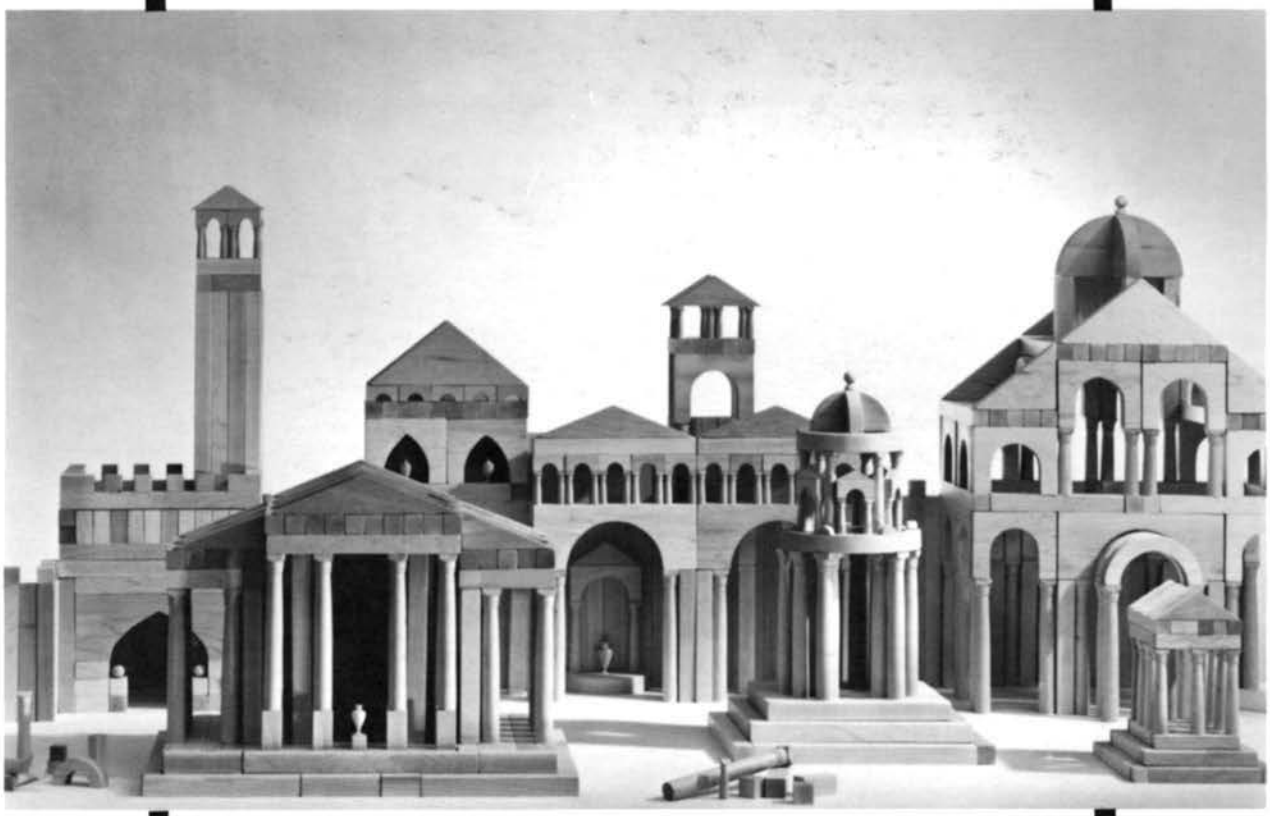
# American Woodturner

The *Journal* of The American Association of Woodturners Volume 4 Number 3 March 1990 $5.00



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

# *President's Page*

*David Ellsworth*

Welcome to the new decade! Welcome, also, to a new woodturning magazine that is soon to hit the press in England. Appropriately titled "Woodturning," this new publication from the Guild of Master Craftsmen Publications Ltd., is currently soliciting articles on a broad range of subjects from the 'how to' to the 'what's happening' in the international scene of woodturning. They also pay for well written articles! So if you've been reluctant to submit to your Journal because you don't get reimbursed, give them a try. Who knows, if it's that good we might just reprint it ourselves. Contact: Bernard O. Cooper - Editor, "Woodturning," Guild of Master Craftsman Publications Ltd., 166 High Street, Lewes, East Sussex BN7 1XU, England.

Our next National Symposium will be at Arrowmont School for Arts and Crafts in Gatlinburg, Tennessee, October 25th, 26th and 27th. The AAW got its start at Arrowmont in 1985, so we're very pleased that Sandra Blain, Director of Arrowmont, has asked us to return. All application information and the final list of demonstrators will appear in the June issue of the Journal.

You may remember that "Woodturning: Vision & Concept" was the title of the juried exhibition that ran concurrently with the 1985 turning conference. It was a magnificent show that received coverage in both "Fine Woodworking" and "American Craft" magazines. This year Arrowmont will sponsor another exhibition titled "Woodturning: Vision & Concept II." This will also be a juried exhibition, but without an "invited" section. It's the first time that we'll all be competing equally with our work through slides. So, if you've got a "hot one," don't be shy. Take good slides and give it your best shot. Once again, the exhibition will open on the first evening of the Symposium and run through the month of November. If you haven't already received an application form contact the school, not the AAW office. Write, Arrowmont School of Crafts P. O. Box 567, Gatlinburg, TN 37738, 615/436-5860.

It occurred to me that some of our members may not be aware of one very special feature of our National Symposiums. We always offer teaching positions within the regular agenda for turners who don't often have the opportunity to demonstrate their techniques and turning styles. This is a great way to expose these talented people to a broad and highly supportive audience, and it helps them sharpen their teaching skills. But what then? Where do they go to teach after the symposium?

The AAW currently has over 30 local chapters that are always looking for input from outside their region. Most are now large enough to pay for a turner's fees and expenses at minimal cost to each member. There may be more of a demand than the supply of teachers at the moment, but if turners are willing to travel and earn a few bucks in the process, maybe we can provide them the opportunity.

How would it be coordinated? First, we need to develop an active list of turners who are interested in teaching. When submitting to this list, turners should include a brief resume of their experiences and describe what style or type of turning they like to teach. Second, we need a list from those chapters who are interested in hosting turners. This list should include dates that the chapters meet and specific areas of interest, if any. Schedules and fee structures can be worked out between the turners and the chapters once they've made contact. Hopefully, we can create opportunities for our lesser-known turners who need the chance to demonstrate their skills.

Send written requests only to Roy K. Bohrer at our Texas office (not to Palmer Sharpless), ATTN: Teaching Opportunities.

Finally, if the Journal seems to have a new look, it's because we've turned over all publishing responsibilities to our home office in Austin, Texas. ASMI successfully outbid the competition and will bring considerable savings to the organization. Many thanks to Roy and his staff.

## We Apologize!

Due to an oversight at headquarters, the American Association of Woodturners name was incorrectly listed on the membership renewal forms. Thanks to those who called, the correction has been made. We apologize for this error and for any questions or confusion caused.
**Association & Society Management, Inc .**

## Election News

The results of the AAW Election are in and the following board members were elected: David Ellsworth, Quakertown, Pa.; Dick Gerard, Indianapolis, Ind.; and Mary Redig, Shoreview, Minn.
In addition, all three proposed Bylaw changes were approved. More details will be available in the next *Journal.*

American Woodturner

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. *American Woodturner* (USPS 000–1348) is published quarterly by the American Association of Woodturners. Regular membership rates are $20 for individuals and $50 for businesses. Supporting memberships are $100 and $250 respectively. Benefactor memberships are $500 and $650 respectively. Patron memberships are $1,000 and $1,500 respectively. Of any membership, $6 is allocated for an *American Woodturner* subscription. Single copy price is $5. Known office of publication and sales office is the American Association of Woodturners, 940 E. Fifty-first St., Austin, Texas 78751-2241, FAX 512/454-3036, 512/454-8626.

POSTMASTER: Send address changes to *American Woodturner*, 940 E. Fifty-first St., Austin, Texas 78751-2241, FAX 512/454-3036, 512/454-8626.

NOTE: AAW does not endorse any product featured or advertised in this Journal.



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## On the Cover

*"Archiblocks" Vergennes, VT*
*Photo Courtesy of The Rosen Agency*

## On the Back Cover

*"Scallion Coat Rack" by David N. Ebner*
*69" H X 12" W*

# The Keys to Business Success

Betty J. Scarpino

*If a man ... can make better chairs... than anybody else, you will find a broad, hard-beaten road to his house, tho it be in the woods.*

*Ralph Waldo Emerson*

No doubt you have read articles and books about how to succeed in business. Armed with this knowledge, how would you rate the chances of a business prospering given the following start-up conditions: a dirt road to a marketplace and no electricity? That is just what chairmaker George Fulton and his younger brother William were faced with in 1860 when they decided to start a business making and selling furniture. That same business, Dominion Chair, is still alive and well today in Bass River, Nova Scotia, Canada, in spite of its improbable start and many unfortunate circumstances over the years. Their chief reasons for success? Commitment of the owners and employees to producing a quality product and to providing continual employment for many members of a small community.

George and William located their woodworking facility near the mouth of the Bass River to take advantage of water power. The brothers harnessed that power to operate an up and down saw, as well as a lathe, in order to increase production. In those years, skilled craftsmen individually turned each pillar for chairs, table, and beds from green lumber such as oak, maple, birch, and ash. The pillars were then air dried before being sanded and assembled into a finely crafted piece of furniture.

Not content with the location in Bass River, William left the area sometime around 1870 to try his hand at operating his own furniture company closer to a railroad. This left George to run the original company by himself. He was soon fortunate to have Isaac MacLellan Munroe, an exceptional mechanic, join him in Bass River. The company prospered.

However, in March, 1885, a fire destroyed the buildings. George quickly rebuilt the company while, at the same time, enlarging the production facilities. The main manufacturing building now stood three stories high. The following year George retired because of ill health. His son, Suther B. Fulton, replaced him as general manager and the company continued to prosper. Suther soon added a large two story building to house groceries and provisions for employees.

Once again, fire destroyed the manufacturing facility, and, again, it was rebuilt (1892-1893). The new plant consisted of three buildings: a four-story building, 100 feet by 40 feet, with an adjoining sawmill; a three story lumber shed, 100 feet by 35 feet; and a 'dry house' which was over 75 feet long. By this time, Dominion company craftsmen had produced over 500,000 chairs.

The manufacturing company continued to prosper and by the early 1900's its reputation for producing high quality furniture had spread far beyond the mouth of the Bass River. When fire struck for the third time in 1909, there was no question but to rebuild. At the same time, the company paid to have the main road out of Bass River graveled. The plant was soon in full production and, a few years later, meeting the demands of World War I war production.

After surviving the Depression and just after the start of World War II, the fourth fire completely destroyed the manufacturing facility. In spite of machinery shortages due to the war, the owners were able to rebuild the plant and start producing products for the war effort, primarily chairs for soldiers' barracks.

The war ended, but not the problems of the company. The fifth fire sent the buildings up in flames in 1948. Rebuilt once again, the company went into full production making hardwood school chairs. Eventually, the demand for Dominion chairs declined due to production of less expensive plywood and plastic chairs by other manufacturers. Instead of going with the trend, the company continued with its original purpose to produce quality hardwood furniture.

Much has changed since George and William built the first water-powered lathe in 1860. The new owners built a dry kiln in 1985, replacing the slow air drying method from years past. Semi-automatic back-knife lathes now turn most of the pillars. However, some things have not changed - table pedestals are still hand turned by skilled craftsmen; and, most importantly, Dominion Chair Company is still committed to producing a quality product.

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*Betty J. Scarpino is an editor and a professional woodturner from Indianapolis, IN.*

# The Business of Turning

## Galleries in America

*Rick Snyderman*

***For the mystic what is how. For the craftsman how is what. For the artist what and how are one.***

*William McElcheran*

The last hundred years have seen a tremendous expansion of artistry of all kinds, and an equally exponential growth in the methods by which these objects reach their many and varied audiences. Throughout this period, individual galleries and dealers have often played pivotal roles. It was Sigfried Bing's La Maison de l'Art Nouveau, Paris, which gave the "Art Nouveau" movement both its name and focal point in the late 19th Century. Alfred Stieglitz's "291" in New York was the first American gallery to exhibit the controversial European painters; Picasso, Duchamp, Braque, and their friends shortly before and after the First World War.

Beginning in the late 1940's and through the 1950's, astute art dealers Leo Castelli and Sydney Janis championed artists such as Jackson Pollock, Willem DeKoonig, and Frank Stella. These art dealers created visibility, markets, and a place in history for both the ideas and work of these artists. Art dealer and gallery owner Lee Nordness had the vision and courage to persist in organizing Objects USA in 1968-69. This was the first comprehensive crafts exhibit to receive critical national recognition. There were many more who had this hope and vision and failed. Yet, they did not completely fail; they helped pave the way for many artists and galleries operating today. To recognize and acknowledge these and other key dealers and galleries is not an exercise in nostalgia. They are part of our continuing history, as are the seminal artists and influential patrons of this century.

It would be instructive for all who call themselves galleries to examine what these individuals and organizations have in common. First, they all have a point of view, usually developed through a process of self-education. Second, they were willing to take risks - cultural entrepreneurship. Third, they served as catalysts, both intellectually and emotionally, for artists, scholars, critics, and patrons. Fourth, they involved themselves in the life of their communities. Fifth, they did not pander to popular tastes; yet in the end, they lived to see their beliefs accepted as mainstream views.

New York dealer and gallery owner Douglas Heller put it succinctly, "A gallery is not a store." If that sounds elitist, consider where things are today. Endless quantities of objects are borrowed from the same technological closet and skillfully hung with a few new touches. Startling amounts of time, energy, and money are spent on merchandising, relative to what is directed towards thoughtful design, or the creative examination of what was around us, what is around us, and what might be in the future.

We are, in short, awash in a sea of generally benign, but substantially mindless stuff, sold by stores calling themselves galleries, and turned out by product-makers who wish to be called artists. Is it any wonder that, in this commodity-oriented TV-Blitz Time, the public is somewhat confused?

As we all know, it is "OK" to do anything in America, a cliche that asserts one of this country's greatest contributions to history, and highlights one of its greatest paradoxes. This question is also our challenge. Can we, as artists, dealers, and galleries offer the public work that stimulates their inner consciences? Can we exercise an intellectual rigor in our work? Can we maintain a personal ethos in our lives? And, finally, can we devise things primarily for the love of them rather than for their profit potential?

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*Rick Snyderman is Founder and Director of the Snyderman Gallery, Philadelphia, PA.*

# Gearing Up for a Wholesale Market

*An ounce of image is worth a pound of performance.*

*Laurence J. Peter*

*Laura W. Rosen*

Applying to the major trade shows can be much less intimidating if you have your facts straight beforehand. Shows like the Buyers Markets of American Crafts, produced four times yearly by the Rosen Agency, Inc. of Baltimore, Maryland, provide a sophisticated marketing environment for artists and retailers to get acquainted. The Buyers Markets attract crafts businesses of all types and sizes. Production-oriented and limited-edition craftspeople exhibit side-by-side, and buyers from department stores, specialty shops, and fine galleries visit the shows to view the works of hundreds of crafts exhibitors. Evening activities like business seminars and band parties enable exhibiting artists to learn more about running a business, and to socialize with old and new friends.

It is important to plan early for shows that are well-suited to your needs. Many show promoters can supply you with an application more than one year prior to the event. The application should give show dates and locations, a brief history of each event, the name and type of facility used, and the fee to exhibit. More details, like a profile of exhibitors and attendees or past-show sales figures, may also be obtained from the promoter. If an exhibition fee seems steep, be sure to examine the size and quality of advance promotions planned, and be aware that fees to show in the major convention centers are much higher than outdoor fairs and festivals. When examining the show's promotional campaign, you might ask what percentage of the budget will be spent on mailings to past attendees, and what percentage will be used for advertising and mailings to attract new buyers. Exhibition fees may also include various amenities normally billed separately like drayage, booth electricity, or signage. Of course, the surest way to "check out" a show is to visit the event, and most promoters are very accommodating in this regard.

The Buyers Markets require a professional free-standing three-sided booth display with adequate lighting, a floor covering, and wall-mount and/or "floating" displays for merchandise. Jewelers often bring display cases or counters to showcase their work. Exhibitors who use air travel to get to the market can often rent pedestals from the show decorator. Tables, chairs, carpeting, lighting, and other booth necessities may also be rented. When planning your exhibit, be sure to follow all of the guidelines provided by show management. The Buyers Markets provide a comprehensive guide to exhibiting - appropriately called an exhibitor's kit - about eight weeks prior to each event. No hiking expert would embark on an expedition without his compass and first-aid kit, and trade show exhibiting can be a similar "jungle" without the guidance of the kit. Whenever you plan a new display, be sure to make it as flexible as possible. Height requirements and booth sizes vary and you should be prepared to do any show you choose.

A good track record with buyers is a key qualification for acceptance into the Buyers Markets of American Crafts. But artists who are new to wholesaling may apply to the Buyers Markets as "Premier Designers." Under that designation, the artist may list (in lieu of wholesale accounts) their major collectors and recent exhibitions, and may provide copies of published articles or letters of reference from craftspeople and gallery owners in lieu of a business biography. Once accepted to the Buyers Markets, the artists are expected to fill orders accurately and timely. In other words, do not make any agreements you cannot keep!

When applying to the Buyers Markets, you will also be asked to submit a copy of your wholesale price list and your wholesale brochure. A sophisticated brochure can be a big expense, but the buyers expect you to have professionally printed literature available in your booth.

If you receive notice that you have been wait-listed for a particular event, there are a few things that you can do to improve your chances of being accepted. First, remain patient - the promoter is telling you that no spaces are available in your

category at present; but when spaces become available, you will be considered.

Next, compile and submit any supporting documents that may increase your chances. New and better quality product slides, letters of recommendation from buyers, and copies of articles that focus on you as a business owner are all good additions to your application file. It is much more effective to respond with supporting materials by mail than to call the show manager about your status.

### And, Once You Are Accepted . . .

If you are accepted for a tenured space at the Buyers Markets, you are in for "life," provided that you continue to exhibit in good standing.

There is a lot to do once you are accepted into a major trade show. Travel arrangements and display planning should be taken care of as early as possible - at least four months in advance is suggested. When planning your display-sample inventory, be sure to use only the merchandise that was shown on your application. Most promoters are fairly strict about that, and ask that you notify them in writing (well in advance of the show) of any changes in your line.

For Buyers Market exhibitors participating in other major shows, the services of Distribution Services of America are available to transport booths on a convenient and affordable "freight circuit" at a considerable savings over the standard motor freight fees. When budgeting for freight expenses, remember that drayage is simply the handling of materials from the dock to your exhibit space, and that freight itself is a separate expenditure.

Next - promote, promote, promote! To insure a successful market, you should utilize every avenue of marketing available to you. Promoters of the Buyers Markets provide you with colorful stickers and postcards to notify your buyers that you will be showing your newest designs at that event. The Buyers Markets also have their own four-color magazine, NICHE, providing an effective vehicle for advertising your show participation. Statistics prove that exhibitors who market themselves outsell others at trade shows.

When you are writing those orders at market, be sure to use professional order forms and get all the details you need from the buyer like credit references, a shipping address if it differs from the store or office address, business phone number, etc. Assist the buyer as much as possible by showing an interest in the buyer and in the shop or gallery. Know when to break off the chit-chat and begin writing the order! If there are any special order details, like "raku basket #4 with larger handle," be sure to write them on the order so as not to get lost in the shuffle. Later, back at the studio, double-check your outgoing shipments and enclose a brief message of thanks to the buyer.

Be aware of booth courtesy and observe the rights of your fellow exhibitors. Rules prohibiting the distribution of literature in the main aisles, and the photography of displays (other than your own) are established to protect all of the show's participants.

### Finally . . .

If you would like to meet the promoter, ask your neighbor to point out that individual sometime during the event, and then go introduce yourself. At the Buyers Market, if you do not get the opportunity to speak to Wendy Rosen (President), make the acquaintance of other people on the show management staff. After all, they are the folks with whom you will be dealing on a regular basis.

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*Laura W. Rosen is Vice President and Director of Public Relations for the Rosen Agency, Inc, promoter of the Buyers Markets of American Crafts.*

# Birth of a Notion

*Richard Lukes*

Although creating an invention is hardly an orderly process in many respects, it is helpful to outline and analyze the various steps involved, from the moment of conception through the long process of developing the idea into a concrete, marketable product. Listed below are the basic steps in the process I used to develop my idea which became the Stabilax (Figure 1).

1. Recognize the problem.
2. Analyze the problem.
3. Find a solution.
4. Test the solution.
5. Have others test the solution.
6. Make drawings of the proposed final product.
7. Prototype or produce the product.
8. Test the prototype.
9. Manufacture the product.
10. Name the product.
11. Decide whether to patent the product.
12. Market the product.

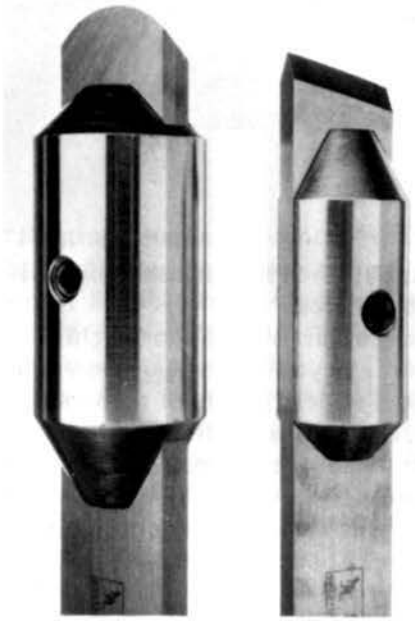

**Figure 1**
Stabilax Woodturning Skew, Model 1500 and Model 1125.

The Stabilax is a device which is attached to a woodturning skew to eliminate the problems all turners seem to find in reliably controlling the skew and avoiding "catches" in the turning work piece.

I was watching a very experienced turner demonstrate "that one final finishing cut" when his skew caught in the wood and ruined the work piece. Of course, the same thing has happened to me on many occasions, but I attributed it to a lack of skill on my part. However, when this occurred, I realized the difficulties of using a skew were not only mine, but a universal problem.

I thought very hard about what I had seen and about my own experience. Why was the skew such a problem for all turners, and why did it take so much time to master the tool? It finally dawned on me that the basic tool, although centuries old, had a fundamental design flaw. The downward force of the rotating work piece could be anywhere along the cutting edge of the skew, but the only support for the tool was at the point where the tool contacted the tool rest (Figure 2).

Realizing the skew chisel was almost always off-balanced (unless the point was straight up or straight down) led to the basic solution of the problem. The support must be lined up under the area doing the cutting by enclosing the skew in either a circle or a semicircle. As the tool is rolled on the rest to make various cuts, the point of support will change constantly to remain under the area where all the downward force is exerted by the turning wood (Figure 3).

The solution sounded great, but would it really work? To test my idea, I made various quick rough prototypes and tried them with skew chisels. All the prototypes worked.

To make sure it would work as well for others, I had some of the turners in our Los Angeles Woodturners Club try out the idea at our next meeting with a very rough prototype made from wood. They all seemed to get excited by the idea, and thought I might really be on to something.

Now, it was time to put all the ideas on paper, and try to figure out the very best form for the idea to take. It had to fit all tools, be of top quality, do exactly what it promised to do, and be affordable. Hours on a drawing board are conducive to heavy thought, at no cost, as long as you do your own drawings.

After making many drawings and measuring all the skews I could find, I decided the best way to construct the idea was out of spring steel. The product would be affordable and would snap on any tool. I approached two large companies, which specialized in die stamping flat spring steel. They each kept the drawings for weeks, and then informed me the dies were too complex for them to make. It may have been they just did not take me seriously, or they were only interested in very large production runs. I then found a small tool and die

shop not far from my home which also did machining. After a few days, the die maker felt he could make a progressive die for me for $12,00 to $15,000. Of course, this was out of the question; so after talking with the owner and die maker at length, we decided the best way would be to machine it from cold-rolled steel. Cold-rolled steel would add durability and give the added advantage of additional weight, which would provide even more stability to the skew chisel.

Two different sized prototypes were produced to fit all the available skew chisels at a cost of $200. However, the owner lost money on the prototypes, as they are very time consuming to make without production tooling. Machine shop time in the Los Angeles area is anywhere from $25 to $50 per hour. The rates may vary greatly according to location, but the machines are all expensive to buy and run, and the machinists and die makers are skilled persons commanding premium wages.

To make sure the prototypes are exactly what you want to produce, test them until you are positive and then test again. Then, take them to someone you really trust and have him test them. The gentleman who tried my prototypes, who is very well known and respected in the wood turning world, gave me a wry grin and said, "Its's the taming of the skew."

Manufacturing the product involves spending large sums of money. Depending on the nature of the product and if it is made by machine shop methods, you may have to invest (one time only) in the cutters, jigs, and fixtures to produce the product in quantity, so it can be made at a price low enough for people to buy. If the manufacture of the product does not require all these items, which are usable only for your product, then you may be able to produce a small quantity and not have to invest so much money. If you have expensive tooling and fixtures, you are also probably going to have to manufacture a fairly large number in order to pay for the up-front fixed costs. All of these items enter into the degree of credibility you are establishing with the machine shop during this decision making process. Depending on the dollars involved, you may need steel nerves, for you may literally bet your house.

In addition to the fixed one-time costs (estimated by the machine shop and a quote given to you), you also now need accurate pricing from the machine shop on materials, labor, subcontract work, and all the processes which go into the actual manufacturing cost of the product. Obviously, this is all directly

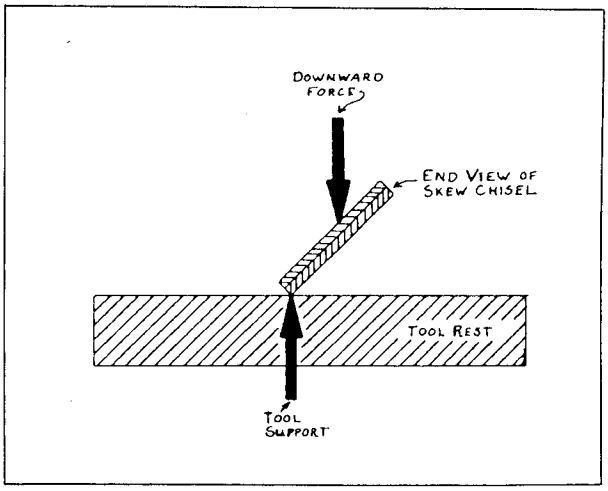


**Figure 2**
Instability of skew chisel used at an angle to the tool rest.

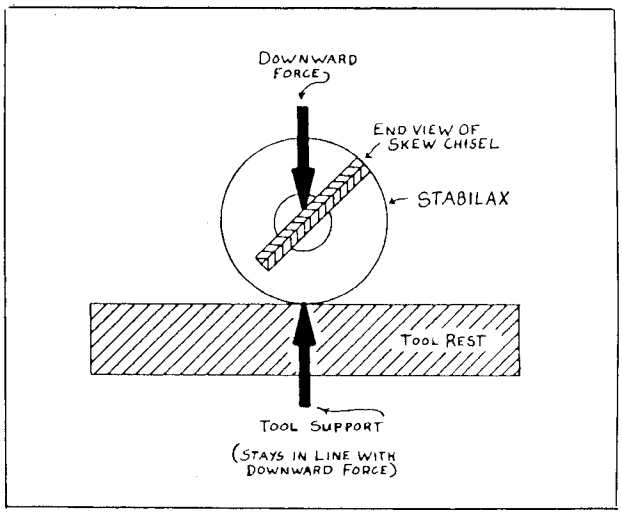


**Figure 3**
The Stabilax supports the downward force on the tool at any cutting angle.

***Inventing is a combination of brains and materials. The more brains you use, the less material you need.***

*Charles F. Kettering*

related to the quantity requested to be made in the first production run. Per unit costs may change dramatically at higher quantity runs, and you are the only person who can make the guess. If you do not make enough units, you cannot recoup your tooling costs, and the per unit price may be too high to allow adequate mark-up for a reasonable profit. If you make too many units, you have a bundle of money tied up for a product which may not sell rapidly.

After you have settled on price and quantity for the initial production run, sit down with the machine shop owner, or whoever is actually making the product, and make a simple list or flow chart, in sequential order, of every tiny step in the entire manufacturing process to this point. Discuss the sequence and every part of the process in great depth. Large dollars may be saved at this point by figuring out not only the most efficient way to produce the product, but also how to avoid sequential mistakes in the process. Quite often, doing one particular part of a machine process will make a different part of the process easier or faster. As an example, it was important in making the Stabilax to have the slot for the chisel milled out before the hole for the set screw was drilled and tapped. The slot allowed chips to escape, reduced the amount of material to drill and tap, and allowed better operation of an automatic reversing tapper.

During this preliminary period, question all your assumptions. The Stabilax looked like a simple device to make, but it is not. It is very time consuming and very expensive to mill out the large amount of steel needed to make the slot where the skew chisel goes.

Once production begins, haunt the machine shop. No one cares about the quality of the product as much as you, the inventor. After all, since you are spending a lot of money, you might as well watch it being spent. I checked on things every morning before I went to my regular job, and every night after work. This attention to detail avoided some very expensive mistakes and gave me the level of quality upon which I insisted. Do not be shy about insisting that your product be manufactured to a high standard of quality. Good enough is never good enough.

At some point you are going to have to name your product. I wanted a name related to the purpose of the device, to provide a STABLE AXIS for woodturning chisels. A derivation of those two words gave me the name I wanted. To avoid trouble, it is very important to go to a large library and look in the business section for the book which lists all the current trade names and registered trade marks.

Now, a decision must be made whether or not to patent the product. This is another expensive item, and one for which a decision is not easily made. If your item is an improvement or a conglomeration of other products, it may or may not be patentable. If it is unique, and no one else has ever patented it or disclosed it publicly to your knowledge, you may be able to patent it. It is time to hire a patent attorney. The prices quoted here are for big city patent attorneys with big city overhead, and highly recommended by someone I trust. Figure on $600 up front to have one of their associates in Washington, D.C. make a search of the Patent Office to see if someone else came up with your idea first. If the search proves you should proceed, figure on another $2,000 to $5,000 to prepare and send a thick stack of paperwork, including drawings, to the Patent Office. It may take 18 months before you hear anything, and you will probably be turned down. Your attorney will resubmit the papers, and after some months, you may get your patent. In the United States, you have one year from the time you first publicly disclose your idea until it must be postmarked and on the way to the Patent Office. Private disclosures to a friend or a few friends do not count.

An alternative is to do the patent process all by yourself. Frankly, I know nothing of the do-it-yourself patent process, and I can only assume it is very time consuming. In my case, lack of time is always a problem; and since I spent a lot of money making the device, I felt I should be serious and get a good lawyer to get it patented. My best advice is to talk to an attorney and get his advice. His charge might range from $50 to $200 an hour, and could be money well spent.

Good luck with your idea!

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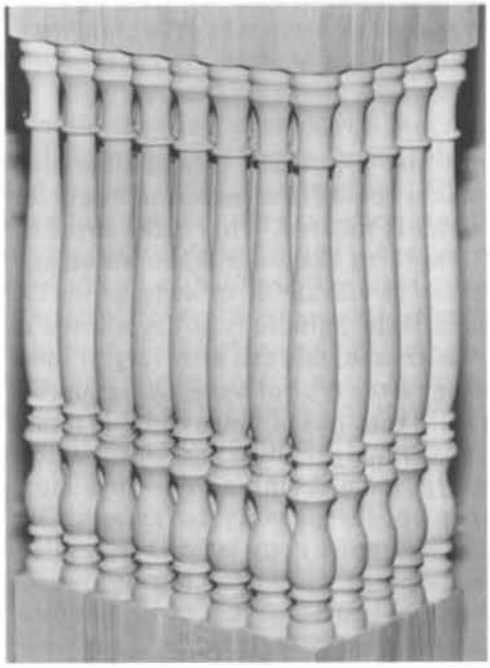
*Richard Lukes markets the Stabilax, a skew chisel accessory, from his home in Los Angeles.*

# Thoughts on Production Turning

*Peter Schuyler*

***A great society is a society in which men of business think greatly of their functions.***

*B. C. Forbes*



*Hand-Turned Spindles*

"Don't give up your day job." This was the advice given to me when I set out to capture the handmade Windsor Chair market. Because chairs are mostly repetitive turnings, I was unknowingly practicing for what was to become my day job . . . production turning.

Production work can offer the turner a great variety of challenges and problems. One needs to become proficient in both spindle and face plate turning as well as being able to devise creative chucking methods. Ideally, production falls somewhere between speed and accuracy.

Any turner, whether production or one-off, would do well to first learn proper technique. Thirteen years ago I spent two days with Russ Zimmerman in Vermont. His course set a good foundation upon which I have developed my own technique and style. Time is important in production work, so dull tools can be your worst enemy. Learning to sharpen quickly and often will increase cutting efficiency and decrease sanding time.

Unfortunately, making the turnings is often the easiest and most enjoyable part of the job. When setting up a production shop, you need to consider the facility from which you will be working and how the size will affect production rate and types of turnings to be produced. Do not cut yourself short on space. Consider how much stock will be kept on hand. Who will supply material, you or the customer? Consider, too, how much machining and stock preparation you will offer. Whenever possible, I have the customer supply material, glued if necessary, sized, and ready to turn. This may limit some of the work offers, but it will eliminate the cost of buying a table saw, joiner, planer, clamps, etc. It also frees space which could be used in other ways and allows you to tend to the business of turning.

With all the money saved, it's easier to justify the purchase of the turning tools, so I spare no expense. Most of my tools are high speed steel. In many cases, I have two or three of the same tool; but each tool is ground for a particular purpose. Sometimes, tools are used for purposes other than what they were intended. For instance, a quarter-inch bowl gouge is wonderful for turning slender chair spindles. A half-inch single bevel chisel with a slightly rounded nose makes a great tool for planing cuts and rolling larger beads and balls. Do not be afraid to experiment. With all the chucks available, whether single or multi-purpose, the two I have found to be indispensable are the screw chuck and the three jaw scroll chuck. With these and a roll of double face tape for split turnings, you can handle most of the usual requests.

Because most of my jobs are architectural, I needed a lathe with the versatility to handle the wide range of sizes to be turned. The Conover lathe proved to be such a machine. Mounted on a fifteen foot bed, I can turn thirteen feet between centers and block the head and tail stocks to whatever diameter needed. I also consider a reversing switch, hand wheel, steady rest, and slow-speed jack shaft absolute necessities. I have added one thousand pounds of sand to the base, installed a two horsepower motor, and made a four-inch drive center, since many of the spindles are very large. So far, with this machine and an old Delta for smaller work, I have not had to turn down a job because of size.

As with any machine oriented business, an idle machine makes no money. I try to set blocks of time aside for uninterrupted turning. Once working, I find my production rate is much better if my concentration is not broken by deliveries, kids, the dog, and especially the phone. Get an answering machine. Lots of work space is a luxury most of us do not have. Keeping clutter to a minimum and having a well organized work area will facilitate a work flow necessary for efficient production.

Pricing production work is a subject for another article. There are, however, a few matters to keep in mind when pricing a job. Think of the whole job; that is, time spent on the phone, chasing for materials, gluing, turning, delivery, and clean-up. One or two pieces will take far more time per unit than one or two hundred pieces. Do not underestimate the time needed . . . you can always reduce the price.

The production turner can find customers without too much trouble. Not many woodworking shops do in-house turning and are usually happy to find a hand turner they can use. Contractors, architects, stair companies, and furniture makers can also be promising contacts.

One last thought about production turning. I doubt that it will allow for early retirement and be prepared to work some late nights and weekends. However, if you like to turn by hand...a lot...it's not a bad way to roll.

# The Custom Copying Lathe

*Billy F. Auvenshine*

***The difference between a bad artist and a good one is: The bad artist seems to copy a great deal; the good one really does.***

*William Blake*

There are a wide range of copying lathes on the market, most of which are made in Europe. Their designs vary from simple, manually operated units requiring multiple passes to complete a part, to full hydraulic lathes that can complete a part in a single pass. I do not include the hopper-fed automatic back-knife lathes in the copying-lathe category. Copying lathes generally work from a sample part or some type of template.

The primary type of copying lathe addressed here is that which includes the advanced designs of a follower rest (Figure 1). The follower rest prevents vibration during turning so that most spindles can be completed in a single pass. A single cutting tool can be adjusted to make a cut of 3/4 to 1 inch deep, and many of these lathes are designed with two cutting tools. When cutting with two tools, the leading tool is making a roughing cut, and the trailing tool is making the finishing cut.

At the current dollar exchange rate, these lathes can cost anywhere from $5000 to $30,000. Most are made in Germany, Italy, and Spain; and the old "saw," 'you get what you pay for,' is good advice. Obviously, at these prices, buyers for this class of lathe are not amateur turners. The manually operated copying lathes that do not include a follower or steady rest of some design are much cheaper and, in my opinion, not adequate for professional turning. The real niche for these lathes is the small shop (usually one to three people) doing custom architectural turnings, especially stair balusters and newels. The other significant use is in turning spindles for windsor-type chair building. The ability to turn long thin parts is one of the real advantages of these lathes. A part is considered thin when the length is 12 to 15 times the minimum turned diameter. Obviously, it makes some difference as to where the minimum diameter is located. This is the approximate ratio of length to diameter when an unsupported part begins to vibrate or to whip under the tool cutting force if the spindle is not supported in some fashion. Of course, this can also vary to some degree depending on the type of wood being turned.

The full hydraulic versions of these copying lathes do have some advantages over the mechanical spring tracing types; but being able to turn more parts per hour is not the primary advantage. One advantage of the hydraulic copy lathe is the ability to trace from a sample part. The tracing stylus uses only a few ounces of contact force; and, therefore, the sample does not tend to bend. Also, many more parts can be turned before the sample begins to lose detail, as a result of repeated passes of the stylus. The other primary advantage of the hydraulic copy lathe is minimal vibration of the cutting tool during turning, especially when the tool begins to dull. However, when turning from a well designed template and with sharp cutting tools, there is very little difference in the performance of the mechanical spring tracing lathe and the hydraulic. Since the hydraulic copy lathes generally cost from 2 to 3 times more than the mechanical type, most small shops buy the latter unit. The copying lathe is like a musical instrument, the more you use one the more variety of parts you can turn.

There are some cuts that cannot be done on any type of copying lathe because of the tool geometry and design. The most common is the cutting of a square shoulder. Some copying lathes have a separate tool assembly or device for cutting a square shoulder as a secondary operation. The sharpest angle that can be cut by the tool is about 75 degrees (or 15 degrees off vertical or square).

This, of course, is a limitation because of the cutting tool design. Any design that requires an undercut is not going to be done by a copying lathe.

The Achilles heel of all copying lathes and the most common concern of turners is the life, or sharpness, of the cutting tool. In almost all designs, the cutting tool is making a shearing cut. The most common material used in these tools for the last 15 years is high speed tool steel. Except for some types of roughing cuts, carbide tools are not used because the edge cannot be ground sharp enough to make smooth shearing cuts. Over the last few years, cutting tools have become available with tangtung and stellite edges to extend tool life. They do an excellent job, but they are very expensive. One of the recent trends in Europe is the use of high speed steel alloys with 40 to 50 percent cobalt.

In almost every Woodworking Fair where I have exhibited these lathes and had long continuous flow of chips coming off a part, there was always a comment, "that's cheating." However, if you have a small shop and do spindle turning for a living, one of these lathes can be cost effective. Their long suit is the ability to turn a few or several hundred excellent, high quality parts of one design; then change templates, and you are prepared to turn a different part. Recently, an article in a major woodworking magazine addressed manual spindle turning and promoted the opinion that only hand turning would give satisfactory results and that copy/duplication of a spindle is the slowest approach to wood turning. The overall knowledge required to design, to make templates, to set-up a difficult part with close tolerances, and to finish with excellent results requires a very good understanding of cutting tools, characteristics of woods, and lathe dynamics. I believe that those of us who do not turn solely by hand can make significant contributions to the advancement of the woodturning craft.

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*Billy F. Auvenshine of Atascadero, CA, markets the German-made HAPFO lathe in North America.*

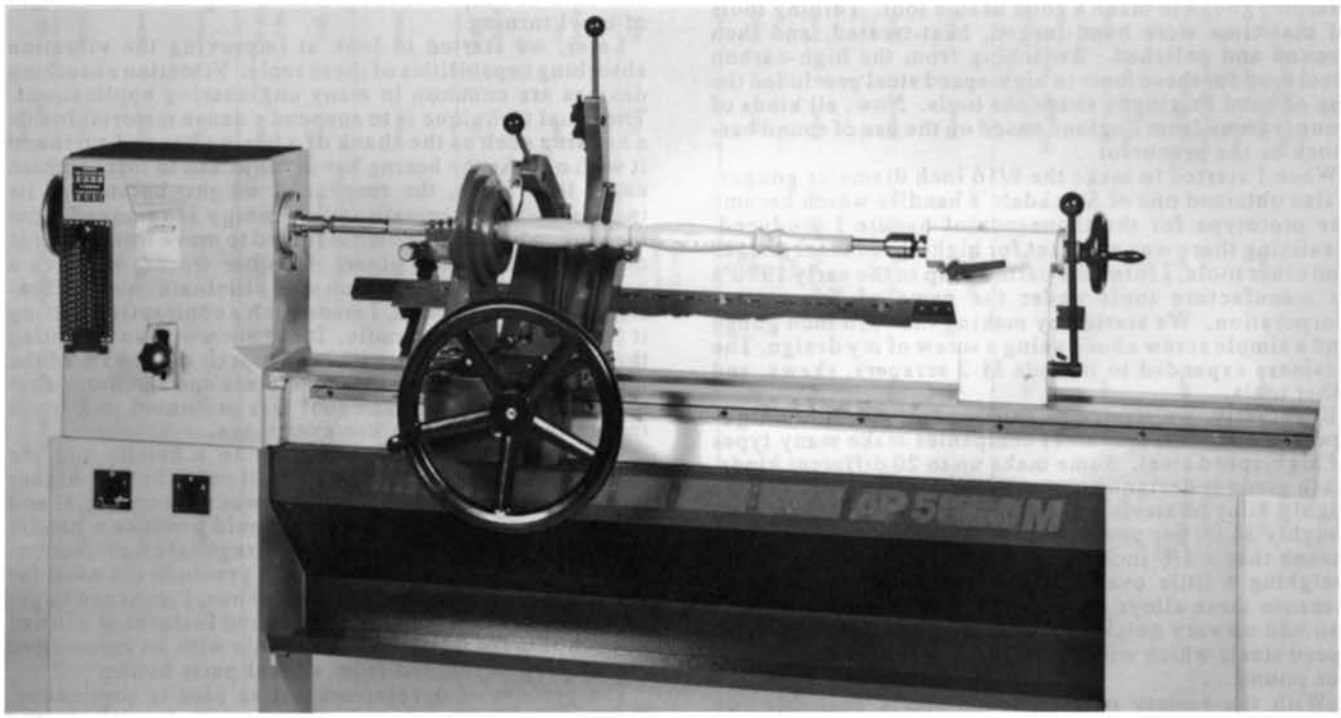


**Figure 1**
HAPFO AP5000 (German) manually operated copying lathe with follower rest.

# Tool Making

*Jerry Glaser*

I first met Bob Stocksdale in the late 1950's; and I was very curious to see what kink of tools he was using to produce his bowls. I had just acquired a 1920's Oliver lathe complete with tools, and some of the tools were made by Buck Brothers, Marples, Greenlee and Berg. They were typical for the period - well made with small handles of maple or birch.

One of Bob's techniques was to use an offset, spear point scraper for some finishing work on his bowls. This tool was made out of a flat piece of tool steel which he got from a friend who was a machinist. Bob showed me a 5/8 inch gouge made by Marples and stated that he would like a gouge of the same shape but made of the same material as his scraper. That simple remark was the start of my career as a toolmaker.

The steel used to make the scraper was marked Braemow which was the trade name used by the Braeburn Steel Company (now defunct) for M-2 high speed steel. I found a source for a bar of M-2 tool steel that approximated the cross-section of the stub of a Marples gouge. Using a 1/2 inch diameter bar end mill, I machined a groove in the annealed M-2 and turned the outside to a round shape. The tangs were milled and I had a gouge. I took the machined blades to a heat treatment shop to have them hardened. To heat treat high-speed steel, it takes a temperature of 2350 degrees Fahrenheit.

While making additional gouges, I decided to standardize on 9/16 inch diameter bar stock. I found it was not necessary to duplicate the exact cross-section of the Marples gouge to make a good usable tool. Turning tools of that time were hand-forged, heat-treated, and then ground and polished. Switching from the high-carbon steel used for these tools to high-speed steel precluded the use of hand forging to shape the tools. Now, all kinds of gouges come from England based on the use of round bar-stock as the precursor.

When I started to make the 9/16 inch diameter gouges, I also obtained one of Stockdale's handles which became the prototype for the thousands of handle I produced. Realizing there was a market for high-speed steel gouges and other tools, I formed a partnership in the early 1970's to manufacture tools under the name of Turnmaster Corporation. We started by making the 9/16 inch gouge and a simple screw chuck using a screw of my design. The business expanded to include M-2 scrapers, skews, and other tools.

Eventually, we started to experiment with other high-speed steels. All tool steel companies make many types of high-speed steel. Some make up to 20 different kinds. Each grade is designed to meet specific needs. All of the highly alloyed steels are very expensive, ranging from roughly $4.00 per pound to over $12.00 per pound. This means that a 5/8 inch diameter by 12 inch long blank, weighing a little over a pound can cost up to $12.00. Because these alloys are also difficult to machine, costs can add up very quickly. Thus, toolmakers select high-speed steels which will just do the job for the lowest cost per pound.

With the variety of high-speed steels available, we ordered tools made out of a number of tool steels recommended for their wear resistance. These included M-4, T-15, Vascowear, D-2, A-2, A-11, etc. We sent a number of these to woodturners for evaluation.

While it is possible to make a gross evaluation of the wear resistance of a particular tool steel, it is very difficult to attach precise numbers to its performance. After several years of experimentation with many types of tool steels, Turnmaster, and its successor, Glaser Engineering Company, settled upon A-11 tool steel as the best steel for wood turning tools.

The A-11 tool steel is used in industry as a replacement for D-2, a highly regarded tool steel for odd working applications such as fine blanking punches, compacting dies for powdered metal products, and other uses requiring highly wear resistant steels. Its very high carbon and vanadium content as well as the particle-metallurgy process used to make it are responsible for its extremely high wear resistance - the highest for any steel.

The handles were made in batches on various types of duplicating and production lathes such as the Mattison. Most of the handles were made of Goncalo alves, chosen for its appearance as well as for ease of machining. Unfortunately, all of them had to be finished by hand, which is very tedious work. Therefore, I looked into the idea of using aluminum bars for handles.

I selected a bar of 1 1/8-inch hexagonal stock, and had a machine shop make a couple of handles to resemble the wooden ones. The cost was reasonable, so I ran a small batch through the shop. I then had the handles shot-peened to give them a pebble finish, and then anodized black. One of the important benefits of aluminum handles is the added mass. The added mass resists the vibrations from the cutting of squares in spindle turning and the odd shapes encountered during the initial stages of bowl turning.

Later, we started to look at improving the vibration absorbing capabilities of these tools. Vibration absorbing devices are common in many engineering applications. The usual technique is to suspend a dense material inside a housing such as the shank of a boring bar and surround it with oil. As the boring bar is subjected to forces which cause it to move, the suspended weight, because of its inertia, wants to remain still. Energy is removed from the system by the oil which is forced to move from one side of the weight to the other. In other words, we have a squeeze-film damper which can eliminate much vibration. With this in mind, I made such a contraption, fitting it into an aluminum handle. It did not work, so I emptied the handle and filled it with lead shot to about 95% of the total inside volume. The added mass and the loose shot did steady the tool. The tool was presented to a wood turner and has been in use ever since.

Obviously, the addition of shot to a handle and the drilling of the cavity for the shot all contribute to higher cost. Last summer, I decided this was uneconomical and ordered an extrusion die which would produce a handle shape of my design instead of the hexagonal cross-section. The extrusion was made hollow to preclude the need for drilling a cavity for the lead shot. Thus, I managed to get an extruded blank with all the desired features at a lower cost. I plug the bottom of the handle with an automotive freeze plug purchased from a local parts house.

The process of development of an idea is continuous. Inputs come from the users, the people helping make the tool, material suppliers, and others. All of the thoughts have to be orchestrated to produce a product which will do the job as intended.

***Lo! Men have become the tools of their tools.***

*Henry David Thoreau*

*Jerry Glasser, Playa Del Rey, CA, designs, builds and markets wood turning tools and accessories.*

| MANUFACTURER/DISTRIBUTOR | MODEL | DISTANCE BETWEEN CENTERS | SWING OVER BED | SWING OUTBOARD | BED CONSTRUCTION | HEAD/TAILSTOCK CONSTRUCTION | OVERALL LENGTH | INDEXING FEATURE | SPINDLE SPEEDS (RPM RANGE) | HORSEPOWER (VOLTAGE) | WEIGHT (LB) | COMMENTS* | PRICE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Advanced Machinery Imports, LTD (Hegner)<br>P. O. Box 312<br>New Castle, DE 19720<br>(302) 322-2226 | HDB 175 | 36" | 13-3/4" | 16" | Steel Box Beam | Cast Alloy | 46" | No | 4 (800, 1400, 2400, 2800) | 1/2 (110) | 110 | (1) | $1,375 |
| | HDB 200 | 39" | 15-3/4" | None | Steel Box Beam | Cast Alloy | 49" | Optional | 4 (800, 1400, 2400, 2800) | 3/4 (110) | 250 | (1a) | 2,295 |
| | HDB 200/1250 | 49" | 15-3/4" | None | Steel Box Beam | Cast Alloy | 59" | Optional | 4 (800, 1400, 2400, 2800) | 3/4 (110) | 290 | (1a) | 2,495 |
| American Machine & Tool Co.<br>P. O. Box 70<br>Fourth Ave. & Spring St.<br>Royersford, PA 19458<br>(215) 948-0400 | 373 | 41" | 12" | None | 1¼ Dia Steel Tube | Cast Iron | 55" | No | 860, 1725, 3450 | 1/2 Recommended | 30 | (2) | 104 List |
| | 4370 | 36" | 12" (16"-Optional Gap Bed Attachment) | None | Cast Iron | Cast Iron | 44" | Yes | 12 (275-3065) | 1/2 Recommended | 100 | (2) | 340 List |
| Buffalo Tool Corporation<br>1111 N. Broadway<br>St. Louis, MO 63102<br>1-800-325-7475 | WL-6<br>(Taiwan) | 39.4" | 16" | None | Steel Tube | Stamped Steel | 60" | No | 4 (600-2700) | 3/4 (110) | 71 | (3) | Contact Dealer |
| Chalet Woodcraft, Inc.<br>RR #7, Harmony Road<br>Simcoe, Ont. N3Y4K6<br>Canada<br>(519) 426-1077 | Harrison Graduate (U.K.) | 54" | 12" | 19½" | Cast Iron One Piece | Cast Iron | 90" | No | 490, 945, 1650, 2500 | 1 (120/220) or 220 | 600 | (4) | 3,678 U.S. + duty & shipping |
| | Harrison Short Bed (U.K.) | 15½" | 19½" | 19½" | Cast Iron One Piece | Cast Iron | 48" | No | 490, 945, 1650, 2500 | 1 (120/220) or 220 | 400 | (4) | 3,167 U.S + duty & shipping ** |
| Conover Woodcraft Specialties, Inc.<br>18125 Madison Rd.<br>Parkman, OH 44080<br>(216) 548-3481 | CL16-011<br>(USA) | Unlimited | 16" Expandable to 20" | 84" | Wood | Cast Iron w/Tapered Roller Bearings | Unlimited | Yes | 50-3000 | 1 or 1/2 (110/220) | 450+ | (5) | 1,200 - 2,200 Depending on Configuration |
| Delta International Machinery Corp.<br>246 Alpha Drive<br>Pittsburgh, PA 15238<br>1-800-438-2486 | 16" Electronic Variable Speed | 52" | 16" | 24" | Cast Iron | Cast Iron | 86" | Yes | 300-2200 | 1¼ DC (115) | 485 | (6) | 2,570 |
| | 12" Heavy Duty | 38" | 12" 16" Over Bed Gap | None | Cast Iron | Cast Iron | 63" | Yes | 340-3200 | 1 w/Various Voltage Options | 581 | (6) | 3,650 List |
| | 12" Standard Duty 4 Speed - | 39" | 12" 16" Over Bed Gap | None | Cast Iron | Cast Iron | 60" | Yes | 915, 1380 2150, 3260 | 3/4 w/Various Voltage Options | 305 | (6) | 2,311 List |
| | Variable Speed - | 39" | 12" 16" Over Bed Gap | None | Cast Iron | Cast Iron | 60" | Yes | 340-3600 | 3/4 w/Various Voltage Options | 410 | (6) | 2,599 |
| DeRose & Company<br>P. O. Box 150<br>Mechanicsville, VA 23111<br>(804) 746-1705 | 19018-5<br>(USA) | 18' | 19" | Unlimited (90° Head Turn) | Steel Fabrication | Steel Fabrication | 42" | Yes, Plus Interchangeable Optional Parts | 12 (150-2200) | 1/1½ (110/220) | 566 w/Stand | (7) | 2,120 |
| | 19054-5<br>(USA) | 54" | 19" | Unlimited (90° Head Turn) | Steel Fabrication | Steel Fabrication | 78" | Yes, Plus Interchangeable Optional Parts | 12 (150-2200) | 1/1½ (110/220) | 671 w/Stand | (7) | 2,270 |
| | 19066-5<br>(USA) | 66" | 19" | Unlimited (90° Head Turn) | Steel Fabrication | Steel Fabrication | 90" | Yes, Plus Interchangeable Optional Parts | 12 (150-2200) | 1/1½ (110/220) | 706 w/Stand | (7) | 2,370 |
| | 19078-5<br>(USA) | 78" | 19" | Unlimited (90° Head Turn) | Steel Fabrication | Steel Fabrication | 102" | Yes, Plus Interchangeable Optional Parts | 12 (150-2200) | 1/1½ (110/220) | 741 w/Stand | (7) | 2,520 |
| | 19090-5<br>(USA) | 90° | 19" | Unlimited (90° Head Turn) | Steel Fabrication | Steel Fabrication | 114 | Yes, Plus Interchangeable Optional Parts | 12 (150-2200) | 1/1½ (110/220) | 776 w/Stand | (7) | 2,620 |

| MANUFACTURER/DISTRIBUTOR | MODEL | DISTANCE BETWEEN CENTERS | SWING OVER BED | SWING OUTBOARD | BED CONSTRUCTION | HEAD/TAILSTOCK CONSTRUCTION | OVERALL LENGTH | INDEXING FEATURE | SPINDLE SPEEDS (RPM RANGE) | HORSEPOWER (VOLTAGE) | WEIGHT (LB) | COMMENTS* | PRICE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Elektra Beckum U.S.A. Corp.<br>401-403 Kennedy Blvd.<br>Somerdale, NJ 08083<br>1-800-223-8600 | HDM 1000<br>(German) | 40" | 15" | None | Steel Tube | Die Cast Alluminum Alloy | 52" | No | 4 (960, 1560, 2160, 3000) | 3/4 (110v) | 125 w/Stand | (8) | 695 |
| Emco Maier Corp.<br>2757 Scioto Parkway<br>Columbus, OH 43026<br>(614) 771-5991 | DB-6 | 39.4" | 15.8" | None | Steel Channel | Stamped Steel | 68.8" | No | 4 (660-3000) | 1 1/3 (115) | 115 | (9) | 799 |
| ENCO<br>85 Flagship Drive<br>North Andover, MA 01845<br>1-800-654-6094 | 199-9055 | 40" | 12" | None | Cast Iron | Cast Iron | 50" | No | 4 (875, 1350, 2250, 3450) | 1 3/4 | 112 | (10) | 182.60 List |
| | 199-9060<br>(Copy Lathe) | 31" | 7" | None | Cast Iron | Cast Iron | 50" | No | 3 (1045-2015) | 1½ (115/230) | 183 | (10a) | 402.40 List |
| | K-1000 (Konig-Drechselbank - German) | 39" | 16" | 24" | Steel Box Beam | Cast Iron | 71" | Yes | 5 (490-3300) | 3/4 (110) | 220 (1320 w/Stand) | (11) | 1,795<br>485 Stand |
| Garrett Wade Company<br>161 Avenue of the Americas<br>New York, NY 10013<br>(212) 807-1155 | 0380101<br>(Garrett Wade - Taiwan) | 40" | 16" | None | Steel Tube | Cast Iron | 72" | No | 5 (660-3000) | 3/4 (110) | 225 w/Stand | (11a) | 685<br>140 Stand |
| | A500<br>(Arnall Australia) | 39½" | 20"<br>Removable Bed Section allows increase 29 x 6 | None | Box Beam Steel | Cast Iron (Tailstock)<br>Integral Box Beam (Headstock) | 72" | No | 290-3000 | 1<br>Optional 1½ (110/220) | 425 | (11b) | 2,395 |
| General Manufacturing Co., LTD<br>835 Cherrier Street<br>Drummondville<br>Quebec, Canada J2B 5A8<br>(819) 472-1161<br>(Phone or write for nearest dealer) | 160-2<br>Variable Speed | 38" | 12" (15" for 3" Over Gap) | Unlimited with Optional Floor Stand | Cast Iron | Cast Iron | 58½" | Yes | Variable (500-3000) | 1/2 to 3/4 (120) | 350 | (12) | 1,367.55 List<br>Canadian $ |
| | 160-1<br>4 Speed | 38" | 12" (15" for 3" Over Gap) | Unlimited with Optional Floor Stand | Cast Iron | Cast Iron | 58½" | Yes | 4 (850, 1375, 2160, 3500) | 1/2 to 3/4 (120) | 290 | (12) | 1,114.25 List<br>Canadian $ |
| | 260 | 38" | 12" (20" with Optional Riser Blocks) | 20" (28" with Optional Riser Blocks) -or- Unlimited | Cast Iron | Cast Iron | 63" up to 8" with Optional extension bed | Yes | 4 (600, 1050, 1720, 2800) | 1 Single Phase (120) | 560 | (12a) | 2,189.50 List<br>Canadian $ |
| | 260-1 | 38" | 12" (20" with Optional Riser Blocks) | 20" (28" with Optional Riser Blocks) -or- Unlimited with Optional Floor Stand | Cast Iron | Cast Iron | 63" up to 8" with Optional extension bed | Yes | Variable (375-3300) | 1 Single Phase (120) | 610 | (12A) | 2,389.50 List<br>Canadian $ |
| Gilliom Manufacturing, Inc.<br>P. O. Box 1018<br>St. Charles, MO 63302<br>(314) 724-1812 | 421-L<br>Lathe Parts Kit & Plan | 31" | 12" | None | Iron Pipes | Cast Aluminum | 48" | No | 3 (690, 1300, 2350) | 1/3 or 1/2 Recommended | 16 | (13) | 91.50 |
| | 1025<br>(Taiwan) | 40" | 15" | Yes | Box Steel | Cast Iron (Tailstock)<br>Steel (Headstock) | 59" | No | 850, 1250, 1750, 2510 Centrifugal | 1 (110) | 105 | (14) | 155 |
| Grizzly Imports, Inc.<br>2406 Reach Road<br>Williamsport, PA 17701<br>1-800-523-GRRR (East)<br>1-800-541-5537 (West) | 1495<br>(Taiwan) | 40" | 14" | Yes | Cast Iron | Cast Iron | 65" | Yes | 6 (560-3600) Centrifugal | 3/4 (110/220) | 300 | (14a) | 595 |
| | 1174<br>Copy Lathe<br>(Taiwan) | 40" | 14" | Yes | Angle Iron | Cast Iron | 55" | No | 860, 1720, 3096 | 1/2 (110/220) | 200 | (14b) | 335 |
| Highland Hardware<br>1045 N. Highland Ave. NE<br>Atlanta, GA 30306<br>(404) 872-4466<br>1-800-241-6748 (Orders only) | Tyme Avon<br>(U.K.) | 48" | 8" | 23" | Rigid 1" Square Section Solid Steel Bars In Skewed Planes | Cast Iron | 65" | No | 470, 750, 1150, 2000 | 3/4 (115) | 121 | (15) | 895 |
| Jet Equipment & Tools<br>1901 Jefferson Ave.<br>Tacoma, WA 98402<br>(206) 572-5000 | JWL1438-1 | 38" | 14" | None | Steel | Cast Iron | 70" | No | 500-3000 | 1 (115/220) | 504 | (16) | 3,466 |
| | JWL1438-3 | 38" | 14" | None | Steel | Cast Iron | 70" | No | 500-3000 | 1 (3 Phase) (230/460) | 504 | (16) | 3,466 |
| Bonnie Klein<br>6514 115 Place, SE<br>Renton, WA 98056<br>(206) 226-5937 | Klein Design | 12" | 5" | -0- | Aluminum Channel | Extruded Aluminum (Tailstock)<br>Extruded Aluminum + Sealed Bearings (Headstock) | 20" | No | 500-5000 | 1/4 Recommended | 12 | (17) | 299 (1/1/90 Increase) |

| MANUFACTURER/DISTRIBUTOR | MODEL | DISTANCE BETWEEN CENTERS | SWING OVER BED | SWING OUTBOARD | BED CONSTRUCTION | HEAD/TAILSTOCK CONSTRUCTION | OVERALL LENGTH | INDEXING FEATURE | SPINDLE SPEEDS (RPM RANGE) | HORSEPOWER (VOLTAGE) | WEIGHT (LB) | COMMENTS* | PRICE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Howard Lewin<br>3825 West 139th Street<br>Hawthorne, CA 90250<br>(213) 679-2485 | "The Lewin " Bowl Lathe" | 12" | 16" | 24" | Cast Iron | Cast Iron | 28" | No | 250, 450, 800, 1300 | 1 (110/220) | 300 Unloaded 500+ Loaded | (18) | 2,100 - Basic Outboard + $300 |
| Mini Max<br>A Division of SCMI<br>5933A Peachtree Industrial Boulevard<br>Norcross, GA 30092<br>(404) 448-1120<br>(Call for nearest dealer) | T124 Copy Lathe (Italy) | 47" | 16½" | None | Steel Box Beam | 3/8" Plate Steel | 77" | No | 800-3000 | 1 (115v) | 441 | (19) | 2,295 |
| Oliver Machinery Company<br>1025 Clancy Avenue NE<br>Grand Rapids, MI 49503-1082<br>1-800-253-6108 | 2159-T (USA) | 38" | 14" | 24" | Cast Iron | Cast Iron | 60" | No | 600-3000 | 1 (115/230) or (3 Phase) (208/230/460) | 1005 | (20) | 3,495 |
| | 2255 Patternmakers Lathe (USA) | 60" (Longer Beds Available) | 16" (Larger capacity Swings Available) | 30" | Cast Iron | Cast Iron | 96" | No | 83-3000 | 3- (3 Phase) (230/460) | 2800 | (20a) | 25,610 |
| | 2260A (Combination Pattern makers Lathe -USA) | 68" | 96" (Over floorplate) | 104" | Cast Iron Floorplate | Cast Iron | N/A | No | 28-1282 | 10/5 (3 Phase) (230/460) | 10,100 | (20b) | 95,900 |
| Powermatic<br>Morrison Road<br>McMinnville, TN 37110<br>1-800-248-0144 | 45 | 39" | 12"<br>16" Over Bed Gap | None | Cast Iron | Cast Iron | 63" | No | 4 - Variable (330-2100) | 3/4 (Single or 3 Phase) | 439 w/Stand & Motor | (21)<br>(21a) | 2,890<br>2,392 |
| | 90 | 38" | 12"<br>17" Over Bed Gap | None | Cast Iron | Cast Iron | 67" | No | 330-2100 or 215-1375 | 1 or 1 (460-3 Phase) | 550 w/Stand & Motor | (21b) | 3,640 |
| | 91 | 38" | 20"<br>25" Over Bed Gap | None | Cast Iron | Cast Iron | 67" | No | 175-1100 | 1½ (Single or 3 Phase) | 600 w/Stand & Motor | (21b) | 4,145 |
| Sears, Roebuck & Co. (Craftsman)<br>Sears Tower<br>Chicago, IL 60684<br>(Contact local Sears Store) | 22816 | 37" | 12" | None | Steel Tube | Cast Iron | 54½" | Yes | 4 (875, 1350, 2250, 3450) | 1/2 (110) | 88 | (22) | 249.88 |
| | 22836 | 37" | 12" | None | Cast Iron | Cast Iron | N/A | No | 4 (875, 1350, 2250, 3450) | 1/2 (110) | 50 | (22) | 179 |
| Shopsmith, Inc.<br>6530 Poe Avenue<br>Dayton, OH 45414<br>1-800-543-7586/1-800-762-7555 | Mark V | 34" | 16½" | None | Stainless Steel Tube | Cast Aluminum | 60" | No | 700-5200 | 1 1/8 w/Variable (110) | 252 | (23) | 1,595 |
| Treen Heritage, LTD.<br>P. O. Box 280<br>Merrickville, ONT<br>Canada KOG INØ<br>(613) 269-4251 | Coronet CL1 (U.K.) | 36" or 48" | 12" | Gap bed kit to 20" | (2) 1½" Solid Steel Bars | Cast Iron | 5'<br>6' | No | 545,1150,2400 | 1/2 (110) | 176 | (24) | 687 U.S.Approx<br>730 U.S.Approx |
| | Coronet CL3 (U.K.) | 36" or 48" | 12" | Swiveling headstock to 30" | (2) 1½" Solid Steel Bars | Cast Iron | 5'<br>6" | No | 510,750,1120, 1650, 2400 | 3/4 (110) | 200 | (24a)<br>(24b) | 1,224 U. S.<br>1,306 U. S. |
| Jim Thompson<br>1021 Miller Road<br>Greenville, SC 29607<br>(803) 288-1309 | Thompson Lathe | 62" | 44" | None | Tubular Steel | 3/4" Steel Plate Tubular Steel (Headstock) | 8' | No | 0-1350 | 5 | 1800 (3200 w/ Sand) | (25) | 10,000 |

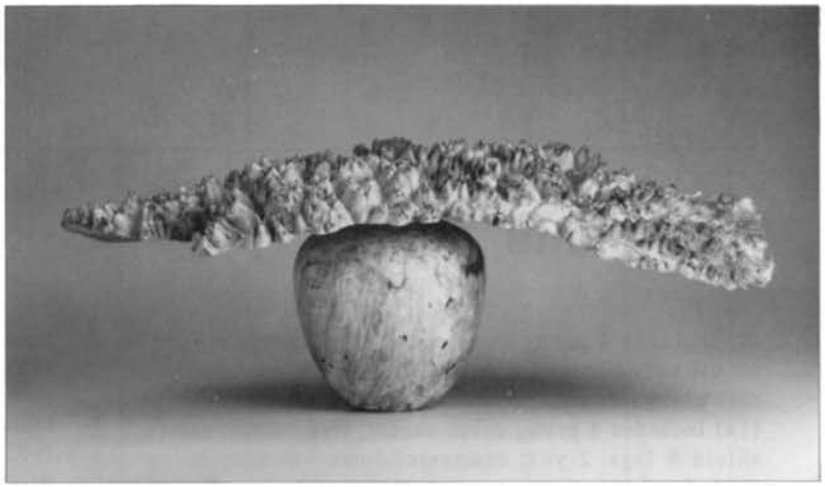
| MANUFACTURER/DISTRIBUTOR | MODEL | DISTANCE BETWEEN CENTERS | SWING OVER BED | SWING OUTBOARD | BED CONSTRUCTION | HEAD/TAILSTOCK CONSTRUCTION | OVERALL LENGTH | INDEXING FEATURE | SPINDLE SPEEDS (RPM RANGE) | HORSEPOWER (VOLTAGE) | WEIGHT (LB) | COMMENTS* | PRICE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vega<br>Rt. #3, Box 193<br>Decatur, IL 62526<br>(217) 963-2232 | 1519 Series (USA) | 19" | 15" | Yes | Structural Steel | Cast Iron | 41.5" | Yes Optional | 320-3400 | 1 Standard 1½ Optional, 110 Single, 220-3 Phase | 234 | (26) | 1,385 |
| | 1531 Series (USA) | 31" | 15" | Yes | Structural Steel | Cast Iron | 53.5" | Yes Optional | 320-3400 | 1 Standard 1½ Optional, 110 Single, 220-3 Phase | 250 | (26) | 1,405 |
| | 1553 Series (USA) | 53" | 15" | Yes | Structural Steel | Cast Iron | 75.5" | Yes Optional | 320-3400 | 1 Standard 1½ Optional, 110 Single, 220-3 Phase | 285 | (26) | 1,435 |
| | 1596 Series (USA) | 96" | 15" | Yes | Structural Steel | Cast Iron | 118.5" | Yes Optional | 320-3400 | 1 Standard 1½ Optional, 110 Single, 220-3 Phase | 380 | (26) | 1,950 |
| | 1200 (USA) | 37" | 12" | N/A | Steel | Cast Iron | 63" | No | 275-3900 | 1/2 TEFC (110) | 140 | (26a) | 450 |
| | 24 Bowl Lathe (USA) | N/A | 24" | N/A | Steel | Steel | 17" | No | 8 (200-3000) | 1/2 TEFC (110) | 145 | (26b) | 450 |
| Wholesale Tool Co., Inc.<br>12155 Stephens Dr.<br>Warren, MI 48090<br>(313) 754-9270 | 3002-0015 | 37" | 12" | N/A | Steel Tube | Cast Iron | N/A | No | 5 (505, 889, 1430, 2260, 3685) | 1/2 (110) | 88 | (27) | 249 |
| Wilke Machinery Company<br>3230 Susquehanna Trail<br>York, PA 17402<br>(717) 764-5000<br>(Bridgewood Lathes) | BW1240 (Taiwan) | 37" | 12" | Unlimited | Tubular Steel | Cast Iron | 53" | No | 575-3580 | 3/4 (110) | 82 | (28) | 199 |
| | BW1539 (Taiwan) | 39.37" | 14.96" | 15.74" | Tubular Steel | Cast Iron | 59" | No | 660-3000 | 1 (110/220) | 206 | (28a) | 795 |
| Williams & Hussey Machine Co.<br>P. O. Box 1149<br>Wilton, NH 03086<br>1-800-258-1380 | L-82 | 46" | 12" | Optional | Machined Steel | Cast Iron | 57" | Optional | 4 (800, 1200, 2500, 3750) | 1/2 (115 Recommended | 85 | (29) | 498 |
| Woodfast Craft Supplies USA<br>1287 E. 11205<br>Provo, UT 84601<br>(801) 374-2879 | M400 (Australia) | 18" | 16" | 24" | Cast Iron | Cast Iron | 36" | Yes | 150-2300 | 1 (110) | 385 | (30) | 1,695 |
| | M600 (Australia) | 38" | 16" | 24" | Cast Iron | Cast Iron | 60" | Yes | 150-2300 | 1 (110) | 520 | (30) | 1,850 |
| Woodturner's World<br>P. O. Box 670<br>Abbotsord, B.C. V256R7<br>Canada<br>(604) 850-2930 | Teknatool TL1000/8S (New Zealand) | 38" short bed | 12½" | 19" | 2½" Steel Tube | Cast high tensil aluminum | 42" | Yes indexing head | 8 (213-3600) | 1/2-3/4 (110/220) 220 or 110 | 70 | (31) | 699 U.S. + shipping, approx. |
| | | 48" long bed | 12½" | 19" | 2½" Steel Tube | | 52" | | | | 78 | (31) | 749 U.S. + shipping, approx. |
| Russ Zimmerman (Myford)<br>RFD #3, Box 243<br>Putney, VT 05346<br>(802) 387-4337 | "Mystro" Myford (U.K.) | 40" | 11" | 20½" | Steel Rectangular Tubes | Cast Iron | 57" | Yes | 5 (420-2880) | 3/4 (110) | 220 | (32) | 1,440 + 220 (Optional Bowl Turning Attachment) |

# Comments

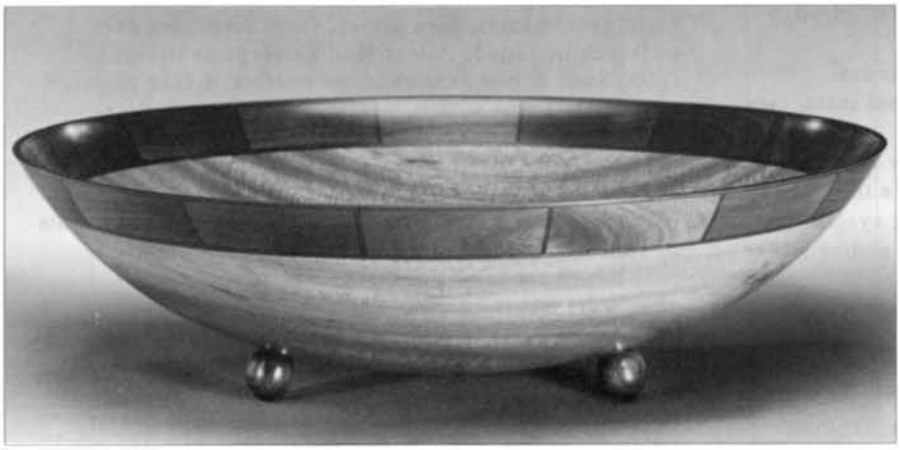
(1) Includes 4 prong drive center, live center, magnetic on-off switch; stand & shield optional. 2-year commercial use warranty.
(1a) Includes 4 prong drive center, live center, safety shield & legs. 2-year commercial use warranty included.
(2) Ball bearing live center for tail stock included. Accessories available.
(3) Bench model, centers, chuck, face plate and stand included.
(4) 2 face plates, 2 prong drive center, dead centers, 2 tool rests, outboard motor, switch. Stand - 1 piece casting included. Ready to plug-in. **As of 1/15/90, 5 left @ $2,564.
(5) Centers & face plate included w/base model.
(6) Includes Cabinet stand, safety shield, tool rests, face plate drive and cup center.
(7) Cast iron outboard hand-wheel. Options available. Stand $449. Custom spindle sizes. 3/8" hole through tailstock & headstock. Hand-wheel locking system for tool rest. No. 3 MT for headstock. Longer and/or wider beds available. Custom tool rests available.
(8) Tool rest, face plates, drive spur, locking bars. Stand included.
(9) Stand, drive & live centers included. 220v motor available.
(10) Includes spur center, tool rest, pulleys, sanding table with 9" face plate. Stand not included. Accessories available.
(10a) Accessories available.
(11) Stand optional, 4 prong drive center, live center.
(11a) Options available.
(11b) Face plate, spur drive & live center. Stand integral.
(12) Stand included. Drive & cup centers, tool rests, face plate, motor pulley, etc.
(12a) Cabinet & motor included, tool rests, spur cup centers, face plates, hand-wheel & manual included.
(13) Plans & patterns, stand not included. Tail & headstock, 3-speed, 3-step cone pulley. Adaptor arbor, face plate, tool rest & support, spur cup center, motor mount adjuster, hardware package.
(14) Bench model. Face plate & tool rest, live center, ball bearing spindle. Accessories available.
(14a) Preformed stamp steel stand included, flap sander, face plate, work shield, pneumatic drum, ball bearing, head & tail stock, sanding disk 9".
(14b) Stand included. Tool rest, 9" sanding disk, 6" face plate, 5 tool bits, spur live center.
(15) Bench model without stand. Head stock swivels 90 degrees, #2 Morse taper for head & tail stock.
(16) Low voltage controls, stand, center & face plates included.
(17) Spur drives, live center, pulleys & belt included, hardened tool rest. Accessories & tools available.
(18) Face plate drive center, tail stock center, 12" tool rest, 12" curved tool rest, knockout bar, wrenches, motor, stand & switch.
(19) Floor stand, copy device, face plate, #2 Morse drive & tail center.
(20) Rear 8" face plate, spur & cup center, screw chuck, face plate, tool rests, rest holder, knockout red, safety shield. Optional floor stand, etc. Longer beds and hand-feed tool carriage available.
(20a) Free standing, taper roller bearings, head stock, pan feeding carriage & compound swivel rest, 2 spur centers, 1 cup center, cone center, screw chuck, tool rests, rest holders, face plates, floor stand, set over tailstock included. Power feed carriage available.
(20b) Spur & cup centers, cone centers, 4 face plates, 4 tool rests, 1 rest socket, portable floor stand. Free-standing.
(21) Variable speed w/motor & magnetic control.
(21a) 4 speed, lots of standard equipment.
(21b) Variable speed w/motor & magnetic control. Lots of standard equipment, tool support, face plates.
(22) Bench model. Tool rests, spur & cup centers. 1 year warranty.
(23) Accessories to operate - table saw, disc sander, horizontal boring machine, drill press & lathe. Tool rest & center tailstock stand.
(24) Bench top model, motor, tool rest, drive center, tailstock center.
(24a) 48" model.
(24b) 2nd tool rest base, 17" double tool rest. Accessories available.
(25) Balance wheel on headstock, precision bed ways allows power boring with tailstock. Will disassemble through 30" door.
(26) Face plate, tool rest, front clamping tool rest holder, spur & cup centers, complete drive system adjustment, wrench for tail stock, guard, reversing switch, 12-month guarantee.
(26a) Face plate, spur center, safety guard, tool rest & support, reversing switch.
(26b) Bench top lathe, face plate, tool rest base & mesh guard.
(27) Bench model, stand & chisel set.
(28) Bench model, 6 & 12" tool rest, face plate, live & spur center.
(28a) Stand, tool rests, face plate, live and spur center. Optional copy attachment.
(29) Bench model, cup & spur center, tool rest, motor not included.
(30) Available in variable speed or 4-step. Complete with accessories ready for operation.
(31) Bench model, locking head stock & hollow tail stock spindle, #2 Morse taper. Attachments available.
(32) Adjustable tapered roller bearings, solid construction.

# A Focus on HIDDEN TALENT

*Curated by Albert LeCoff*



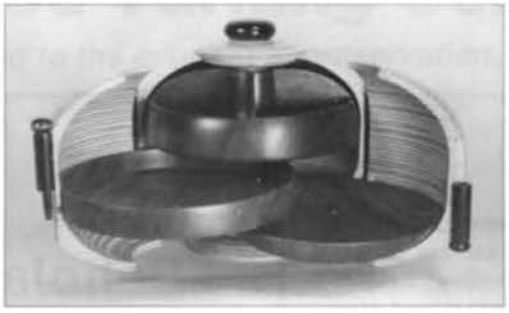
**Ron Cronkite**
*Clouds, Reflections* (1989)
Western maple burl
H. 6-1/2" x Diam. 4-1/2"; "wing span," 18"



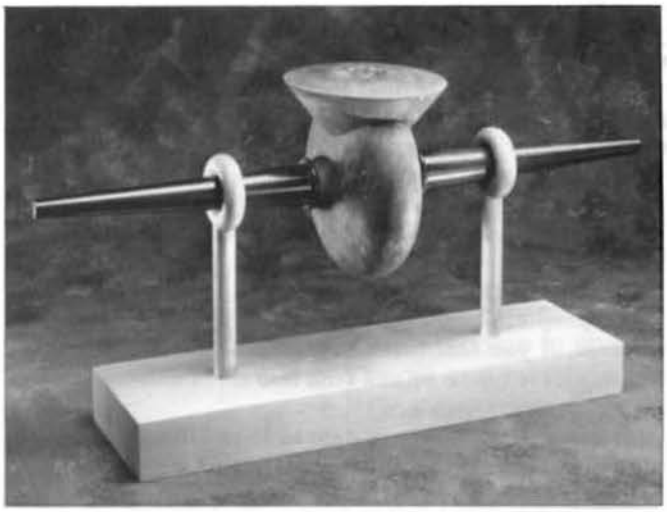
**Barry T. Macdonald**
Bowl (1989 )
Honduras mahogany, bloodwood, ebony, dyed veneers
H. 5-3/4" x Diam. 20-1/2";
thickness 1/8" - 3/16"

**Barry T. Macdonald**
Box (1989)
Bubinga, mahagony, ebony
L. 15-1/2" x Diam. 7"

Ron Cronkite, 2812 Wright Avenue, Racine, WI 53405
William F. Moore, Route 1, Box 671, Hillsboro, OR 97124
Ray Jones, 17619 Tulsa Street, Granada Hills, CA 91344
Johannes Michelson, Powderhorn Road, Manchester, VT 05255
Barry T. Macdonald, 1423 Berkshire Road, Grosse Pointe, MI 48230



**Ray Jones**
*Round Box #3* (1989 )
Finland birch plywood, ebony, padauk
H. 7" x Diam. 7-1/2"



**William F. Moore**
*Aegean Memories* (1988)
Brass, ebony, maple, purleheart
H. 14" x L. 20" x W. 7"

**Johannes Michelson**
*Wing Vase #5* (1989)
Sugar maple crotch, mahogany, acrylic, lacquer, spalted maple
H. 21" x Diam. 15"

**William F. Moore**
*Phoenix* (1988)
Copper, madrone, maple, mahogany
H. 26" x L. 48" x W. 18"

This page is dedicated to those who make objects from the lathe and who are unknown to the general public. If you feel you are a *Hidden Talent* send your 5" x 7" glossy black/white photos to Albert LeCoff, HIDDEN TALENT, 42 W. Washington Lane, Philadelphia, PA 19144. Accepted photos will not be returned; nonpublished photos will be returned if a self-addressed stamped envelope is supplied.

Dear Reader:

The strong interest in the rain forest issues has prompted me to include a section addressing this subject. If I am able to acquire more articles on this "steamy" subject I will. Please understand that the comments and statements are those of the authors and not AAW.

This issue has been difficult to assemble for two reasons. The theme, "The Business of Turning" by it's very nature tends to favor those who are writing about their particular business or subject. This is unavoidable but I think you will agree that our authors presented their particular subject tastefully and with a minimum of salesmanship. The other problem is trying to get a balanced set of articles without missing key businesses, and for this I must apologize. I am acquainted with most of these people and I approached them with a subject for them to address in their particular article. I am deeply indebted to these business people, who took the time to write for our Journal; however, if you feel that I have missed something of interest, please type it up and send it to me. I will gladly run it.

As a final comment, I am deeply in debt to Iona Elliott for completing a goal I had set for the Journal when I took the reins in October 1988. The goal, of course, was to run a chart on every lathe available in North America. I had her model the chart after a well composed chart that was featured in the "Mother Earth News," 1986. Deepest thanks go to Joanne Dufilho of Mother Earth News, Inc. for extending permission to exploit their format. Please understand that the information presented in this chart was compiled through a series of telephone calls, so it was very difficult to document the information supplied. The phone numbers are correct; however, so if something appears incorrect please call the manufacturing representative. If a lathe has been omitted we apologize and we would appreciate any information for our files so that when we update this chart we will have this information to use.

Thank you for your understanding.

Peter J. Hutchinson
Editor in Chief

Dear Editor:

I would like to thank David Ellsworth, Bill Funk, and everyone at the Third Symposium who signed the AAW poster for me. After neurosurgery, the prognosis is good – I should be back at work within a year or two. In the meantime, I am coming up with some pretty outrageous ideas for future projects!

Keep on turnin'!

Herb Balderson #53
Aspen,Colo.

# Scholarship Award recipients announced

The committee is pleased to announce that we have had enough applications for the scholarship program this year to be able to award the 10 tuitions to the various schools, workshops and conferences. The winners are Michael Laverriere, Bayard Blessing, David Sterling, B.F. Porterfield, Michael Lee, Bob Kopec, Joel Pensley, Shelley Leon Croyle, Ross Markley and Dana Adler.

If you are interested in applying for a scholarship next year and are a member of AAW, watch the upcoming Journals for the necessary information to apply. The scholarships consist of an award of tuition to one of the following:

AAW Annual Symposium
Southern California Woodworking Conference
Russ Zimmerman's School of Woodturning, VT
Arrowmont School of Arts and Crafts, TN
Brookfield Craft Center, CT
Craft Supplies, Provo, UT
Conover Woodturning Workshop, OH
Rude Osolnik Woodturning Workshop,
Berea, KY

The scholarship Committee is open to suggestions - schools or workshops to add to our list, instructors willing to teach, or any other ideas for improving the program. Send your suggestions to:

AAW
940 E. Fifty-first St.
Austin, Texas 78751-2241
ATTENTION: Scholarship Committee
Bonnie Klein, Chairman
Bill Hunter, Chairman
Rude Osolnik

# The Rain Forest Dilemma

*Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has.*

*Margaret Mead*

## The Rain Forest Dilemma

*Stoney Lamar*

I can count on two hands the number of pieces that I have turned out of tropical exotic wood over the past ten years of woodturning. However, I now realize that I had not been exposed to what I would characterize as good quality material; the disparity between good and poor quality can be tremendous. But as a result of my last two pieces, one cocobolo and the other bocote, I am admittedly hooked. Tropical woods are very desirable materials because of superior workability and of finishing qualities.

However, there is a problem. The dilemma that is raised by the use of exotic woods becomes a personal one and one that demands a reasonable and thoughtful response. Since we, as users of tropical hardwoods are being accused of complicity in the rape of the world's rain forest, I do not believe that we can afford to ignore the problem. Knee-jerk behavior is already threatening one major market for craftsmen in the United States.

The problem is not only a personal one or one that effects merely our industry, but also a societal dilemma. When proper management seems to be the key to sustainable logging techniques, how can we, as a highly developed industrialized country that cannot seem to manage our own environmental problems, expect a third world country such as Brazil to manage their forests in a way that will guarantee their continued existence. Their management problems are compounded by the fact that in many cases clear cutting practices provide only subsistence level incomes for those immediately involved.

For me, the potential answer to the dilemma may be found by looking at the incident which galvanized my awareness of the deforestation problem; the work and death of Chico Mendez. As head of the rubber tappers union in the Upper Amazon Basin, Mendez and his rubber tappers illustrate the truth and full force of Margaret Mead's words. Together, they demonstrated that the production of rubber provides as viable a source of income for the local economy as the production of beef which has relied on slash and burn agricultural techniques. The beef, incidently, for the most part, is headed for the American fast-food market. The combination of an economic model plus the grassroots nature of his struggle are the keys to their success. His murder, after six attempts, was perhaps the event that really attracted the world's attention and general concern. While this particular situation and event are admittedly only a small scene in the larger picture being played around the world, it does seem to demonstrate the intensity and complexity of the problem and also what is at stake for some of those involved. I think it is important to note that the logging industry was not really a player in this situation; typically, deforestation in these countries is more a result of slash and burn agricultural techniques than logging exploitation. This example also illustrates that the answer to my personal dilemma is not merely a question of whether to continue to use tropical hardwoods or not, but one which requires a response that at least attempts to understand the complete situation, and the conflicts that may arise. These include conflicts that involve immediate economic gains versus sustained economic stability and long term management goals; concerns of indigenous groups versus outside commercial influences; and, finally those of us that would like to

continue to enjoy the privilege of using these materials versus those who feel that boycotting their importation is the only appropriate response to the problem.

While the timber industry may not have been a major factor in the Chico Mendez incident, I do believe that it may be used as a good analogy that applies to the personal, industrial, and societal dilemma presented by the rain forest crisis to us as woodworkers. The most important first step is to become aware of the problem. Secondly, I would suggest that we form a sort of empathetic kinship with the rubber tappers and all others that are users of the forest and its products. Any woodturning show is a good demonstration of how important the availability of tropical hardwoods is to many of us. If we want to continue to enjoy the privilege of using exotic hardwoods, then we should be as committed as the rubber tappers to sustaining the renewable resources of the tropical rain forests. What this involves is first supporting organizations like WARP (Woodworkers Alliance for Rainforest Protection) and Green Turners. Secondly, let your suppliers know that you are concerned about the problem and about their sources of wood. I have a rubber stamp that states ART SAVES LIVES, which is my way of spreading my belief that what I do has meaning. This is a situation where we have a tremendous opportunity to untangle some of the inaccuracies that surround this issue. While we might not save any lives, we might at least have the satisfaction of knowing that the person that just walked into your booth or workshop and accused you of contributing to the rain forest's demise, may walk away a little more informed about the complexities of the problem. Of course, you can also let them know that by using tropical hardwoods you feel you can potentially be part of the solution, rather than part of the problem.

Our response as an industry must be a reflection of our personal stance. We must send a clear message to those in the market place that we will not collectively allow others to make our decisions in matters of conscious. With this in mind, I would suggest we take an opportunity as an organization to review and possibly adopt and/or support the policies and objectives of WARP, which will be prepared at their September conference. It is my understanding that these policies will support the idea that a boycott is not the appropriate response to the problem, will acknowledge that the indigenous groups are dependent on income derived from timber products, and will support the establishment of a network of verifiable sources of tropical hardwoods that are also involved in reforestation.

The societal dilemma is much more complex and ambiguous. In many cases, it would seem that policies being used in the effected third world countries mimic at least in attitude the policies that exist in our country towards logging and the environment. For example, our government spends millions of tax dollars to build logging roads into public forest lands for the logging industry, a subsidy not unlike the Trans-Amazon road that has made much of the deforestation possible in Brazil. Another example involves a West Virginia official who called for a dramatic increase in the logging of public land because of the foreign market demand for timber. We should ask ourselves what is the difference between our willingness to sell off our natural resources and Brazil's. While Brazil is a third world country struggling to overcome its economic problems, we are a highly developed industrialized country willing to think like a third world country when we consider the most effective/ineffective use of our natural resources. I realize that there must be considerations made with regard to local economies, but it was apparent to me in Seattle through discussions I had with local suppliers and turners that there is a great deal of concern over the long term economic effects that the excess rate of logging will have on those same economies. We must ask ourselves if we are willing to pay the price of the open market policies that came about in the 1980's, when it may mean sacrificing job security and the environment for future generations. While these problems are a result of national policies, our best response to them is at the local level.

## THINK GLOBALLY, ACT LOCALLY

Public pressure recently resulted in the stoppage of a clear cut operation in the Appalachian Mountains, simply because it was right below one of the more scenic overlooks on the Blue Ridge Parkway. While this may seem to be a somewhat trivial victory, it does demonstrate what can be accomplished, and indicates a sense of priorities to our representatives.

In conclusion, there are no quick fixes. It is a problem filled with ambiguities and hypocrisy. One of the greatest ironies from our perspective might be that the real demand that we as woodworkers in this country make on the tropical rain forrest is minimal, indeed statistically our consumption does not even show up on some graphs. Nevertheless, because of our visibility, we become the easiest target for the uneducated. I believe we can take advantage of this situation and become an effective lobby group for the issues presented. Effective, not because of a relatively few concerned professionals, but because of the thousands of amateur/hobbyists from former presidents to truck drivers and priests, that we care enough for the future of our planet to demand reasonable long range solutions to this crisis.

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*Stoney Lamar is a professional woodturner from Saluda, NC.*

# Conserving the Rain Forest

*Mick O'Donnell*

The United Kingdom imports approximately 80% of the timber it uses. The supply of softwoods is conveniently available from the Scandinavian countries, where a system of renewal is in operation; but hardwood supplies come mainly from the rain forest regions of South America, Central Africa, and Indonesia.

It is estimated that in the last hundred years, 50% of the rain forests of the world have been destroyed and continue to be destroyed at the rate of over 100,000,000 hectares (249,000,000 acres) a year. Destruction on this scale of part of the earth's ecological system can have catastrophic consequences to life on this planet.

The rain forest has been in existence for millions of years and provides a vital link in the stability of the planet. The recognition of this rule is essential so that man will be motivated to retain the rain forests in their natural state. The rain forest contains the most diverse forms of life on the planet; thousands of species of trees, animals, and insects, many of which have never been discovered and are in danger of extinction. This is in addition to native tribes who live with the forest in harmony with nature.

Trees take in carbon dioxide and produce the oxygen we breathe every day. This occurs in the young and maturing trees. Once trees have reached maturity, an average of 70 to 80 years of age, they become net consumers of oxygen.

The rain forests are being cleared for a number of reasons:

1. By the local population to clear land for the growing of vegetable crops, grazing for cattle, fuel supplies, and building materials, and the local manufacture of wooden domestic items for resale.

2. Commercial timber supplies for high quality lumber and wood-chip.

3. Clearing of land for the grazing of beef cattle and land speculation.

The first of these is the kind of activity to be found in all parts of the world, local people making use of their natural resources. The second two reasons are commercial activities using natural resources to supply a demand in other parts of the world and to make money. These activities also are found throughout the world, and should generally be encouraged in today's enterprise culture. The real problem lies in the scale of these activities and the destruction of a unique and natural environment. The felling of trees for commercial hardwood yields approximately 3 cubic meters of wood (@1300 board feet) per hectare (@2.5 acres). This compares with a potential of 300 cubic meters (@130,000 board feet) per hectare from a plantation. Commercial demand for hardwoods is only for certain species out of hundreds, with the result that most of the timber is wasted. Cleared land provides very good grazing for a limited number of years, 3 to 4 years, after which the fertility is totally lost and the ground becomes useless. In both cases, the unwanted timber is burnt on site emitting enormous quantities of carbon dioxide into the atmosphere.

As consumers and woodworkers, we are on the front line of assisting in the destruction of the rain forest. The household products or the tropical timbers we buy and use to make a living or indulge our past-times are encouraging the destruction of the rain forest to meet our demand. If we value the rain forest and the unique environment contained therein and wish to preserve its present state, then, as individuals we should take some form of action. However, the problem is to determine what kind of action we should take to achieve the desired result.

If we simple stop buying rain forest products, then the rain forests become a worthless asset. This would only encourage the destruction of rain forest areas in order to make income from other means such as farming or land speculation. On the other hand, if we continue to use rain forest products but are very selective in the type of timber and the source of supply, then the effect on the rain forest can be more positive. If we were prepared to use a much greater diversity of timber species, the timber recovered per hectare from the rain forest will be much greater and require smaller areas to be felled each year to meet the demand. If in conjunction with this, we were to be selective about the source of supply such as buying only timber which had been felled under a sustainable management scheme, then the effects on the rain forest could be

***The only means of conservation is innovation.***

*Peter Drucker*

quite dramatic. There are a number of different types of sustainable management schemes which could achieve these results.

Plantation farming is the most common form of management and is practiced in many places. Cleared areas are planted with the particular species of trees required, the timber recovered from this type of plantation can be a hundred times that from virgin forests and once the plantation is established, recovery costs are greatly reduced. The resulting forest is not a substitute for the natural rain forest, but at least it maximizes the yield possible. Selective felling is practiced in a number of countries, but the scale is generally small. This can be very effective, providing excessive damage is not done while retrieving the logs.

Another form of sustainable forest management is one which is practiced by the natives of the Palcazu Valley in Peru. They use what is known as strip felling of the rain forest. They take a large area of the forest and divide it up into long narrow strips of approximately twenty meters (@65 feet) wide. One strip is clear felled, taking care not to damage the terrain and the soil structure, and the two adjacent strips are left untouched. In this way the areas felled are quickly regenerated with the diversity of plant an animal life of the rest of the forest. Within a forty-year period the felled area will have regenerated into natural rain forest and can be harvested again.

In general terms, there are two types of action we can take:

1. Economic action.

Stop buying timber from the rain forest; or better still, change suppliers to those who purchase timber harvested under a sustainable management scheme.

2. Political pressure.

Increase public awareness of the problems associated with the rain forest, thereby, increasing public opinion in such a way that governments will react and take positive conservation steps.

The Timber Trades Federation are very concerned about the destruction of the rain forest, which they say is due to non-logging activities. They support the idea of a surcharge raised on all imports of tropical forest products through a special International Timber Trades Organization (ITTO) fund to assist in creating or strengthening sustainable forestry.

Friends of the Earth have their own very comprehensive campaign to save the rain forests. They have become an effective political force by increasing public awareness of the problems and concerns. This, in turn, has made the politicians aware of the effect at the ballot box. At the same time, they are encouraging local people to adopt sustainable management schemes in the rain forests which are economically viable. They also publish a book called the "Good Wood Guide" which is a guide to timber produced under sustainable management schemes. This book is being updated and reprinted and should be available soon.

As users of wood, we are in a direct line of responsibility for the survival of the rain forests, although the amount of wood used by individual craftsmen is very small. To stop supplies altogether would have negligible effect in the overall scheme. However, it is all a question of a positive attitude to the global environment, together with all actions possible that will save the world. It is very easy to cast the timber merchants and suppliers in the role of the bad guy, but they are only responding to demand and doing everything they can to supply it. The customer and consumer are the culprits. It is they who have the power to force change with their actions.

A new environmentalist group, Green Turners, was formed at the 1989 Loughborough Woodturning seminar under the chairmanship of Don Dennis. This organization is appealing directly to woodturners, making them aware of the environmental issues involved in the destruction of the rain forest, and to put forward positive solutions while retaining as much choice as possible in the use of tropical timbers. Rather than being a small independent voice, Green Turners has become affiliated with AWARE, Association of Woodusers Against Rainforest Exploitation, supporting each other in trying to raise public awareness.

The main aims of Green Turners are:

1. To inform people about the problems associated with the destruction of the rain forest.

2. To encourage turners to use those timbers harvested under a sustainable management scheme and to use a greater variety of timbers which are often destroyed on site.

3. To inform turners where supplies are available.

The group is financed by a ten dollar membership fee which covers general administration and newsletter costs so other fund raising activities can take place. The group raised 1,500 pounds (@$3000) from the Rainforest Ball which was held in Edinburgh in autumn, 1989. Everyone is encouraged to join the group. Send 5 pounds ($10) to Green Turners, April Cottage, Fyning Lane, Rogate, Nr Petersfield, Hantshire, GU31 5DH or $10 to Michelle Holtzafel in Vermont for turners in North America.

*All art is a revolt against man's fate.*

*Andre Malraux*

# Art, Form and Wood

*Michelle Holzapfel*

It is a dangerous temptation, when dealing in global issues, to keep anxiety at arm's length by becoming involved with the details and definitions of the "problem." This can serve to insulate us from considering our personal responsibility for the creation and solution of these problems.

As I hear the debates on international politics and global resource management, I am struck by how easy it is to expect someone else to do something to change the situation. I fully realize that the actual depletion of rare hardwoods is not largely a function of use by woodturners; but in considering the larger issue of use of natural resources, I have developed a personal viewpoint which I would like to share.

Makers of objects, and woodturners specifically, should first address the strength of their forms and the development of their skills. If the maker has a powerful idea and the skill to execute it, the type of wood is less critical to its ultimate success. Too often, weakness of form is covered up or neutralized by the use of material with strong grain patterns or known rarity, which confers instant status.

When the merits of ceramic vessels are considered, no one would comment, "Wow, what a great hunk of clay!" Yet, how often do we hear a similar remark applied to wooden vessels. Considering the intrinsic beauty of wood, it behooves every maker to ask, "Am I honoring this piece of wood with my best creative effort; or am I relying on its beauty or value as a 'status symbol' to carry it to success?" The rare hardwoods, rain forests, and environment as a whole, are victims of their own abundance of beauty. They are too often victims of our self-indulgence and lack of imagination.

This situation is encouraged by a marketplace in which rare woods, metals, gems, fibers, and furs, even when fashioned in a mediocre way, still command high prices and a measure of respect. Since the market supports this level of "creativity," it continues to flourish. This may reflect a lack of understanding on the part of the buyer, who may not know what constitutes good formal and technical skill, but who does appreciate the mystique of the wood species superstars.

The greatest tragedy in this situation, besides the loss of rare species of hardwoods and deterioration of the environment, is the waste of our ultimate resource, the human mind. The implications of responding to this situation are painful. They involve thinking and rethinking one's craft; the effort of investing an object with value through skill and imagination; and trusting one's instincts. The biggest risk is putting oneself in the uncomfortable position of not being understood when making a visual statement, which is stretching the limits of our medium's vocabulary. The buying public too often is scared, not sure if they should invest, and not willing to make the painful effort to think for themselves and trust their instincts. This fosters the completion of the cycle that reverts back to following fashion and keeping it safe and pretty.

The woodturning field has a firm foundation of respect and appreciation for the interaction of form and material. The exploration of human creativity, the resource that recreates and augments itself, has just begun. In serving to minimize the use of rare natural resources, even the renewable ones, we can do them the ultimate honor - let them grow. Ultimately, we will grow.

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*Michelle Holzapfel is a professional woodturner and principal organizer for the "Green Turners" in North America. Her business, Applewoods, is located in Marlboro, VT.*

# Question and Answer Page

By Clifford Schroeder

I enjoyed the articles on holiday projects in the September, 1989 issue. Where can I obtain the bit described in the article on "Turning Fancy Pens." Paul Fennell says to drill a 9/64 inch hole with a 4 1/2-inch long bit.

Tom Keating
Tempe, AZ

These drills are available through firms such as MSC Industrial Supply as well as local supply houses. MSC Supply is located at 151 Sunnyside Boulevard, Plainview, NY. Customer Service: (800) 888-7270. I got mine through a surplus tool dealer. The length is not important, providing they are long enough to do the job.

I use the insert from a BIC pen which sells virtually anywhere for $.10 - $.15. If a different insert is used, simply modify your turning to accept it. Craft Supplies, Provo, UT, sells fancier inserts, if desired.

Paul Fennell

***I can evade questions without help, what I need is answers.***

*John F. Kennedy*

# Candlestick Napkin Ring Holder

*Devore O. Burch*

This design has the dual function of being not only a decorative napkin ring holder, but also a candlestick. The finial on top is used when the candle is not in place (Figure 1).

Use the wood of your choice, walnut works very well. First, turn the base by mounting the wood on a small face plate. Bore a 7/8 inch diameter hole in the center of the base to receive the tenon on the end of the column. Sand completely and remove from the lathe, but leave the base mounted on the face plate until after the finish is applied.

Next, turn the column as a spindle between centers. The outside diameter of the column should be slightly smaller than the inner diameter of the napkin rings to allow for a free fit with the changes in humidity. The napkin rings have a 1 1/2-inch inner diameter. Remove from the lathe and bore the hole in the top to receive the brass candle eyelet. The referenced eyelet requires a 7/8 inch hole. This completes the column except for finishing.

Turn the finial, which may be the most difficult part of the three turned details, in a 3- or 4-jaw chuck. If you do not have a 3- or 4-jaw chuck, the finial may be turned in the following manner: Mount a 1 inch block on a small face plate and turn a hole in the center to receive the 7/8 inch tenon on the end of the finial. This hole should be small enough for a snug fit with the tenon. Mount the rough block between centers, turn to a rough cylinder, and turn the tenon down for a press fit in the holding fixture. Now the finial is ready for turning. It seems that turning from the out-board end, or unsupported end, toward the chuck works best. Sand the finial completely and all the parts are ready for finishing.

When finishing, I prefer to leave the turned objects right on the lathe. This method will give a luster not possible by other methods. If an open grain hardwood such as walnut is used, first fill the pores with a paste wood filler, sand smooth when dry, and apply two coats of sealer and two coats of lacquer. Sand and polish in the lathe at low rpm. Finally, apply a coat of wax and buff.

Assemble by gluing the column into the base. Press the brass eyelet into the top of the column and drop the finial in place. The base should have a felt pad on the bottom. Put a pair of these on the dining table and listen for the comments. They make terrific gifts and they sell very well.

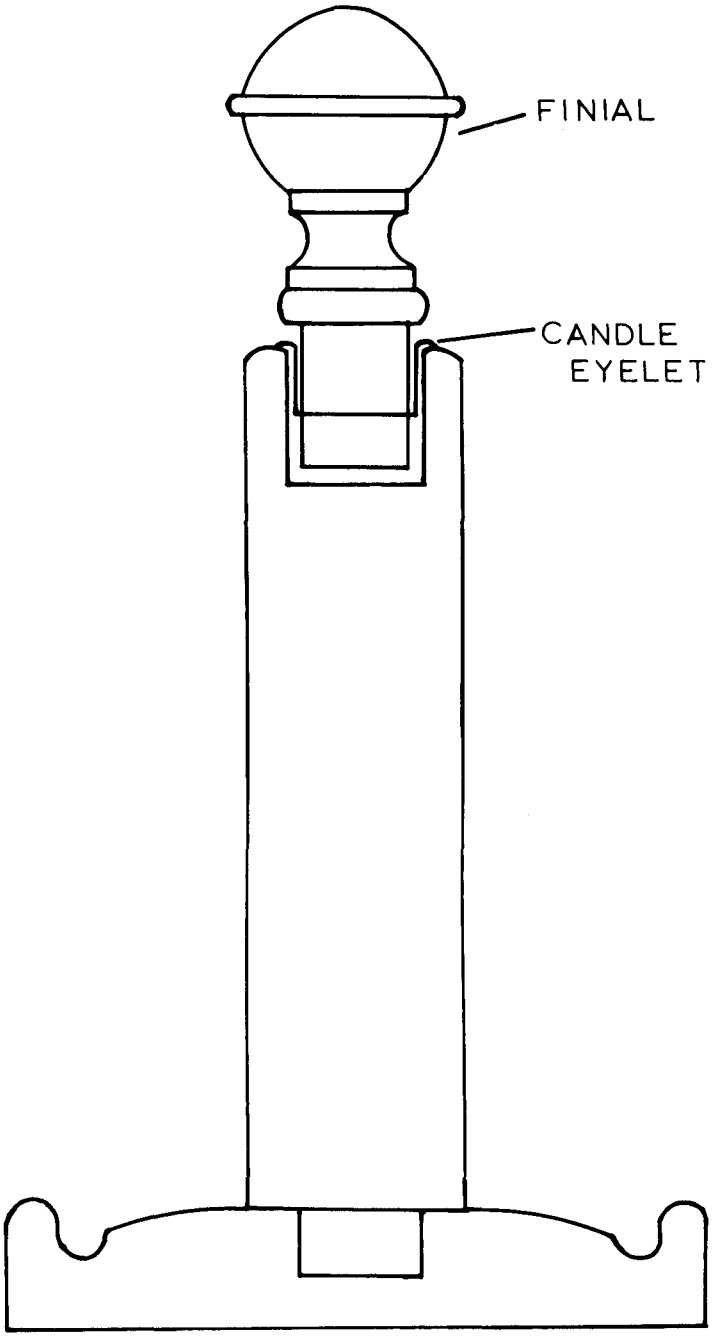


**Figure 1**
9-inch tall candlestick napkin ring holder with finial brass candle eyelet, column and base.

*Devore Burch is an avid wood turner from Fort Worth, TX.*

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