supply catalogs. Buffing wheels, mandrels and Tripoli/White Diamond cutting agents are available at jewelry supply houses in any major city.

Coloring Wood

by Merryll Saylan

Coloring wood is an interesting subject with unlimited possibilities. Exciting avenues for exploration are available through a large variety of materials and methods. The term "coloring wood" is synonymous with staining or dying, and refers to color that is transparent, with the grain and pattern of the wood showing through the addition of color.

Several factors which never change despite the variety of methods and materials are: 1.) The preparation of the wood. Stain, dye or whatever you use, has an annoying propensity to uncover sanding scratches, tear marks and roughness. It is much harder to repair after color has brought it to your attention. 2.) Water stains raise the grain. I recommend wet sanding or raising the grain one or two times before the addition of color. 3.) The wood affects the color. The original color of the wood adds its own color, and sometimes bleaching gives you a more neutral shade as a base. Many factors affect the results. Colors, materials and methods are not pleasing on all woods. Test samples are helpful; however color on curved surfaces is never quite the same as the straight-grained samples. 4.) The final finish adds color, whether just the slight deepening and richness from a water-white lacquer to the yellowing of an oil finish. To my great dismay, I had a wonderful turquoise turn totally green when I applied an oil finish. Some materials will not take all finishes; for example, spirit stains dissolve in finishes that have spirit in them. 5.) Wood oxidizes from light. 6.) There are no instructions for using materials not necessarily intended for wood. Rules for painting watercolors on paper, or fabric dyes on fabric are not relevant for use on wood, create a lot of trial and error but also challenge and excitement. A basic knowledge of finishing techniques is essential.

Some of the materials available are: 1.) water stains, including aniline and coal tar dyes; color pigments, which could include tinting colors available in paint stores; caseins; artist

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Sharpen Your Tools

by Russ Zimmerman

Tool sharpening is the biggest problem for the beginning woodturner. It is often more of a problem than the "taming of the skew," and the reluctance to sharpen is incredible. There is more willingness to struggle with the tool than to take a chance on grinding. Those wanting to learn to turn must change this attitude toward grinding.

The wheels supplied with the grinders are usually grey aluminum oxide and are awful. They glaze very rapidly, load with steel, and except with the lightest of touch, overheat the tools. The 60-grit pink or white aluminum oxide grinding wheels are forgiving and minimize the risk of overheating and burning tools.

Many of you know that holding the tool lightly and steadily against a high speed grinding wheel, while maintaining a proper angle, is not easy to do, particularly when you are learning and are not sure exactly what you are trying to do. Figure 1 illustrates a dull skew that had been ground hollow (a) on the face of a wheel, honed to a flat bevel with a hollow in the middle (b), and used long enough to wear over the honed bevel just behind the edge (c). Consider what happens when you try to resharpen:

1) In order to sharpen a tool you are supposed to grind its edge (e). This usually leads to lifting the handle of the tool so that only the edge is put in contact with the wheel. There is not enough steel in the edge to carry away the heat so the edge turns blue, unless you have an incredibly light touch. Even if you do have a light touch, the result of this attempt to grind the edge will be a change in the bevel's angle. In fact, when you grind you should be grinding a new hollow bevel (rather than an edge) at the same angle as the old bevel. When the honed surface (if any) is ground away, the new bevel meets the surface of the flute (in the case of a gouge), or the flat top of the tool (in the case of a scraper), or the other bevel (in the case of a chisel), and the result is a new edge which is then honed or not as desired.

2) When grinding any tool free-hand, one often takes the toolaway from the wheel to look at the handiwork. When you see that you are not done grinding, you must get the tool back in the proper position on the wheel, which is usually very tricky. Most often, repeated attempts at finding the right position produce a collection of facets on your tool's bevel. In fact what you should try to learn to do is to estimate when the bevel is in the proper position at the start of grinding. Once in the proper position, you grind the bevel inward until it meets the other side of the tool and forms the edge. You make this estimate by watching and listening. Watch the sparks carried around the surface of the wheel. If they are planed off by the edge (e), then you are grinding at the edge and the handle is too high. If you hear a harsh metallic sound, then your handle is too low and you are grinding only at the base of the bevel (d). When grinding in the proper part of the bevel listen for a softer metallic sound and hold the tool in that position until you see the sparks just starting to be planed off by the edge.

Now with a decent amount of practicing, free-hand grinding is possible. But realistically, many of you are not spending 8 hours a day turning. You might spend only an hour a week and are not inclined to spend that time practicing sharpening.

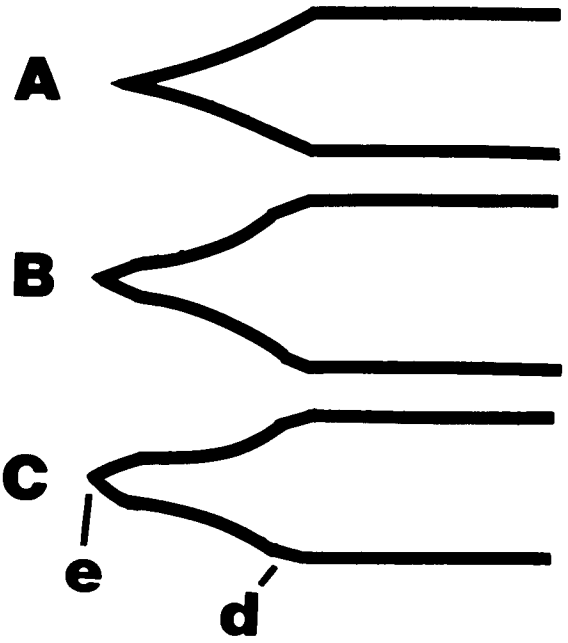


Figure 1 Skew chisel profiles.

So you overheat or burn your tools and get generally unsatisfactory edges. The problem is how to easily take the tool from the wheel, look at it, and return it to the wheel at the proper angle. I engineered the grinder to solve this problem and others related to it.

First, I added a sliding arm support (Figure 2) that would support the end of the handle of a gouge while its bevel was ground by the wheel. Second, I attached a piece of wood to the right-hand tool rest (Figure 3) in order to provide a broader surface on which to rest skew chisels. I adjusted this surface so that it produced an angle of 33° between the two bevels of the chisel. Third, I attached a piece of wood to the left-hand tool rest (Figure 4) to provide a broader surface on which to rest scrapers, and then adjusted the tool rest to produce a bevel angle of 80°.

Please study the figures, they offer what many call repeatability, or what I call consistency. That is, any one of the devices allows you to remove the tool from the wheel, look at the bevel, and return the tool to the grinder, with confidence, so that you have the tool at the same correct angle.

Nevertheless, these devices are just aids. They do not mechanically move the tools over the grinding wheels. It is possible to push too hard on a tool, to lift or lower the handle too much, or to rotate a gouge too slowly or too fast for the thickness of the steel. Toward this end, I would like to tell you (1) what the mechanical requirements are for the bevels of commonly used tools, and (2) why the bevel did not end

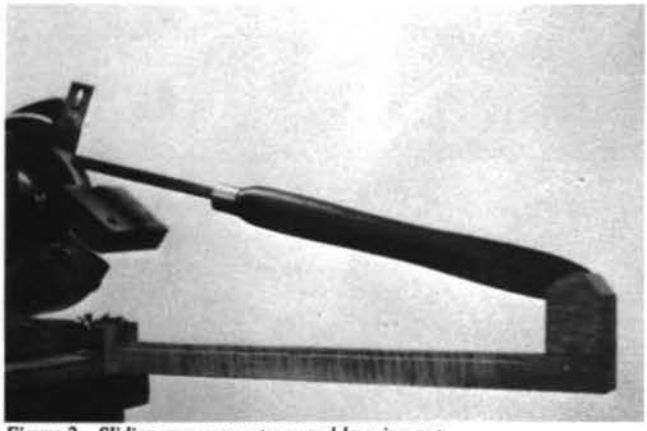


Figure 2 Sliding arm support secured by wing nut.

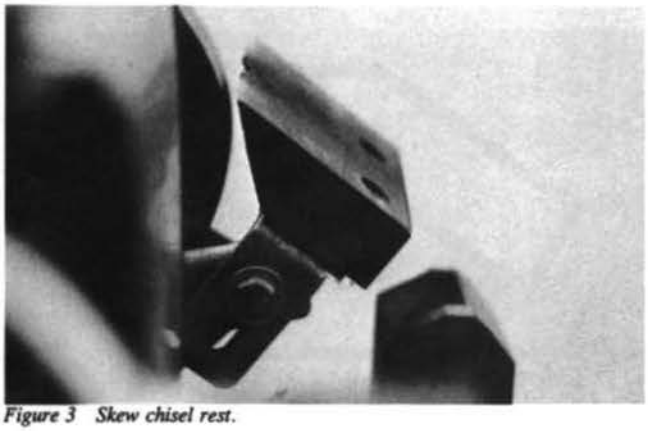


Figure 3 Skew chisel rest.

up looking as it is supposed to when using these jigs. For more information, read the *Zimmerman Turning Letters* or other books about turning.

1) Here is a table of commonly used tools with details of their bevel:

Tool Names*	Number of Bevels to Grind	Angle Between Bevel and Top of Tool or Between Bevels****	Edge Description As Viewed In Profile From Side
1. Roughing Out Gouge	1	30°-35°-45°	Straight-Vert.
2. Spindle Gouge**	1	30°-35°-45°	Fingernail
3. Bowl Gouge A***	1	30°-35°-45°	Straight-Vert.
4. Bowl Gouge B***	1	55°	Straight with 60° slope from vert.
5. Bowl Gouge C***	1	25°	Straight with 30° slope from vert.
6. Chisel Ground Square	2	30°-33°-45°	Straight with edge at 90° to length of tool
7. Chisel Ground Skew	2	30°-33°-45°	Straight with edge at 75°-45° to length of tool*****
8. Parting Tool	2	45°-60°-90°	Narrow and thick version of (6)
9. Scraper	1	75°-80°-85°	Round, square, skewed or ground to desired shape

* There are other tools which are variations on the general tools above; e.g., O'Neill Gouge, Rafffan Skew, Old Bodger's Skew (which has a concave curve rather than a convex curve as does Raffan's.)

** Spindle gouge may also be referred to as coving or hollowing or (less accurately) fingernail gouge.

*** Gouge A is best used for turning bowls on the outboard end of lathe, only with bed mounted tool rest (ie., not with floor stand). See *Letter 2.* Gouge B is a full fingernail grind, as described in *Letter 2.* Gouge C's shape is close to that which you receive from the factory. Easier to grind than Gouge B, it requires no forward push as it is rotated from the central position to the left or right. Thus, C is recommended for beginners.

**** Where there are three angles shown, I use the middle one, but you can certainly experiment with the range between the other two angles.

***** I prefer the one that would be called 75°, which is the angle of skewness to which most English skews are ground. Just to confuse you, I usually refer to this angle as 15° as that is the arc the short (obtuse) corner has moved through when the tool is compared with a chisel ground square.

Figure 5 illustrates how the cutting ends of these tools are supposed to look.

2) Why, after grinding don't the tools look as they should?

Gouges. It should be obvious that to grind a gouge, you put the end of the handle in the support on the end of the sliding arm as in Figure 2. The cutting end of the tool is set in position on the grinding wheel. Then the arm is adjusted so that the old bevel just rests on the wheel. Better to be grinding a little toward the base of the bevel than toward the edge. The reason for this may be understood if you imagine grinding a gouge over and over without changing the position of the support arm. The tool would get shorter each time, and the bevel angle blunter, which is, of course, undesirable. By moving the tool support in a hair each time, you will tend to maintain the proper angle.

If the tool has never been ground before, look from the side of the grinder at the end of the tool as it is held on or near the wheel. Move the arm in or out until the tool looks like it will have the right bevel angle when the grinding is done. You can always change the tools position during or after grinding as you watch the bevel develop. The gouge with its curved shape is then rotated left and right to grind a new bevel, grinding away the old worn bevel, producing a new edge.

Gouge 1, the Roughing Out Gouge, is often a little thicker near the corners. Hence, if you grind at a constant rate of rotation, the steel near the middle of the tool will grind faster and the corners will begin to lean forward. You should determine if yours is this way by looking down the length of the

tool from the edge end. You can even use calipers to measure the thickness of the steel at different points around the curve. Do not determine the thickness of the steel by looking at the length of the bevel. The reason for this is that as a roughing gouge is rotated, the center of rotation rises and the angle of the bevel changes slightly, becoming more acute near the corners. A more acute bevel looks thicker than one not as acute. You compensate for this varying thickness by slowing the rate of rotation near the corners or, conversely, speeding up the rate as you pass through the middle. At the same time, just watch the edge. If one part begins to stick out, grind only there, leaving alone that part that does not stick out.

Gouge 3, the square across bowl gouge, is usually just the opposite of 1 in that the steel of these machined steel tools is thinner at the corners than at the center. Apply the same type of thinking and you will find that the edge slopes back from the vertical if you grind at a constant rate of rotation. (In fact, that is what the Sorby tool grinders do, which explains why their gouges come with an edge close to that in Gouge C). To produce a square-across edge, you grind away only what sticks out, moving the tool slowly as you pass through the middle of the edge and rapidly near the corner, even avoiding the corners entirely. Note that the flute is shaped like a rounded V (Sorby's are more like U's). You will also note that the steel is thinner nearer the middle of the edge than it is just to the left and right of the middle. So, if you move slowly through that middle, you produce a little notch in the edge right at the center. Keep that in mind and speed up rotation as you approach the center, slowing up as you leave the center.

By now you should begin to see that you just watch the edge and grind away what you don't want; but for Gouge 2, the Fingernail Spindle Gouge, and Gouge 4, the pronounced Fingernail Bowl Gouge, you must do a little more. With the grinder off, put these tools into proper position on the tool support, adjusting it so the bevel at the middle of the edge just rides on the wheel. Now rotate the tool as though you were trying to grind toward one of the corners. You will see that before you reach the corner, you have formed a notch in the edge of the tool, said notch having the curvature of the grinding wheel. But this is not the way these tools are supposed to be. Instead, viewed from above the tool, the shape of the tool's edge should be nicely convex throughout for Gouge 2, and the same for Gouge 4_1, occasionally straightening out near the corners of the deeper Gouge 4_2, Figure 6. To prevent the notches from developing, you should push these gouges forward, up the surface of the wheel as you rotate the tool. This is a very tricky motion which I would like you to try to imagine from the picture (Figure 7). That is, imagine the fingers of my right hand advancing the tool as they rotate the tool. The left hand assures a light pressure of the tool on the wheel.

The wrong motions include: (1) moving the gouge forward before you start to rotate, leading to an unground point; (2) rotating before you push forward, leading to notches; (3) too fast or too slow of a forward motion and (4) too fast or too slow rotation and (3) relative to (4), all of which lead to the wrong shape. The hardest part of the grinding is when you do it for a new tool. When trying to learn, it is likely to take a lot of trial and error. Persevere, for a properly ground tool will work better than one that is not, even if with a perfect

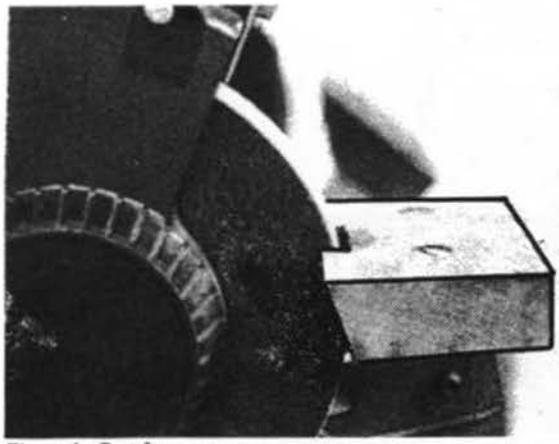


Figure 4 Rest for scrapers.

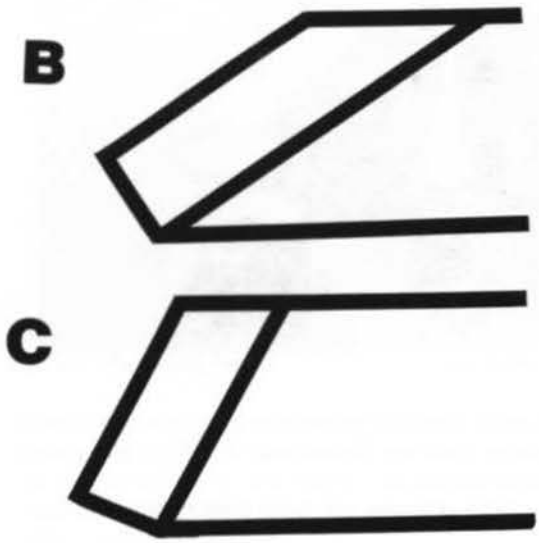


Figure 5 Cutting profiles of Gouges B and C.

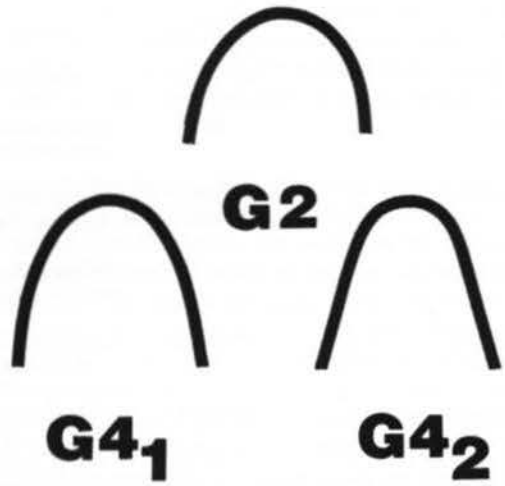


Figure 6 Profile of gouges, as viewed from above.

"tools do not get sharper as you use them"

Figure 7 Sharpening the gouge. Right hand pushes the tool forward while rolling the tool.

Figure 8 Sharpening the skew chisel.

technique. Once the tool is properly ground, regrinding is much easier, for as you move the tool, watch the edge and control the tool's motion so that sparks just come over the edge as you move the tool's bevel on the wheel.

As stated, Gouge 5 is easier to grind than Gouge 3, because it requires no forward motion. However, it is very important that the bevel at the center of the edge be ground to the specified 25° angle, and the slope of the rest of the edge from the vertical be no more than the 30° specified. When this condition is met, the corners of the tool are not ground much lower on the wheel than the center of the edge. (The greater the distance between the point at which the center of the edge is ground, and the point at which the corners are ground; the greater the likelihood of developing notches in the upper two thirds of the edge.)

Chisels. In Figure 8 you see a skew chisel being ground while held on its special rest. You just need light pressure against the rest. (1) Pushing against the rest too hard will likely result in grinding too much on the edge, changing the angle. (2) Gripping the handle too tightly, tends to lift the handle, with the same result as in (1). (3) Gripping too tightly tends to push downward on the handle as it is pushed inward, grinding too much on the base of the bevel. (4) Pushing the tool too hard against the wheel causes it to ride up on the wheel leading to the same result as in (3). (5) If the edge of the chisel is not kept parallel to the wheel, it tends to end up curved and hard to hone. Easy does it is the key to success with chisels.

Parting Tools. I usually grind free-handed, but I would suggest using the arm of the jig you used for the gouges. It will then be easy to get the same angle on both bevels. There are three patterns of parting tools. (1) the first is diamond shaped designed to contact the sides of the grooves only at the ridge on each side of the tool. The edge must be ground so that it connects the ridge on one side with the ridge on the other side. If it doesn't, the edge will be narrower than the tool and cause burning of the wood. Sometimes the ridges are not exactly opposite each other so the edge must be ground with a slope from one ridge to the other. When you use the tool, just hold the tool so the sloping edge does not slope. The diamond shape allows this to be done. (2) The second is rectangular with a taper from the edge to the handle. This means the edge is always wider than the rest of the tool, and, thus, only the ends of the edges touch the sides of grooves being cut. Easy to grind, the edge does not even need to be in the middle (vertically). (3) The third is rectangular with no taper so the edge is the same width as the rest of the tool. The greatest friction is with this tool, but it has other redeeming features. That is, it is either a very narrow tool, or it is a very wide, strong tool. Comments on grinding it are the same as for (2).

Scraping Tools. To a great extent, errors in grinding scrapers are similar to those that occur when grinding chisels. Since scrapers are most effective when ground often, but a very little bit, it is important that you have a consistent technique. That means always keep the scraper steady on the rest. If you grab the handle too firmly, you are likely to lift or lower the tool on the wheel. Suppose the tool rises on the wheel; then you will be grinding on the lower part of the bevel and not even sharpening the tool. The clue that you are doing this will be that no sparks hit the top of the edge and form the burr.

Suppose you lift the handle, then would be grinding the tool only on the edge which is fine this time because it will sharpen the tool. But suppose you get the tool in the proper position next time. You won't be grinding the edge because it will have been ground back the previous time. Now you will have to grind lightly until the bevel has been properly reground. A final comment on scrapers. Most of the time it is desirable to have the burr produced from the wheel. If it does not work well on a particular wood, try honing it away by moving the top of the tool over a flat stone. Sometimes the burr gets too big, instinct tells you when; hone the burr away before regrinding.

Conclusion. If you are still with me to this point, congratulations. Realize, please, that what I have described in words is done in a one-hour demonstration the first day of instruction. A demonstration is worth 4500 words.

Finally, *remember that tools do not get sharper as you use them.* If it is dull now, it is going to be more dull five minutes from now, and you are going to have a harder time with the tool. That is when you must put your sharpening skills to work.

Russ Zimmerman teaches woodturning in Putney, VT.

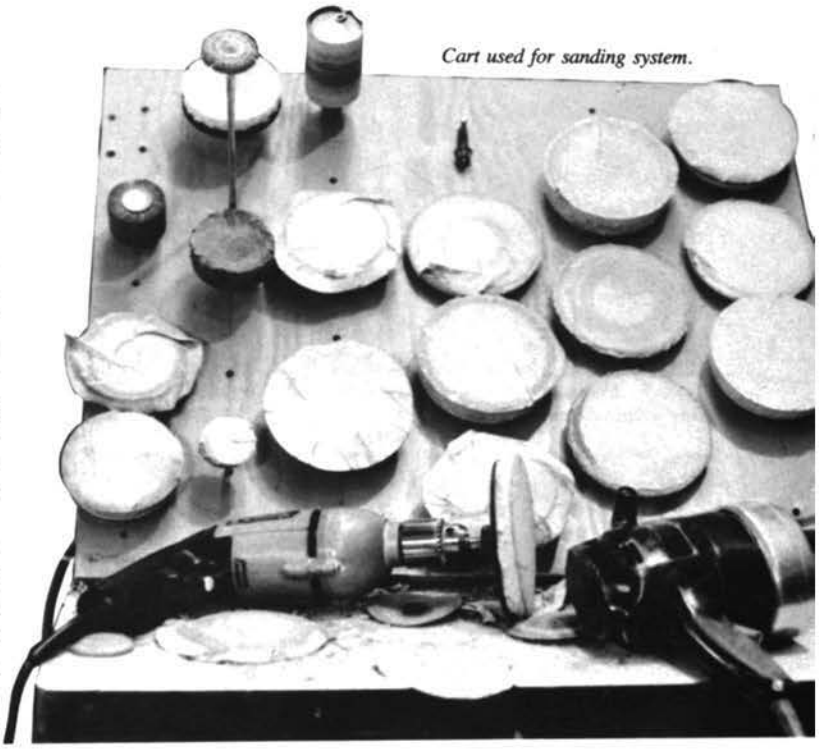
The Sanding of

For the final finishing process, sanding is just one choice. If you want to leave the object rough shaped, finish-cut, scraped, sandblasted, or similarly textured, it's up to you. I've seen many pieces that would have lost their presence, strength and impact if the decision to sand was made. It's up to the individual to continuously explore new techniques and tools, as creating is a continuous learning experience.

If sanding is the direction necessary to complete the piece, proper lighting is very important. I use two 100 watt bulbs, one mounted above and beyond the headstock, and one mounted on the tailstock end facing the work. Flexible arm, magnetic base or clip-on holders work well for these mountings. These lights are backed up by two 150 watt ceiling mounted floodlights, mounted on inexpensive exterior adjustable holders with a separate switch. The focal points are the same as the smaller two lights, one straight down on the headstock and one coming in from the tailstock end.

For protection against dust, I use a 1 hp Delta self-contained extraction system with the drum mounted on casters. Replacing the flexible hose with a reducer and 5" metal stove pipe helps concentrate the pulling power. I can move it around without too much bother and position the unit in just about any attitude I want. In lieu of an extraction system, at least mount a fan that will pull the dust away from your face. Also, I wear a particle mask at all times, especially when dealing with spalted wood, walnut, or exotics. I always wear a high quality, clean face shield.

When I built my studio, I allowed enough room so I can get all the way aroung my lathes. It's nice to be able to work from the back side of the machine at times, and leaving them free standing makes clean up a lot easier. Because I have the room to move around, I use a cart on three inch casters to carry my sanding equipment. The cart is wired so all I have to do is plug it in, and all my electrical tools are at hand (See photo).



Cart used for sanding system.

Open-coat abrasives are made for wood, closed-coat abrasives are made for metal. Open-coat has approximately 1/2 the particles bonded to the backing as closed-coat, and will eject sanding dust. Closed-coat will retain more dust and glaze, especially at high speeds when applied to wood. Heat from friction compounds the problem. For wood, then, the most effective use is with closed-coat sandpaper at slow rpms.

Use open-coat, cloth-backed disks because paper-backed disks do not last. I use flexible rubber disk holders first to get rid of any torn fiber and, in the case of spalted or rotted wood, to do the final shaping.

If the piece is large, I use my auto body sander with a 7", 60- or 80-grit disk. The speed of the sander is about 5,000 rpm, and it removes a great deal of surface material quickly. The trick is not to rest the sander on the surface of the spinning object. If you do that, the side grain will be removed at a faster rate than the end grain, and your nice round surface will begin to dip and wave. Instead, brace the grinder against your hip and slowly sweep from the headstock to the rim. Pull out, go back and take another stroke. Make sure you keep the grinder moving at all times.

You may have to start with a 36-grit disk in the case of badly pecked spalted wood; but if you do, leave the object "fat," and do the final shaping with the sander. Work your way through the grit progressions to 120-grit.

On inside work when the large disks won't fit, I use the 3" Merit snap lock system. The grit progression should be the same as on the outside, stopping at 120- or 150-grit. I find any finer grits load the disks even when I use the rubber cleaning blocks I have mounted on my lathe's headstock.

If the wood is damp and the coarse disks keep loading, use a heat gun to dry the surface of the object while the lathe is runing. Be careful and just dry the surface.

If you want to continue using the Merit system in finer and finer grits, wet sanding will eliminate most of the loading at 180-, 220-, and 320-grits, but it makes too much of a mess for me. Remember Merit is closed-coat and made for metalworking at high speeds.

In sanding the inside, you can sand on the right or left, but stay away from the center. I have seen a lot of nice bowls spoiled by a dish cut at the center of the inside. I like to close my eyes and run my fingers from the base to the rim outside and from the center to the rim on the inside and feel no interruptions of the curve.

In the case of a natural rim, stop the lathe and sand carefully below the rim, keeping in mind that you want the rim the same thickness no matter how high or low it is on the object.

The foam backed pads are next, and I usually make my own foam disk holders using industrial 3/8" or 1/2" open cell foam or the thick pads, and 1/4" close cell for the thin. I have semi-flexible plastic holders with 1/4" shaft, from 5" down to 1", available from Industrial Abrasives Company, 42 N. 8th Street, Reading, PA 19601. I stick the foam on the pads with 3M #77 spray adhesive and true them in a Jacobs chuck

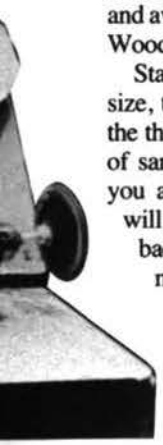
Turned Wood Objects

by Rodger E. Jacobs

mounted on the lathe. A thin leather or canvas disk cemented to the foam will make the disks last a lot longer.

It helps to have a holder for each size grit to get full use out of the sanding disks before changing. I usually have to redo my holders every three weeks or so if I turn every day.

I use self-adhesive cloth-backed disks for foam-backed sanding coupled to a good, strong single or two-speed electric drill. The brand of paper that seems to cut well and lasts the longest is S. M. KK-532 in F weight. It's made in West Germany and available in any size disk through Abrasives South, 5465-A Woodbine Avenue N, Charleston, SC 29418.



Start on the outside with a 5" or 6" disk of the same grit size, then finish off with the flexible rubber disks. Remember, the thick foam pads are not as aggressive, and different brands of sandpaper do not always have the same particle range. If you are going to leave any deep scratches in the object, it will be at this stage, so I always use the same grit or even back up one step. The motions are the same: keep the disk moving from the base sweeping up to the side. When the dust stops forming, change grits; but first look over the object while the lathe is stopped for any scratches you may have left. Inside work is the same, but you may have to use a smaller disk holder.

Use the thin foam, 1/4" to 3/8" pads for detail work. It helps keep all these features nice and crisp without all the tedium of hand sanding. It is important to have the disk overhang the disk holder by 1/8" or so because you do not want to dig in.

When I reach 320-grit, I will stop the machine and go over the outside and inside with the piece stationary, taking care to remove all concentric rings. If at this stage you see a bruised area or heat checks caused by friction, you will have to back up in grit if you want to get them out. Sometimes these marks will not be apparent until the final stages of sanding, but I have found my overhead flood lights help me spot any trouble areas sooner.

Spalted wood is sometimes difficult to sand to an even surface as it wants to dip and wave. A coat of 2 lb. shellac when you get to the foam stage and another coat before every grit change helps immensely. You will load some paper up, but the results will be worth it as the shellac hardens within the wood, stiffens the fibers, and helps you sand more evenly. Shellac is also food safe and compatible with most oil finishes.

I adhere to the saying, "If you can't reach it, don't sand it." But you can use different sanding fixtures to reach areas your fingers will not go. The extension mandrel for the Merit system is good, and will thread onto my foam pads from Industial Abrasives Company. It allows me to reach down into hollow vases and small necked bowls.

The flap sander used by Jack Straka featured in *Master Woodturning* by Dale Nish, page 177, works well also. I made several in different lengths, and again, it is best to have several so you do not spend all your time changing paper when you are ready to go up a grit. Sometimes I just hold a thin foam disk in my hand and sand. Let your imagination be your guide, but watch your fingers.

When I am finished with sanding, I part the piece off the lathe or stop and remove the faceplate. For open pieces, I have several wood cylinders of different lengths and diameters with rubber pads glued to the ends. I mount these on a screw center or in a 3 jaw chuck, reverse the bowl and bring the revolving center up to the center of the base and hold the piece by pressure against the pad. I use a cloth pad in the center of the bowl to keep the rubber from spinning and scoring up the inside. This is especially important in spalted or soft material.

In hollow pieces, I turn a cone on a screw center, use a cloth pad over it, and press the piece in with the live center, taking care to press snug but not too tight. If the hollow piece has a natural opening, I will turn a large doughnut nest type shape. Pad it well, and press the piece in with the live center. Some pieces call for their very own fixtures, but with thought and study, you can reverse turn just about any piece.

These mounting methods allow for the final subtle shaping of the base line that can make or break a piece. You can bring the curve around and make a tiny base, turn a foot and get rid of any unwanted mounting holes. I usually use a 1/4" gouge and light cuts for this stage. I feel that a nice clean undercut base is a major part of a good piece.

Once you get the base the way you want, take it off the lathe and set it on a flat surface and take a look. You will have a stub from the live center, so the ways of your lathe is a good place to set the piece. When you are pleased, remount and sand with the correct pads and paper, progressing to the finish grit.

If you are finished sanding the base line or foot, remove the piece from the lathe and take off the stub left from the revolving center with hand tools. A shallow bent gouge works great.

I usually wait a couple of days with the piece in my insulated drying cabinet before sanding the base as it will move some.

I use my drill press with 1" and 2" disks both rubber backedand thick foam to sand the base, taking care to get all the torn fiber before going past 120-grit. If the piece rocks, glue a piece of sandpaper to a piece of stable material, particle board, MDF, or high quality plywood, clamp the board to a bench and rub the piece back and forth taking care to keep it level.

If the piece has checked during the drying process, you might want to open up the cracks with a shallow gouge. What I look for is a nice pleasing radius from the surface of the bowl sweeping down into the crack. Sawing the crack open with a dovetail saw will help in the shaping process. Sand the cracks by hand with a small piece of foam backing the paper. Worn out merit disks make good backing for sanding cracks. Feather the cracks up into the surface of the bowl ending with the final grit.

Sometimes the rim needs fine tuning. I use a foam backed dowel or a 2" sanding drum, hand held for this application.

If you find that you have missed a scratch or two after you have applied the finish, you can wet sand with silicon carbide paper, the blue stuff available at auto parts stores, using the finish as a lubricant. Start with whatever it takes to get the scratches out, and work to the final grit, wiping the piece dry and applying new lubricant with each grit change.

Miniature Turning

by Bonnie Klein

Miniatures can be defined as items for the doll house 1/12th scale of 1 inch equals one foot, or as small copies of regular sized items, or possibly anything which could be made on a miniature lathe. In any case, small items are very intriguing and collectible as well as challenging to make. Turning miniatures is an excellent way to build skills for the larger pieces without consuming large quantities of materials.

The Lathe: First, it is not necessary to have a small lathe to do miniatures. I have done some very small goblets on a 2,000 pound bowl lathe. The main advantage of a small lathe is its portability. You may also do woodturning in places not possible with a standard sized lathe such as the kitchen table, outside in the sun or where there isn't room for a shop. Since the whole turning process is scaled down, it is just so much nicer if the lathe, as well as the tools, is in proportion.

The Work Area: Good lighting is one of the things I find to be essential. I always have a goose-neck type lamp near the lathe and adjust the light to where I need it most. It is also important that the lathe be clamped down on a solid surface. If you don't have to follow your lathe across the table, you can concentrate more easily on your tiny turnings.

Sometimes magnification is needed for the very small items. I use two forms, one is a pair of glasses with a power of about 2.25, and the other is a Vision Visor like the jewelers use which can be flipped up or down as needed. Sometimes I will use the two together. Another hint is to be aware of your background. Depending on the material being turned, it is good to have either a very dark or a very light background. I just lay a piece of paper down to silhouette the turning.

Tools: I have made tools from chain saw files, cement nails, dental tools, and band saw blades; but the ones I prefer and use the most are of high speed steel. I sharpen them on a 100 grit grinding wheel and hone with a hard arkansas stone.

Materials: The woodgrain for very small items should be very fine and even. You need to be aware that the size of the grain and the pattern must be in scale with the piece.

Bone is a wonderful and very inexpensive material resembling ivory. Obtain the lower leg bone from the meat market, have the knuckles cut off, and boil for about two hours to clean it and remove the grease. Different parts will have various wall thicknesses. Usually, I cut it with the band saw into lengths needed for turning, and then into lengthwise sections taking off the corners with the disc sander, and squaring one end in preparation for glueing onto a waste block. This will make your shop smell horrible and give you nightmares of trips to the dentist. I like to do this job at the end of the day giving the dust a chance to settle and the odor a chance to dissipate by the next morning. It is not good to breathe the dust so be sure to wear a mask for protection. Bone can be cut with a gouge or scraped.

Acrylic is available in extruded or cast and in colors. It is lots of fun to work with, but tends to melt and gob up when warm. With your "extra" hand, you can hold a small wet rag against the work to keep it cooler. It will sand well, and then polish with jewelers rouge to a high clear finish. Alabaster is found in Colorado and Utah in a wide variety of colors and consistencies. It turns best with carbide tipped tools, sands well and makes a nice finished piece. Often there are fracture lines or small quartz deposits to make it a little more difficult to have a 100% success rate.

Soap Stone and Pipestone are found in various parts of the US and generally are mined. They are much softer than alabaster and yield a much higher success rate. Regular gouges or scrapers may be used.

Brass compression nuts are used for the tool handle ferrules and can be turned with scrapers, sanded and polished nicely.

Aluminum is a lot of fun to work with. It needs to be cut at quite a slow speed, 200-300 rpm. It can be scraped, and it sands well and polishes to a high shine. I've been using very large 1/4"-3/8" (6-9mm) diameter rivets obtained from a Boeing Airplane Surplus store.

Tagua nuts grow on a palm tree somewhere in South America. It is actually a seed and is nicknamed "vegetable ivory." It has been used for years for scrimshaw, carving, and jewelry making. It cuts with a gouge or scraper, is very easy to work, has no grain and finishes very nicely. Most nuts have shrinkage cracks of unpredictable size and shape.

Mycarta, which is very hard and strong, is used for knife handles. It is available in an ivory color; and cuts, scrapes and finishes very well.

Mounting Techniques: Since 80% of the work I do in miniatures is mounted only on the headstock, I don't use the tail stock very often. The majority of work is fastened to a waste block on a face plate with a cyanoacrylate glue. There are three consistencies and an accelerator available. I use the very thickest for mounting work and speed up the set with the accelerator. I use the very thinnest to run into checks and cracks and other defects encountered in the material. You are able to use very small pieces with very little waste, and the waste block can be tapered down to allow more clearance for the tools around the work.

Another way of mounting material is with the use of double stick tape such as carpet tape. For greatest effectiveness, you will need to clamp the material to the waste block with the tape and apply pressure for a few minutes. This is the method I use for mounting bracelet blanks.

I also use a 3-1/4" diameter 3 jaw scroll chuck. The jaws are of soft aluminum and reversible making it a very useful chuck. Another chuck is the spigot/collet chuck allowing you to make a very small bowl with a choice of foot of either 7/8" (22mm) or 5/8" (15mm). Two other chucks I use are the 1" (25mm) diameter screw center chuck and the cone chuck for items such as lace bobbins or pen blanks.

Sanding and Finishing: I start sanding with 220 silicone carbide paper and then with 400 and 600 wet and dry paper. I burnish the pieces before applying the final finish with either the back of my fingernail, a small piece of polished bone or with a pencil shaped piece of wood. The final finish, when I am demonstrating, is usually "Kiwi" neutral boot polish, a hard wax in a very convenient small container for traveling. I also use a paste wax or a combination of shellac, linseed oil and alcohol as a "french polish." Generally, since the finish needs to be in scale with the piece, I prefer a finish that doesn't have a high gloss or seems to "coat" the work.

Questions & Answers

Cliff Schroeder, Page Editor

Question by Paul Killinger of Boulder, CO: I am currently in disagreement regarding galleries who have changed the traditional percentage split from 60%/40% (60% to the artist) to 50%/50%. I feel strongly that *consigning* at this split is little different from selling outright and offers NO incentive to the artist. I feel that no craftsperson should supply a shop or gallery that does not offer more than 50% to the craftsperson."

Answer by David Ellsworth: Many shops and galleries around the country have made this percentage change, especially those in major metropolitan areas. The primary reason behind it is economics, higher rents for commercial space, higher rates for insurance, and the high costs of advertising and promoting our work in what has become a very competitive market for crafts. In the past few years, these costs have become staggering.

The important question is why must we, the makers of these objects, pick up the tab for this 10% loss in income. Part of the answer is that crafts people do not make "commodity" items where inflationary cost increases are passed directly on to the consumer. Instead, our objects are the "luxuries" of society, including most of our lower priced production turnings that are designed to be functional. Another problem is that the average consumer of today has learned to bargain for a 10% discount. This "hidden cost" is not new to the marketing of crafts, but when this discount is given under the old 60%/40% split, the gallery profit is reduced to only 30%. No craftsperson can survive at 30% profit, and neither can our galleries.

What can you do? Most important is to talk directly to your shop or gallery owner, and try to understand their specific needs as you communicate your own. With both parties involved, try to develop creative marketing techniques to enhance both the short and long term relationship that is essential in selling your work. Don't be afraid to offer your own ideas, but be careful not to make demands that the gallery cannot possibly meet.

If you are just beginning to sell your work, ask the gallery for ideas that will help stimulate sales: suggestions on pricing; preparation of advertising materials; improvements on photography; keeping an up-dated gallery portfolio on you and your work; designing better shipping containers to minimize damage . . . after all, broken objects do not sell, they just increase insurance premiums. If you have a consistent sales record with the gallery, you may suggest a sliding percentage scale that begins at 60%/40% and enables you to work up to selling some items outright at the 50%/50% percentage level. Maybe the gallery can initiate incentives that are based on your annual sales performance just like other businesses do.

The fact is that the craftsperson and the gallery are in the same business of reaching the general public with a quality product. As such, we each share the responsibility of supporting the other for the survival of both. Since everyone's costs are going up, some of the old rules of marketing have begun to change, in this case, percentages. When that happens, each of us must have the confidence to ask *why* these changes are being made, it is our individual right. Then when all the cards are on the table, it becomes the craftsperson's choice to either accept the change, modify it to their individual needs, or remove the work and place it in another sales location.

Welcome New Board Members

Please welcome the new members of the AAW Board of Directors, **Bonnie Klein** and **Alan Lacer**. And welcome back **Palmer Sharpless**, who has been re-elected to a second term.

Bonnie Klein is from Renton, Washington. She is a Founding member and Secretary of the AAW's Seattle Chapter. Bonnie is known to many as a turner of miniatures, which she will be demonstrating during our next Symposium in Seattle this October.

Alan Lacer is from Norman, Oklahoma, where he initiated and is the President of the Central Oklahoma Chapter of AAW. Alan is an avid turner with considerable experience as a teacher and demonstrator.

Palmer Sharpless is from Newton, Pennsylvania. He is a retired woodshop teacher, a Founding member of AAW, and has served as Chairman of our Local Chapter's committee from the very beginning.

We are pleased to have had so many talented and energetic members run for these Board positions; and those who were not successful in their bid this time are encouraged to re-apply during the next election in 1990. And, in order not to lose track of their talent and energy, these members have all been asked to serve on the newly formed committees of Fund Raising, Membership, Election and Journal. If any members are willing to join any of these committees, please let us know.

Our heartfelt thanks go to our retiring Board members, Bill Hunter and Alan Stirt, who have worked so very hard to help this organization in the past three years. Bill and Alan have agreed to sit on the Board of Advisors, where their experience with administration and AAW procedures will be most helpful. In addition, both will remain on the committees that they originally founded: Bill as Chairman of the Educational Committee and Alan on the Safety Committee.

The Woodturner

His is a combination of artistry
and mechanical skills
Born over seven hundred years
before Christ
And nurtured throughout
the centuries
By a dedicated number of those
who enjoy
And appreciate symmetry
and form
And love to transform the
shape and grain
Of exotic woods and plain
into a magical display
Of fanciful configurations
such as to
Magnify the spirit and
delight the soul.

Lester B. Wright
December, 1988

Congratulations

The League of N. H. Craftsmen 14th Annual Juried Exhibit Awarded J. Paul Fennell of Topsfield, MA, the Woodworkers Gallery Wood Award. Fennell was honored for his unnamed redwood lace vessel. Congratulations from AAW.

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watercolors; chemical stains and synthetic dyes. 2.) spirit stains, anilines and synthetics. 3.) oil stains, which could be tinting colors; Universal Tinting Colors which can be used in lacquers or oils, artists oils, Japan colors and aniline dyes. 4.) varnish stains.

I've used only a fraction of what is available. Artists oils can be rubbed directly onto wood or mixed with the finishing oil for different results. A deep color applied to open-grained wood creates a wonderful contrast when wiped off.

I've painted on watercolors for beautiful, luminous colors, but sometimes I have difficulty with lap marks on the curved surfaces of a bowl. A fabric designer suggested fiber-reactive dyes, a synthetic dye made for cellulose fiber. Many of the aniline dyes made specifically for wood are synthetics, not coal-tar derivatives. Fabric dyes, available in a wide-range of colors, eliminate brush lap marks. They are designed to react and chemically bond with the fiber. In reality, I use them like paints and do not think they chemically effect wood. Their disadvantage is that they go on very wet and will distort work.

Despite the seemingly endless variety available, the most important aspect is the willingness to experiment. A trip to the library yields wonderful new and old books about finishing, and you gain confidence when you see the different methods people use. It helps to understand a little bit about color, and perhaps a basic art course in color theory would be useful. It certainly helps to know how to mix from a basic palette, otherwise none of us would have enough space for all those little bottles and tubes of paint.

AAW Structure

Committee Structure of AAW

If you want to participate on these committees, please contact the chairmen at the addresses listed below.

Publications Committee, Rus Hurt, Chairman; Alan Stirt, helping. Subcommittees: Journal, Series Publications, One-of-a-kind Publications. (Rus Hurt, Box 116, Flagg River Road, Port Wing, WI 54865.)

Promotions Committee, Dick Gerard, Chairman. Subcommittees: Advertising, Membership, Public Displays, Placing Articles in Magazines. (Dick Gerard, 7410 Railway Court, Indianapolis, IN 46256.)

Conference Committee, Ernie Conover and David Ellsworth, Co-chairmen. Subcommittees: Annual Conference, Turning Workshops, Regional Shows. (Ernie Conover, 18125 Madison Road, Parkman, OH 44080.)

Special Funds Committee, Bill Hunter, Chairman. Subcommittees: Contests and Games, Scholarships and Stipends, Visiting Craftspersons, Relief Fund, Achievement Awards. (Bill Hunter, P.O. Box 260, El Portal, CA 95318.)

Local Chapters Committee, Palmer Sharpless, Chairman. Subcommittees: Planning, Promotion, Assistance, Support Services. (Palmer Sharpless, 192 Durham Road, Newtown, PA 18940.)

Structure of AAW

From our earliest beginnings, our Board of Directors has sought ways to involve a broad base of our members. This involvement takes two forms: members forming local chapters and members accepting Page Editorship responsibilities.

Although this Journal is assembled in our main AAW office, it is not written there. It is written by our members who send material to our Page Editors. Their efforts are coordinated by Peter J. Hutchinson, our Editor-in-Chief.

If you are interested in submitting material for forthcoming issues, please send your ideas directly to the appropriate Page Editor. If you think that your idea falls outside any of our current editors' topics, then send it to Peter J. Hutchinson (5124 Scenic Drive, Murrysville, PA 15668), and he will re-route it. NOTE: Writer's Guidelines and copy deadlines are available from the AAW office: P.O. Box 6220, Lynnwood, WA 98036-6220 (206) 670-1011. Page Editors include:

About Wood: Casimer Grabowski, 19705 SW 134 Ave., Miami, FL 33177
Feature Article: Leo Doyle, 378 W. 53rd St., San Bernadino, CA 92407.
From the Trenches: Dick Gerard, 7410 Railway Court, Indianpolis, IN 46256
International Communique: Albert LeCoff, 42 West Washington Lane, Philadelphia, PA 19144
Interviews: Merryll Saylan, 927 Grayson, Berkeley, CA 94710
Local Chapter News: Palmer Sharpless, 192 Durham Road, Newtown, PA 18940
Ornamental Turning: Richard Miller, 1661 S. Research Loop, Tucson, AZ 85710
Practical Finances (for impractical people): Ron Kent, 5329 Kalanianaole Hwy., Honolulu, HI 96821
Turning 9-5: Shawn Christman, 647 So. Alaska St., Seattle, WA 98108
Projects: Rus Hurt, Box 116, Flagg River Road, Port Wing, WI 54865
Questions and Answers: Clifford Schroeder, 1612 Sunset Dr., Traverse City, MI 49684
Shop Safety: Alan Stirt, RFD #4, Enosburg, VT 05450
The Supplier's Side: Roger Barnes, RFD #1, Almond, NY 14804
Tips & Techniques: R.W. (Bob) Krauss, P.O. Box 427, Crescent City, CA 95531

New AAW Address and Phone Number:

Dennis R. Hormann—AAW
P.O. Box 6220
Lynnwood, WA 98036-6220
(206) 670-1011

New Editor-in-Chief Address:

Peter Hutchinson
AAW Editor-in-Chief
5124 Scenic Drive
Murrysville, PA 15668

Announcements

CERF. . .and You

Have you heard of Johannes Micholsen? Johannes is a woodturner from Vermont and a member of the American Association of Woodturners. On June 6, Johannes' house *and* his workshop burned to the ground!

Now. Have you heard of CERF—the *C*raft *E*mergency *R*elief *F*und? CERF was developed to help craftpersons rebuild their lives in times of emergency due to accident, fire, theft and natural disaster.

CERF gives cash. Also interest-free loans with no specified payback date. CERF is funded by public and private donations. CERF gave Johannes only $435.00. Why? Because CERF is a new organization and that's all the money it had to give.

AAW members can help CERF build up its power base with donations. CERF is a not-for-profit organization. Your donations are tax deductible.

Think you can help? Send what you can. Hopefully, you'll never need CERF's help. But somewhere, sometime, someone will.

Many thanks! You will be forever rewarded.

Sincerely,
David Ellsworth
Honorary Board of Advisors
Craft Emergency Relief Fund

Make checks payable to:
CERF
Suite 9100 Connecticut Ave. NW
Washington, DC 20036

Letters To The Editor

Dear Editor:

You were right! My experience in learning woodturning with Rude Osolnik was outstanding. I remember my paragraphs with regard to why I would like an AAW scholarship, and how I expected it to help me if I were granted one. All of my expectations were met, and I emerge a much, much better turner; for that I want to thank you personally, and also give thanks to AAW for the scholarship.

I will put my new skills to use with joy and finer products—I hope that others may continue to find the scholarship program as beneficial to them as I found it for me.

With Appreciation,
Roger Wolff