Queen Anne Wing Chair Frames
Hand Cut Thru Dovetails

The Old Saw
The Newsletter of the Guild of New Hampshire Woodworkers

Calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 16</td>
<td>Period Furniture</td>
</tr>
<tr>
<td>Sept 23</td>
<td>Annual Meeting</td>
</tr>
<tr>
<td>Sept 30</td>
<td>GSWT – new date</td>
</tr>
<tr>
<td>Oct 7</td>
<td>BIG</td>
</tr>
<tr>
<td>Oct 19</td>
<td>GSWT/Mt Wash Valley</td>
</tr>
<tr>
<td>Oct 21</td>
<td>Small Meetings</td>
</tr>
<tr>
<td>Oct 22</td>
<td>NHFMA Auction</td>
</tr>
<tr>
<td>Nov 11</td>
<td>Period Furniture</td>
</tr>
<tr>
<td>Nov 18</td>
<td>Guild Meeting</td>
</tr>
<tr>
<td>Nov 25</td>
<td>GSWT</td>
</tr>
<tr>
<td>Dec 2</td>
<td>BIG</td>
</tr>
<tr>
<td>Jan 13</td>
<td>Period Furniture</td>
</tr>
<tr>
<td>Jan 27</td>
<td>GSWT</td>
</tr>
<tr>
<td>Feb 3</td>
<td>BIG</td>
</tr>
<tr>
<td>Feb 17</td>
<td>Guild Meeting</td>
</tr>
<tr>
<td>Mar 10</td>
<td>Period Furniture</td>
</tr>
<tr>
<td>Mar 17</td>
<td>Small Meetings</td>
</tr>
<tr>
<td>Mar 24</td>
<td>GSWT</td>
</tr>
<tr>
<td>Apr 7</td>
<td>BIG</td>
</tr>
<tr>
<td>Apr 21</td>
<td>Guild Meeting</td>
</tr>
<tr>
<td>May 12</td>
<td>Period Furniture</td>
</tr>
<tr>
<td>May 26</td>
<td>GSWT</td>
</tr>
<tr>
<td>Jun 2</td>
<td>BIG</td>
</tr>
<tr>
<td>Jun 16</td>
<td>Summer Trip</td>
</tr>
<tr>
<td>Jul 28</td>
<td>GSWT</td>
</tr>
<tr>
<td>Aug 4-12</td>
<td>NH Craftsmen’s Fair</td>
</tr>
</tbody>
</table>

Turning Dutch Foot Legs

Photo by Dean Powell

Porring table by John Siegel
maple legs, tiger maple top

vee grooving • marking your work
at large • target coatings • biedermeier style lamp
A Wonderful Experience

I write this President’s message with many mixed feelings as it will be my last as president of the Guild. It has been a wonderful experience for me to have had the opportunity to serve the Guild in this role for the past two years. Getting to know so many of you and to see the Guild continue to grow and flourish has been very rewarding and an experience I will never forget.

Seeing so many of our members volunteer their time, energy and talents over the last couple of weeks at the Craftsmen’s Fair at Sunapee truly exemplifies the qualities that make our organization something we can all take great pride in. Our annual raffle has been a wonderful experience for me to be held simultaneously at different locations on the third Saturday in October. The Guild’s small meeting format has met with much success in the past, so we hope you will be able to take advantage of this opportunity to see some other shops where the venue is focused to individual interests.

An email will be sent to all members in October with details. Or check into the Guild web site at www.gnhw.org.

Steven Saw

See Sunapee report on page 26

President
Roger Myers
603-773-9634
strathamwood@comcast.net
dsachester@gsinet.net

Vice President
Dave Anderson
603-887-6267

gbenulis@comcast.net

cpjkv@localnet.com

Secretary
Greg Benulis
978-314-5815

gbenulis@comcast.net

cpjkv@localnet.com

Treasurer
Peter Breu
603-435-8133

Peter Breu@adelphia.net

At Large
Jack Grube
603-432-4060

Jackgrube@adelphia.net

At Large
Brian Sargent
603-483-1330

bldesignd126@earthlink.net

At Large
George Sanidakis
978-549-1807

gsanidakis@sanidakis.com

At Large
Bob LaCivita
603-942-1240
lacivita@comcast.net

At Large
Andy Young
603-672-9558

amy@26boston@aol.com

At Large
David Frechette
802-633-2561
dfrechette@together.net

GSWT President
Jon Siegel
603-768-5882

big@proctornet.com

Old Saw Editor
Jim Seroskie
603-673-2123

jseroskie@verizon.net

Programs
Sal Morgani
603-772-1006

kamstamer@aol.com

GSWT Jon Siegel
603-942-1240
lacivita@comcast.net

GSWT
Jon Siegel
603-768-5882

big@proctornet.com

Period Furniture
John Whiteside
603-679-5443

johninfremont@comcast.net

Scholarship Committee

Selection Committee
John McAlevey
207-372-6455
johnmcalevey@adelphia.net

Selection Committee
Peter Breu
603-647-2327
peterbreu@comcast.net

Selection Committee
Jack Grube
603-432-4060

Jackgrube@adelphia.net

Member
Peter Bloch
603-526-6152

peterbloch@adelphia.net

Member
Bob Jarrett
978-456-3928

bobjarrett@charter.net

— Please send all applications to John McAlevey, Selection Committee Chair

Books
Tony Immolosa
603-673-9629

annette_and_tony@peoplepc.com

djdelorie.com

Membership
DJ Delorie
603-463-5996

dj@delorie.com

Old Saw Mailing
Syd Lorandeau
603-542-5295

slorandeau@verizon.net

Shirts/Hats
Peter James
603-435-8133

cpjkv@localnet.com

Small Meetings
Brian Sargent
603-483-1330

bldesignd126@earthlink.net

Sunapee Fair
Dave Anderson
603-887-6267

dsachester@gsinet.net

Video Librarian
Bob Trahan
603-444-5284

bott39@localnet.com

Web Master
DJ Delorie
603-463-5996

dj@delorie.com

Volunteer Positions

Books
Tony Immolosa
603-673-9629

annette_and_tony@peoplepc.com

djdelorie.com

Membership
DJ Delorie
603-463-5996

dj@delorie.com

Old Saw Mailing
Syd Lorandeau
603-542-5295

slorandeau@verizon.net

Shirts/Hats
Peter James
603-435-8133

cpjkv@localnet.com

Small Meetings
Brian Sargent
603-483-1330

bldesignd126@earthlink.net

Sunapee Fair
Dave Anderson
603-887-6267

dsachester@gsinet.net

Video Librarian
Bob Trahan
603-444-5284

bott39@localnet.com

Web Master
DJ Delorie
603-463-5996

dj@delorie.com

The Guild of New Hampshire Woodworkers – Bringing together the diverse interests of the New Hampshire woodworking community.

“The Old Saw” is published five times per year. To join the Guild, go to www.gnhw.org and click on “Membership” to download an application form.
Sept 23rd, 2006 – 9:30 am

Annual Meeting

at Dana Robes Wood Craftsmen

I do not believe it but another year has gone by since the last Annual Meeting. Time sure flies when you are having fun woodworking! This year’s meeting place is at Dana Robes – custom furniture and cabinet maker also offering a variety of workshops.

Business Meeting – Two items of note this time are the election of officers and a discussion and membership vote on by-law adjustments. The proposed by-laws and change summary were included in the June issue of The Old Saw and may be viewed on-line at www.gnhw.org/mission.html.

Annual Auction – The annual auction is a big fund raiser, so let us get behind it and bring our hardly used “stuff” to be auctioned off. Last year we had so many good buys, it is rumored that ebay is coming to buy our “stuff” for resale on their internet site. Try to bring your items early so we can put it on display for all to look over. This will also give you time to tour the workshop and gallery which in itself is worth the drive to Enfield.

Presentation – Jere Osgood has been designing and making furniture in his own workshop for almost fifty years. During this time he has received many awards for his furniture. He was named a Fellow of the American Craft Council in 1993 and was given the Award of Distinction by the Furniture Society in 2002. Jere’s work has been included in many permanent collections such as, the American Craft Museum (NY), the Museum of Fine Arts (Boston), the Renwick Gallery of the Smithsonian Institution’s National Museum of American Art and the Currier Gallery of Art. His work is also in many private collections. To view some of Jere’s work, go to www.furnituremasters.org.

Jere will present Process of Design after our break for lunch. Jere will show a few slides of his work – pieces he considers to be original. He will explain his approach to designing a piece of furniture, use of a sketch book, scale drawings, full size mock-up, shop drawings and then the making of the piece. Then he will explain how to design and the possible need to change his approach. Bring your questions as Jere has a wealth of knowledge to share.

Parking – Parking is always a bit of a problem, so please carpool if possible.

– Syd Lorandeau

Treasurer’s Report

by Peter James

This past year has seen a lot of activity in the financial area of the Guild. I did the five year filing for our 501(c)(3) status in the fall of 2005. This status makes donations to the Guild tax deductible. In addition to this filing, I also had the regular IRS and New Hampshire Secretary of State’s office filing for our not-for-profit reports.

The big event of the year was the Turning Symposium held in May at Pinkerton Academy, Derry. We had record attendance and record expenditures. The net profit from this event is split three equal ways. One third goes to Pinkerton for use of the facility, one third goes to the Guild Scholarship Fund and the Guild general fund retains one third. We netted out about $9,000 so Pinkerton and the Scholarship fund received $3,000 each and the general fund retained just under $3,000.

The Scholarship Committee has awarded $10,647 in grants and scholarships. This year, the Steering Committee decided to assist the New England Association of Woodworking Teachers with a grant that was used to promote woodworking in schools. As a guild, we need to benefit not only the members but the general public as part of our 501(c)(3) status. The amount awarded in scholarships was $7,320.

Since we converted the video library to DVD format, sales have increased. Video sales along with books, magazines and shirts (the enterprise activities) are self sustaining. Income from the sale of the DVDs covers the cost of those in the lending library.

Costs for The Old Saw have gone up dramatically due to production cost and the greatly increased membership. The quality of the newsletter (magazine) is something the Guild is proud of and is the primary reason membership numbers have risen so quickly in my opinion. Year end membership is over 475 – up about 100 over where we were one year ago and over 160 where we were two years ago. There will be increases in both production and mailing costs for The Old Saw this coming year, but it is still within our budget without a dues increase. Costs for the newsletter will approach $25 per member this year.

This report is being put together with two weeks remaining in our fiscal year. There will be some slight changes in that period and I will give a report at the annual meeting in September. Again this year, it has been a pleasure to be your treasurer.

See cash flow report on Page 27
Ask This Old Saw!

Q SUMMER SWELLING — Why do drawers and doors get tight (hard to open) or stick in the summer? — Anon

Joe Barry replies: Think of wood as a sponge. In the summer the air is more humid and it absorbs moisture and swells. In the winter the drier air causes it to give up moisture and shrink. A finish only slows the exchange of moisture with the atmosphere – it can never fully seal out moisture exchange. A house with humidity control will lessen the movement. However, few of our customers will have a museum grade environmental control system. We just need to allow for this when we build.

You may have heard the expression “a nickel and dime fit.” One meaning of this expression is that when fitting doors or drawers in the winter when the wood is driest, allow a nickel sized space. Conversely, allow only a dime space when the wood is at it’s largest dimension in the summer. Experience in your shop and with different species will give you a better feel for just how much allowance is required.

Herm Finkbeiner replies: Drawers stick because wood gets bigger in the high humidity of summer. For a very graphic explanation of the phenomenon, see the web site: http://timber.ce.wsu.edu/content.htm Click on “Moisture Effects” then click on “Next”.

Q WATER BASED FINISH — How can I use water based finish & get good results? I need a low VOC product to use inside a residence. — Peter James

Gary R. Wood replies: If appearance is a concern with water based finish, I often wax over the last coat. Wax can give more depth and richness to the final finish. It is best to wait a couple of days before waxing. Like many surface films, water based finish dries quickly but needs time to harden.

Q USED MACHINERY — When considering the purchase of used machinery. What should one be looking for to insure that the machine is worth buying? — BL

Jon Siegel replies: Are there parts missing? If so you should check on the availability of these parts before buying. If the machine is old, you may not be able to get original parts. In this case, consider fabricating the parts yourself or buying an aftermarket item (such as a table saw fence) which might be even better than the original one.

Has the machine been taken care of? Obviously, you should look for rust, or any signs that the machine has been stored outside. Have the adjusting screws been lubricated? If adjustments work smoothly, and the knives are sharp (jointer or planer), this is a good sign. If buying a machine from a woodworking shop, look at the shop itself. Is it orderly and well kept? Although indirect, this is an amazingly good predictor of the maintenance the machine received.

Joe Barry replies: With used machinery I like to see it run. If not possible, when was the last time it was run? Stick to the established brands that support their tools. I can still buy parts for my Unisaw built in 1948 from Delta. I just bought a used Powermatic shaper because I know I will be able to maintain it and get accessories. Check the manufacturer’s web site to see if parts are still available for the machine in question. If you want to buy a fixer-upper, ask yourself why. Are you doing it for the pleasure of fixing it up, or the cost? The cost and time will often exceed reason with making old tools serviceable. Most importantly, know what you are buying! Don’t buy a square head jointer or planer because they were considered unsafe in our grandparent’s time.

Q DECARLS — I make old post office box banks. One of the things that I need to keep the banks authentic is numerical decals for the windows. Can anyone give me a clue as to where I can obtain numerical decals. — John Willse

Bob LaCivita replies: This is a stab. Sign and banner companies have graphic programs that seem to produce any font in the world. They can make vinyl letters. They also might put you on track.

Herm Finkbeiner replies: There are at least two types of decals available. Dry transfer letters can be obtained in almost any art supply store. A common brand is: C-Thru Demi–Better Letters. Their product is available in about 30 different fonts and 3-6 sizes in each font.

The other type lets you make decals from anything you can put together on your computer. The decal is produced on a regular printer so it can be any composition and color combination. The system I use is by McGonical Paper & Graphics www.mcgpaper.com. Hope this helps.

Jim Seroskie replies: Try these sources:

- www.letterunlimited.com
- www.brucknerbobbies.com/vinyl_letters.htm
- www.speedysigns.com/lettering/
- www.staples.com then search for “vinyl number letter”
- www.quillcorp.com then search for “vinyl letter” in quotes
In 1982, when I had been in business for just a few years, I was approached about the idea of building Newport style Queen Anne wing chair frames. The two people involved were an antique dealer and the owner of a shop selling reproduction furniture. The idea was that since antique Queen Anne wing chairs were so scarce and highly sought after, there would be a market for well-made reproductions. The antique dealer knew someone who owned an original chair and knew that he could borrow it so that I could measure it. The desirability of these chairs was proved when he brought the chair into his shop and got immediate offers to buy it.

Measuring the original was a big advantage for me. I have seen many so-so interpretations of the design since then, and appreciate that I had the opportunity to get the proportions correct at the beginning. Queen Anne wing chairs are big and wide, but the lines of the wings and arms balance the cabriole legs and turned stretchers to form a refined whole.

The proposed arrangement was that once I made a sample frame they would keep it in their shop to show potential buyers. When an order came in they would call me and I would have eight weeks to fill the order. Initially they offered me $500 per frame. Even in the best light in 1982, $500 seemed close to slave wages, so I knew that to make it worthwhile I would have to work fast. I knew I could make one chair from scratch, but to make multiples I was going to need jigs that would allow me to make the same parts over and over with consistent results. Chair frames don’t necessarily lend themselves easily to working this way, but since the wood of a wing chair is only seen below the seat frame, I realized that the majority of the frame could be done by this method. It helped that I had been spending time visiting a shop in Concord, NH where I had been learning about the use of shapers in production work.

I also had to learn about the requirements of upholstery frames. I had some experience making slip seat frames in school, but knew little about wing chairs. I got out my books of antiques and looked up every photo I could find of bare frames as well as upholstered chairs. One thing became clear pretty quickly. While more modern chairs are often covered with quite thick upholstery – “overstuffed” is the term – eighteenth century practice was to use a minimum of padding for comfort and let the frame define the shape. My term for good period upholstery is “crisp”. When I went to measure the original chair, I worried about getting the shape of the frame without taking the upholstery off. I need not have worried because the padding was thin enough to make the dimensions of the parts pretty obvious.

An important consideration is how the upholsterer is able to pull the fabric tight over the frame. An advance over original antique frames was the introduction of “spreaders” or upholstery rails to allow the fabric to be stretched on the inside of the wings and back. I was warned early on to include these as they make the job much easier.

I knew from school that the best wood for an upholstery frame would be ash due to its resiliency. A frame has to be able to accept and hold hundreds of tacks. Every time it is re-upholstered it needs to stand up to being re-tacked. So the frame would be ash, with the primary wood the choice of the buyer (traditionally walnut) for the legs, and some poplar for the turned rolls.
Building the first frame involved not only constructing the chair, but also building the jigs and planning my approach to solving joinery problems. I started with a full size drawing, which allowed me to see all dimensions, joints, and angles actual size. A wing chair frame is a complex assembly with angled joinery and odd-shaped parts. I couldn't afford to make a huge investment in elaborate jigs at first, so I solved each joinery puzzle with the simplest methods I could come up with.

I will describe how I go about building a chair and talk about my solutions as they arise. Of course, I am going to simplify things, or I would take up the whole newsletter.

I start a chair with the back frame. The first pieces I cut are the two back posts. These are shaped in a profiling jig with my shaper. The type of jig I use involves two straight knives and a $\frac{1}{4}$˝ high concentric fixed ring held in the shaper table. This bears against the bottom edge of the jig. Many people would do this with a ball bearing rub collar, but in practice the ball bearing is sloppy enough to leave a scalloped surface. A fixed ring eliminates this problem. The shaper knives are set in line with the outside diameter of the ring and shape the work piece exactly to the jig. This method is used to profile all the other major shaped parts of the chair frame if they are square edged. By changing knives, I can shape the molded parts with the same setup.

At this point in the process I start to employ a jig I designed which helps out quite a bit. It is a mortising jig for my plunge router, and it consists of a rectangular platform of stacked plywood about two inches thick which is set on low legs so that it can be held in the dogs on my workbench. The leg height is just enough to allow a bar clamp to pass underneath.

In use, the work piece is clamped to the front edge of the jig. A fence is positioned on the top of the jig to line the router up to cut specific mortises. The fence is held with through bolts that thread into t-nuts on the underside of the jig so that it lines up exactly the same every time.

For the back posts, the fence has a position which lines up the side rail and side stretcher mortises, a position for the back rail, and another position for the crest rail. I can do all the joinery for the back of the chair in a very short time. The back seat rail and crest rail are made and their tenons cut and fit. The turned back stretcher is then joined to the posts with round tenons and the back frame is ready for glue-up. The crest rail is bandsawed and shaped after the back is glued.

New England Queen Anne wing chairs always had one-piece back posts. In later practice the posts were often scarfed above the seat frame. The upper back would be framed separately out of secondary wood.

The next part of the chair is the seat frame. This heavy horseshoe-shaped frame supports the coil springs for the seat. It consists of a front and two side rails cut from $\frac{3}{4}$˝ ash with the side rails horizontally mortised into the front rails. The side and front rails are profiled on the shaper, the tenons for the back posts are cut, and then the side and front rails are glued together.

Next, the side rails have to be mortised for the wings and arm stumps. This is the real reason I built that mortising jig. These mortises are at an angle to the inside faces of the side rails. I clamp the side rails to the front edge of the jig, using the back edge of the front rail as a locator. The fence then has angled positions for routing the wing mortises and the stump mortises – both left and right hand. The final steps on the seat frame are the square through mortises for the front legs.

Making the base of the chair consumes about a third of the total time. Since this is the part where wood is visible, it is worth it. This is especially because Queen Anne chair legs and stretchers are beautiful designs. I traced the original cabriole legs. Note that the way the leg is incorporated into the design makes it end up not entirely symmetrical. The most obvious detail is the joint with the side stretcher. This is a rectangular mortise and tenon even though the front of the stretchers are round. A round tenon would take too much material away and seriously weaken the legs at their narrowest point. The back edges of the leg blanks are the shoulders of the stretcher tenons so a flat is left...
around the mortises in the legs for the stretchers to butt up against. The tops of the legs are faired into the curve of the seat frame. The knee blocks are glued on to each leg and the non-symmetrical seat curve is drawn on the top face of the leg. As the knees are shaped, their form changes according to this line so that the front knee blocks are quite different from the side blocks. Most of the legs of my chairs have turned pad feet, but I have made several with ball and claw feet.

The side stretcher joinery is carefully marked out on the square blanks before they are turned as it is much harder to do the layout afterwards. I don’t cut the tenons beforehand as that would remove the centers for turning. Once the stretchers are turned, the tenons are cut and fit. These are angled tenons, of course, and I have always cut them by hand. The front end needs to be left with enough wood to support paring the tenon shoulders. I don’t turn up to the marks, but leave a quarter inch or so. The waste is pared down to the turned profile after the joint has been fit. The long mid stretcher can be joined with round tenons into the blocks of the side stretchers. Once the base frame is joined and sanded, the main frame of the chair can be glued up. The front leg through tenons are wedged, and then all the joints are pegged.

The upper frame consists of the wings, arm stumps, arms and rolls. The wings are made from two pieces mortised and tenoned together. All the rest of the joinery involves angles. To cut these joints consistently I decided to make a series of router guide ramps that rely on a template ring on the router base. This works similarly to the shaper ring but upside down. Since the router bit is smaller in diameter than the ring, the edge of the ramp that the ring bears against needs to be set back the corresponding distance from the line it follows. The first ramp I made was for the wing stile bottom tenon. The wing stile leans back and leans out, so I planed the ramp to have a face that slopes at two degrees to the horizontal. I clamped the ramp so that its end was on the angled tenon shoulder line. I glued a fence to the bottom butted against the front edge of the stile. With the ramp properly located and the router bit set to the correct depth, it was no problem to rout a close fitting angled tenon which was also at an angle to the line of the stock so that the wing stile was properly positioned. I actually made two of these ramps. One left and one right.

The joint between the wing rail and back post is very complex. The posts lean back, and the wing rails are at an angle to both the horizontal and vertical planes. I thought about mortising the wings into the fronts of the posts, but aside from the complexity of the angles, there are already large mortises for the crest rail. It just appeared to be too weak. I decided instead to lap the wings to the sides of the posts and screw them in place. Even this is complex joinery. The lap in the post has an angled bottom and shoulder, and the wing rail lap does as well. I made a symmetrical keystone shaped ramp for the router to cut the lap on the inside of the left and right wing rails. It sits at a two-degree incline to the face of the wing. The post laps are cut with another double-ended angled jig. That one has the router template ring follow the interior cutout.

Wing chairs are differentiated by the design of the arms and rolls. The best-known Newport design has one vertical tapered roll at the front of each arm. A second roll design has a short vertical roll at the front and a larger cornucopia shaped horizontal roll on the arm. Most of the chairs I have made are in the first pattern, but more recently I have been building the second design.

The first roll and arm design is constructed with rectangular stumps mortised into the seat. The rolls are made from a split turning. Two pieces of poplar are glued together with paper between them, and once turned, they are split apart and the halves are glued to the underside of the stumps. The inside front edge of the stumps are then rounded over to continue the curve around the inside. The stumps are mortised up through the horizontal arms that are made in the shape of a letter “P” with the round part of the “P” the shape of the top of the roll. These arms are then fit to dados in the wing stiles.

The two-roll variation has stumps mortised into the seat frame, and the “P” shaped pieces are glued vertically to the back edges of the stumps with the “P”s facing the outside. Short arms are through mortised into the “P”s and then mortised into the front faces of the wing stiles.

The arm to wing joints are quite complex. I usually make mock-ups of the arm to get the angles and lengths right. The mortises in the wing stiles are not parallel to the edge of the stock, but plumb. A two-degree ramp is clamped to the side of each wing to guide the router for cutting the mortises. The arms have angled shoulders and angled tenons.

The small tapered vertical rolls are also split turnings, but the large horizontal rolls are single pieces turned to a bullet-like shape, then one side is cut off and planed flat, the ends cut...
Vee grooving is a fast and easy method to make a box. It is extensively used in speaker manufacture with veneer covered MDF. This method allows the panels to be rapidly glued, folded and made into a box with minimal clamping. It also allows the grain to be continuous around the box. Although I have only used this method with veneer covered MDF, it can be successfully used with other sheet goods as well as solids.

I was introduced to vee grooving while trying to gain prototype work with a local speaker company. At the time, I was not eligible for the work since I did not vee groove. Now I do and use it for short run speaker construction in my own shop, but still cannot gain prototype contracts since I do not have a CNC operated router. Now if only I could find an extra $50,000 somewhere…

The Bit – To begin, you first need to obtain a vee grooving bit. Methodologies for cutting the groove vary between manufacturers. Some will cut the bottom of the groove to a point, similar to a chamfer bit, but will cut an extra few tenths of a degree to allow room for folding and glue. Another method, which I chose to go with, uses a bit that cuts a true 45° bevel, but leaves a flat at the bottom of the groove. This also allows room for folding and glue.

Bits for hand held routers are available, but do take some research to find. The bit I use is manufactured by Her-Saf (www.hersaf.com), model V090, and is an insert type bit. This bit is also designed for use in CNC machines. Insert type bits are typically used in the commercial industry since you can change the cutter in a matter of minutes, and continue your work. The down side, however, is that they may have some vibration since the tool is not balanced as a whole. If you have significant vibration – stop.

Box Design – In box design, the two opposing faces (i.e. front & back, or top & bottom) are typically separate pieces that the four sides are assembled upon. These two faces should be rabbeted around the perimeter allowing room for insertion of a wood edge. The rabbet also allows rapid construction by providing a positive reference for square and keeps the pieces in alignment. The wood edge may then be routed with a detail, which gives an appearance of solid wood panels.

I have found that application of the wood edge takes longer than the routing, cutting and assembly of the rest of the box. Details will get you every time.

Before cutting the groove, determine how you plan to cut the pieces to width. If you cut the vee groove across an entire sheet first and plan to cut to width second, you may have a surprise. Since each groove is now a hinge, large areas are hard to handle. Also, if the “hinge” is flexed a couple of times, chances are the piece will separate.

Cutting the Sides – Several methods may be employed to cut sections to width. The most straight forward method is to cut the pieces to width before grooving and then clamp them together while grooving. If an entire sheet is to be used, a sacrificial sheet of cheap ply may be used for support to keep the pieces together while sawing. Grooving is performed with the sacrificial sheet in place to keep the grooved sheet from moving independently. This can still be a bit unwieldy and should not be attempted alone.

You may also choose to assemble the box before cutting. A long box would be assembled and then cut to width as required. Two issues arise with this method. First is squaring the box while the glue dries and the second is cutting all sides without leaving saw marks or dings.

I assume you chose the first option (cut to width before grooving). Congratulations on a wise choice. Cut pieces to length allowing an extra ¼”, plus at both ends. Length is simply the outside length of all sides added together.
Tape should now be applied to the finish (outside) of the sheet under where the vee groove is to be cut. Tape performs multiple functions. It aids in the formation of the corner by keeping tension on the wood fibers as they are bending and breaking. It is also the clamp which holds the box together as the glue dries. Tape does not need to be applied to the end cuts.

Adjust the router to cut a groove to within a $\frac{1}{64}$ or less of severing the material. You want just enough material to hold things together after cutting. If too much material is left, the break at the corner will leave a rough broken edge. Too little material will not allow handling, allowing the panels to sever as soon as they are moved.

Use a guide for the router and make the first cut, leaving a scrap cutoff to be removed on the far side of the bottom of the vee. I have found that a cutoff of at least $\frac{1}{4}$ is best. To make the second and fourth cut, I usually use an MDF guide cut to the dimension that allows placement of one side of the guide on the edge of the initial vee and the other to dimension for cutting of the second vee. This allows for accurate placement of the router in multiple locations. Accurate placement of a guide is difficult by measurement. Inaccurate measurement or alignment will cause the box to not have equal sides or be misaligned.

Use of a second guide similar to the first is used for the third and fifth cut. A scrap section should be left at the end of the fifth cut.

**Assembly** – Now the fun begins. Break the scrap sections off from both ends. Attach tape to one end leaving half exposed. Apply glue to the rabbet of one of the front/back panels. Apply glue to all vee grooves. Apply glue to the end cut that does not have the tape applied. Roll the vee groove panel onto its edge. Fold the panel into the box and use the exposed tape to tape the two ends together.

Now pick the box up as a unit and place it into the rabbet. Check for square. Apply glue to the rabbet on the remaining front/back and apply to the box. Light clamping may be used between the front and back of the box. No additional clamping is necessary.

**Breathe** – The box is done except for application of the wood edging, flush sanding of the edge and detail routing.

One variation or addition used by some manufacturers is the use of a small amount of water in the bottom of the vee just prior to folding. This will make the wood fibers more pliable for the bend. I have not found this necessary, but use of this method may allow for thicker material below the cut.
There are a number of reasons for marking your work as your own. First is pride in your work – “No, it’s not a kit!” Second is the marketing of your work. Others will see the mark and associate you with quality work. This may be the best source of new work beside the word of mouth from satisfied customers. “Branding” yourself in the same way as Thomas Moser, George Nakashima or Sam Maloof will associate your name with a certain genre or style of work. And finally, there is the obligation to posterity to identify the date of manufacture and the maker.

Can you imagine an appraiser of the future stating that your chair is “…in the style of Dunbar, likely from New Hampshire?”

There are reports of reproduction style work being sold as original. We use the tools and methods of the past and copy the best work of well-known craftsmen. There are reports of Wallace Nutting pieces and Mike Dunbar chairs having the maker’s marks removed and being sold as antiques. A good mark will reduce the risk of your work being misrepresented in the future.

I have gone through a couple of iterations as my marking of my work evolved. I was initially drawn to the paper labels of the period furniture makers. They were wonderfully complex and evocative of a time when furniture was “bespoke”. However, I passed that idea up as paper labels do not hold up well and are easily removed without damage to the piece. I wanted something a little more permanent, and less fragile.

The first branding iron that I purchased was based upon a Viking era rock carving. The response to this logo was always very positive. However, I soon came to see a number of flaws with my choice of logo. Aside from the plagiarism suit awaiting me in Valhalla, there is the issue of it not clearly communicating who I am or what I do. I am not Swedish. Shake my family tree and only Micks fall out of it. My work was not Scandinavian in style or inspiration. I make traditional American country style, Shaker inspired pieces and roll-top desks. The interlaced dragons said nothing about my work or me. Poor choice!

The multiple fine lines were an additional expense in the manufacture of the branding iron and always a problem in getting a good impression. It was difficult to get a consistent line value when heating this iron. Some lines would be too dark and others too light. I
experienced with using a torch without much luck in getting a consistent heat. I finally arrived at placing it face down on an electric burner – thus the charred handle.

The major fault with this design is it doesn’t say anything about who the maker is and where he can be found. I did put my initials “JB” and the initials “VT” for Vermont in the center. Both were cryptic and too small to be readily seen. I later removed the VT when I left Vermont. This led me to believe that you should never choose a business name that ties you to a particular place unless you are absolutely certain you won’t move.

A nearby shop is named Freighthouse Woodworks and is located in an old railroad freighthouse alongside the tracks in South Royalton. I don’t know the details but most buildings alongside the tracks belong to the railroad and you can only lease them. If at some future date the railroad does not renew the lease or the shop needs to move to larger quarters, the name may become inaccurate. People searching for the freighthouse in the future may find it to be something other than a wood shop.

I later came to the conclusion that I would use the business name Heirloom Custom Woodworks. The name summed up what I was doing. I continued with the use of my old logo and chose a typeface that was somewhere between the runic alphabet of the interlace period and the typeface of the colonial period. I gradually came to see that I did not have a consistent and clear commercial image for the marketplace. In fact, it was a muddle.

I re-examined what it was I did and the message I wanted to communicate to my buying public. I will never be more than a one-man shop and a maker of reproduction furniture. I do not need to operate under a DBA (“doing business as”) identity for privacy, liability or the need to be able to sell the business. So, the important things that I want to communicate to the public are my name and what I do.

Thus, my second branding iron. This time I went with my name and a simple early American style trade sign. The traditional oval with a plane to signify a woodworker clearly communicated what I wanted. Notice that this time I upgraded to an electric handle. This branding iron has served me well for a number of years.

In the past year I have re-established my shop and re-examined both what my goals were and how I would achieve those goals. One thing about the second branding iron that I was dissatisfied with was the quality of the artwork. My drawing that was the model for this branding iron was just not up to a professional level and professionalism was a part of my marketing message. I bit the bullet and hired a professional graphic designer to re-do my logo. I initially tried to do it myself on the computer and found my efforts still not good enough. I gave the designer several pages of drawings and criteria to start with and a good idea of what I wanted. This made her job much easier – and much less expensive! What were interesting were the options she gave me. There were things that I hadn't considered and I ended up choosing something that I had not initially considered. I had originally wanted a black plane on a white background and ended up choosing the opposite.

Another part of signing my work that I considered important was dating and numbering my pieces. Chris Becksvoot hides a dated silver dollar in each piece, which appealed to me. If they would have continued the state quarters series with a new issue each year I would have used a Vermont quarter for the year of building. However, the mint didn’t cooperate so I gave up on the coin idea. I could use a hot pen and number the piece under the brand. However, anyone who has seen my handwriting knows that to be a poor choice. I ordered a branding iron with my new logo that had the capability of doing changing numbers or letters. One advantage of the computer age is that I was able to e-mail the graphics file from my designer to the branding iron manufacturer and not have to worry about camera-ready copy. With such a large head, I needed an even larger electric element for this brand.

An alternate marking method is to use a builder’s plate like a boat builder. I contacted an advertiser that is a regular in Fine Woodworking magazine that makes brass plates. He is located in England and it was all done by email. I sent the graphics file, he sent a quote, and I paid by Paypal. He did suggest that I reverse the image for better reproduction. So I also got what I had wanted initially when I did the re-design.

Between the branding iron and the maker’s plate I have two options to mark my work in a permanent and professional manner. The response I have had from customers has been very positive and I find that they often direct attention to my mark. With luck, that may bring me more work. Or, at the least, they know who built it.
Hand Cut Thru Dovetails

With the understanding that I would share what I learned, I was invited into Bob LaCivita’s shop in Nottingham for a lesson in hand cutting dovetails. This is what I learned.

Bob’s Procedure…

Use a marking gauge set to the thickness of your stock plus ½” to scribe the shoulder line on the two pieces to be joined. A sharp cutter with a beveled or slightly rounded inside edge will leave a clean line while drawing the gauge face tight against the stock. A deep scribe will be helpful when paring out waste and can add to the character of the joint. However, if you would like your finished product to be clear of unnecessary lines, you can postpone this step until after you have laid out the tails and pins and be careful to only scribe the areas to be removed.

Determine the spacing of the tails. Use a marking knife and a small square to carry the layout across the end grain. Bob demonstrated a ¼” pin that is easily divisible for practice, yet common and attractive in drawer construction. With the stock secured in a bench vice, mark each of the half pins ¼” in from the edge. Bob cut two tails, so he easily found the center of his piece and laid out his third pin. If you cut three or more tails, you can quickly space them out evenly by walking a divider across the stock. Begin with one point in the center of one of the half pins – in this case ⅛” from the edge of the stock. Make adjustments to the divider until it takes the desired number of steps and lands at the center of the other half pin. Each step will mark the center of a pin. Make your marks square across the end grain ¼” to either side. Darken your marks with a pencil if visibility is an issue.

Shade the waste between the tails. Set your kerf in the waste and saw to the shoulder line. As Bob implied, cutting clean joinery is a natural result of being comfortable using your hand tools. Be sure your saw is sharp and properly set, and work on your technique until you can get consistent results that need little to no alteration with a chisel. Shading...
the waste with a pencil might seem unnecessary but it gives you one less thing to think about. It is crucial that your cut begins square across the end of the board and that you begin with your saw tilted to the angle of the dovetail. Changing the angle to follow your reference line once you’ve begun the cut will only cause problems. Bob used his left thumb to guide the saw. With the saw started on track, he cut with long smooth strokes. Posture is important. If you make one cut standing up straight and the next leaning over to look at your line, it will be difficult to get consistent results. Bob made all his cuts in one direction, then altered his stance to make the others.

In my limited experience, I have found that cleanly starting a kerf alongside a knifed line is one of the most challenging tasks in cutting dovetails. Bob accomplishes this by tilting his saw forward a bit as he begins, and leveling it out as he settles into his rhythm. With practice, I was able to improve using Bob’s technique. But I was also tempted into ordering a kerf starter from Glen-Drake toolworks after seeing his demonstration at Lie-Nielsen’s 25th anniversary celebration. After using it, I felt I would need to mention it in this article.

Use a coping saw to quickly remove most of the waste. Rather than marring the edges left by your dovetail saw, begin a new kerf in the center of the waste. Cut down and then off to one side to remove half of the waste. Cut to the other side and take out the rest. Be careful not to damage the tails.

Clamp the piece on its side and use your dovetail saw to remove the half pin waste. Leave 1/32˝ to be pared off neatly.

Chop and pare back to the shoulder line with a sharp chisel. Bob used a mallet and chisel to remove most of the material. He was careful not to chop out the back of his piece by working in from both sides and leaving a slight hump in the center. Finally, to remove the hump, rest your chisel in the shoulder line and take the last shavings.

Proper lighting is as important as proper form. Use a piece of scrap to protect your workbench. If you are right handed, lay your left hand on the stock with your palm up. Guide the chisel between your left thumb and index finger. Use your right arm and upper body to apply downward pressure.

Use the tails as a template to lay out the pins. Lining both pieces up can be awkward. Bob made this step less problematic by using a simple piece of 3/4˝ thick scrap. He secured the unmarked pin stock in his bench vise and used the piece of 3/4˝ scrap to space the end up about 3/8˝ above his bench top. He then moved the scrap to the center of the bench and used it to support the back of previously cut tail stock. With the edges aligned and the shoulder of the tails even with the inside face of the pins, Bob held the pieces in place and traced the tails on the end grain with his marking knife.

Square the layout down the face of the board, stopping at the shoulder line. While this step resembles marking the angles of the tails, it requires that you be more precise. These marks are not merely references as the others were. They must be followed exactly or the resulting joint will be unsightly. To make these marks rest your marking knife in a line cut in the previous step. Move your square over tight to the flat back of the knife. Follow the square down to the shoulder line. Repeat this to mark out each pin on the front and back of the stock.

Shade the waste. Set your kerf in the waste and saw to the shoulder line. Again, rather than trying to follow the line, focus on your technique. Keep the saw perpendicular to the stock, and use long even strokes. If you run off, your lines will be there to pare to. But don’t be content with that. Look for tendencies you can correct through your mechanics – like a pitcher on the PawSox would in order to make the Bigs.

Use a coping saw to quickly remove the waste. This step is repetitive, except now you have to be extra careful not to cut into the angled pin.

Chop and pare back to the shoulder line with a sharp chisel. Again, chop in from both sides. Pare back the hump and leave a slight hollow to ensure a tight fit. Work carefully. It would be a shame to bruise the edge of a pin at this point.

Hold your breath and assemble. If you are just beginning, don’t be frustrated if they don’t fit. Every set reads like a book. Look to see what you might do better next time. Keep at it. Try to eliminate one flaw with each practice set. Before you know it, you’ll get consistent results. And your new skill will open up a whole range of furniture making possibilities.
Adventures in Lutherie

What if we approach a woodworking project as an adventure? The exciting part is then the unfolding experience, the unexpected discoveries, the uncovering of strange and marvelous new tools, new techniques and ideas. Even the setbacks, struggles and difficulties in acquiring new skills and perspectives, the indecisions and the outright failures add spice to the journey. Indeed, they cause the experience to be an adventure instead of merely some mechanical and programmed following of defined steps and procedures.

I recently placed an ad in The Old Saw asking if anyone would be interested in finding a luthier to teach us, as a small group, to make guitars. Two members answered that such an undertaking has been a lifelong dream. So, without delay and in high spirits, we have embarked on our adventure.

We have just started. I propose in this and follow up articles to provide an account of our quest. The plan is to tell you about our journey as we experience it, writing as it were, in real time. My focus is on the process, on making something out of nothing, on what we go through starting with a dim idea and ending, hopefully, with beautiful guitars.

The outcome is not at all guaranteed. My hope is that some readers are inspired, if not to make guitars, then to undertake a project of their dreams that is currently beyond their skills or experience. I hope also to capture the excitement of the process itself, of the actual doing, because I believe that the soul of our craft lives in each moment of undertaking it.

My companions are Paul Miller and Franz Summers. As a trio, we cover an interesting range of experience levels. Paul is a juried member of the League of New Hampshire Craftsmen. He makes world-class windsor chairs and teaches both carving and turning. I am not as experienced as Paul. But I am competent in a number of areas, such as joinery and finishing, and have sold several pieces to satisfied clients. Franz describes himself as a novice, although he has experience in carpentry and has worked as a machinist. None of us has ever built a guitar.

Our first step is to find a luthier. After researching the internet, we find Allen Carruth of Newport, NH – www.alcarruthluthier.com. We visited his shop on a day that he was teaching. It was like entering another world. The shop is small with accommodation for a handful of students. Guitars, in various stages of completion are piled everywhere. In one back room are stacks of bookmatched sets of Indian rosewood for sides and backs, and sheets of spruce for soundboards. In another room is a oscilloscope and related equipment for sound measurements.

One of the students takes out a finished guitar and starts playing. The sound is exquisite, the finest any of us has ever heard. The guitar is breathtaking. Paul asks if he can play it. When he does, a rare smile crosses his face.

For a guitarist, something called action is critical. The action is the distance that a string must be depressed to make contact with the fret and so produce the desired note. If the distance is too great, the guitar is difficult to play; too little and the string is apt to buzz. The difference between a good and a poor action is measured in fractions of a millimeter. Furthermore, the distance must be uniform along the entire length of the fretboard, meaning the strings must be precisely parallel to the neck. Paul says that the action of the guitar he is playing is perfect, the best he has ever encountered.

The cost of classes, tools, and materials is significant and we are all retired. Where to find money? We remember that the Guild offers scholarships and submit an application as a group. The committee is friendly and responsive. Within a few weeks, John McAlevey tells us that we have been awarded a scholarship that will cover a big piece of our expenses. In return, we promise to give back knowledge to the Guild and this series of articles is in part a fulfillment of that commitment. If all goes well, we hope to undertake a project of their dreams.

So we sign up and take our first class. Lutherie is unlike other woodworking. Much of what we “know” is not applicable. For example, here is a photograph of Alan holding a guitar top and showing the bracing underneath. As you can see, the bracing is glued to the top and, even though diagonal, crosses the grain in violation of standard woodworking practice. There is no option. The top is only 2 mm thick and needs support. Plus, it has to resist the force of stretched strings. However, in order to partially relieve the cross-grain expansion and contraction stresses, the top is not actually flat but curved to follow the arc on the circumference of a 25 foot diameter circle!

Lutherie introduces an aspect of wood selection hitherto unfamiliar to us – namely its acoustical properties. A fine guitar must be beautiful both visually and aurally. Much, but not all, of the sound quality is due to the top (called the soundboard). Using both existing literature and also his own extensive measurements, Alan has extensive knowledge of the sound...
properties of many woods and each of us has a different style of playing in mind. Franz is interested in a flamenco guitar; Paul in a jazz steel-string guitar which may be amplified; I play acoustic finger-style steel-string guitar and favor torch songs from the ‘30s. In addition, both Paul and Franz want light-colored guitar bodies. So Alan sets Paul up with a red spruce top and wavy maple sides and back. Paul is persuaded to add dark banding on the perimeter of his guitar else, says Alan, the shape of the otherwise light-colored instrument gets lost, visually. I get an Engleman spruce top and dark Indian rosewood sides and back. Franz opts for an Engleman spruce top and is still contemplating his choice of back and sides having narrowed it down to California Laurel, Black Acacia, or Palo Escrito.

Perhaps the most individualistic feature of a guitar is the rosette, the decorative band that surrounds the sound hole. Rosette making is an art unto itself. It is possible to buy pre-made rosettes but even that is not trivial. Catalogues show hundreds of them. Deciding to make one’s own rosette is a big deal.

Nancy, one of the students, has spent five months making hers, shown in the photograph. This rosette involves inlaying thousands of 1 mm thick pieces of wood into a 1 mm deep channel routed in the soundboard.

The second rosette shows another option chosen by Bill, another student. He spends the day selecting and gluing tiny strips of abalone into his rosette, trying to create the appearance of one continuous band without gaps. He asked me to take this photograph in part because he realized that once the abalone is sanded, its appearance will change completely as different microscopically thin layers are revealed.

I decided to make my own rosette and know exactly what I want — something called a Greek Key. As a consequence, all I have to show for my first day’s work is a rough drawing on the back of a manila file folder and have to endure jokes from Franz who has already glued his spruce top and from Paul who has both glued his top and steam bent his sides by the end of class.

On Alan’s recommendation, the dark elements of the Greek Key design will be shaded, that is, made up of two strips side by side, one of ebony and one of koa, both with side grain showing. The white parts will be hard maple, with end grain showing. This should produce interesting effects as light plays on the rosette.

The ebony, koa, and maple pieces must be 1.8 mm thick if my calculations are correct! Unfortunately, that does not correspond to standard veneer thickness. No matter. The photo shows a tool (one of the few power tools in Alan’s shop) that may be unfamiliar to most readers. It is a drill-press-mounted thicknessplaner. The rotating bit shaves off wood and the operator moves the workpiece around underneath it.

To actually make the rosette, ten small jigs are to be made. Each holds a tiny sandwich of glued strips at a precise angle, measured off the ten-times-scale diagram, so that a block plane shaves off material at the required angle. Then the angled strips have 1 mm thick pieces cut off, in the manner of slicing off a piece of French bread. This requires a tiny miter box and a razor saw. The resulting hundreds of pieces are to be individually glued into a routed-out circular channel in the soundboard and, if all goes well, the pattern emerges. We shall see.

So there we have the first leg of our adventure in lutherie. We are all in a high state of excitement. As Franz puts it — “I embark on this project with a sense of anticipation of creating something that will be beautiful and hopefully will become a family heirloom.” Paul states clearly, and I believe him to be completely serious, that he wants to make the finest guitar ever built. Me? I want to enjoy the process and already am. So what if the rosette takes months, what better way could I possibly be spending my time?
Back in 1990 when both the Guild of New Hampshire Woodworkers and my business, Big Tree Turnings, were new, I was making table legs for various furnituremakers. Both Teri Masaschi and Matt Burak repeatedly ordered Dutch foot legs, and in a few years, I turned hundreds of them. Over time I tried different methods of turning the legs. The procedures described here were developed during those years of experimentation and production.

Dutch foot legs were popular in the Queen Anne period. They were also called club foot, pad foot, spoon foot, or even (incorrectly I think) cabriole legs. Dutch foot furniture legs are turned on a lathe and are different from cabriole legs. Cabriole legs are sculptured legs usually cut out with a band saw, then finished with spoke shaves and other tools. The Dutch foot legs described here are produced entirely on the lathe requiring no band saw work prior to and no hand work after the turning. But there are also hybrid forms in which the ankle is hand carved after the turning to obtain more curvature than is possible by turning only.

This is multi-axis turning, which means that more than one pair of center points are used on the workpiece. One set of center points are the normal ones which are at the center of the square on each end. The second set of centers are offset in opposite directions so that one part of the turning (the node) will run true in both setups.

On simple legs, the node is at the transition point at the bottom of the pommel. This is the point where the square meets the round and must be centered. The simplest form of leg has just a straight taper from the ankle up to the pommel (square part at the top of the leg). More complicated forms have decorative beads just below the pommel, and sometimes the leg has a long curved form instead of a straight taper. On these the node is at the fattest point in the curve.

The Turning Process

Basic legs can be made in two steps – first off center to make the taper, the ankle, and the top of the foot; then second on center to form the toe and the bottom of the foot.

Nearly always the offset is along the diagonal line. The exceptions to this would be for a round table (with a round apron) or a center leg.

The first thing to calculate is the offset at the bottom, or the Foot Offset. Just remember this simple rule: Subtract the radius of the ankle from the radius of the foot, and you have the Foot Offset.

For example, if the square is 1 3/16”, use 1 1/4” (1/16” less) for the foot diameter (7/8” radius). The ankle diameter is 3/4” (3/8” radius). Therefore the Foot Offset is 7/8” minus 3/8”, or 1/2”.

The smaller offset at the top (pommel) can then be computed from the law of proportional parts (X/Y). For example, if the top square is 5” and the turned part is 20”, then the Pommel Offset is 5/20 of 1/2” (that is 1/4 of 1/2”) or 1/8”.

Foot Offset = Foot Diameter - Ankle Diameter
Pommel Offset = \( \frac{X}{Y} \) (Foot Offset)
Using a center-square to mark diagonals. Make four lines. Squares available from Grizzly.

Marking the offsets.

Making the transition cut at the node with a skew chisel.

The transition cut completed. Notice that it is about ¼” deeper than the flat. The left side is the finish side.

Rough out to ¼” above the second shadow line as pointed out by my fingernail.

Draw a line indicating the height of the toe on the flat produced in the previous step.

Cutting the top of the foot.

Top of the foot completed.
The length of the top square (pommel) should be an inch or two longer than the width of the apron. After preparation of the square, mark the limit of the top square with a dark pencil.

Mark out and punch the true centers in the usual way at both ends of the square. Then mark and punch the offset centers on the diagonal line. Check that they are in opposite directions, and that the larger offset is at the bottom (foot) end.

Mount the work first on the offset centers, and make the transition cut on the pencil line. On straight tapered legs, the diameter at this point is usually 10% to 15% smaller than the square.

Rough turn the leg to remove a little of the outside corner. Proceed to within about ⅛" of the first shadow line (see diagram). Now you can mark the point of the toe with a dark pencil line drawn on the flat area formed in the previous step.

Make the top of the foot first. Make sequential curved cuts which approach the pencil line and the correct ankle diameter.

Turn the taper of the leg using a straight edge to check your progress. Sand this part including the whole length of the leg and the top of the foot.

Mount the work on the true centers and starting at the heel, cut down to the bottom of the foot. Sand this part being careful not to blunt the sharp line at the toe which is important to the look of the finished leg.

A shallow spindle gouge is used for final finishing. The left hand dampens vibrations and can detect errors that the eye cannot.

Light pressure and patience are required to carefully sand the intermittent part at the top of the foot.

Before & after showing an alternate foot design

Use a ½" spindle gouge to round the bottom of the foot. The curve begins just above the point of the toe.
An Overview of Target Coatings

Fine Water-Based Coatings for Furniture, Architectural and Marine Applications

If you have ever considered switching to water-based finishes, then Target Coatings is the finish to use. The good people at Target have spent over twenty years on research and design to produce a full line of water-based products.

We, at Maine Coast Lumber, are a manufacturer of dovetailed drawers. We have used a couple of different finishes to spray our products but were not happy with any of them. A customer recommended we try Target’s water based Ultima Spray Lacquer. We were pleasantly surprised when it surpassed all our tests. Now, after about a year of using the lacquer in our drawer shop and with all the benefits of water-base, we have made the decision to become a distributor for Target Coatings.

Ultima Spray Lacquer

The Ultima Spray Lacquer is the flagship of the product line with its exceptional clarity and depth of image. Unlike other water-base finishes, this lacquer dries to a straw-like tone and still allows the wood to oxidize and age to a deep rich patina just like its solvent based counterpart. Even with its quick drying time, the lacquer levels out unbelievably. As one of our patrons proclaimed to us — “This stuff makes me look like a professional finisher when I’m done.” The USL has a 30% solid content, so it will build up more quickly than most solvent based lacquers with solid content ranges in the low 20’s. It also is self sealing, so no sanding sealer is needed. Even though this sands great there is a 100% burn in rate. This means it fuses to the last coat so no sanding is needed for next coat to bond to its self. There are no limitations on how many coats can be applied. The USL is available in four different sheens — gloss, semi-gloss, satin, and flat.

Ultra Seal-WB Shellac Sealer

Target Coatings has also engineered a water-based dewaxed shellac. Using the same shellac flakes as alcohol based products, this product is designed to function as a sealer, color toner, and barrier on all wood products. Just like alcohol based shellac, the WB shellac has a shelf life of one year. We have found that the shellac works exceptionally well as a first coat underneath stains to prevent any blotching or unevenness. The shellac comes in four different colors — Amber, Blonde, Garnet, and Golden Red.

Ultima-WR Stain System

Using emulsion technology, the folks at Target have developed a water-based linseed oil that penetrates deep into the wood bringing out the natural color tones. The stain has a longer open time to prevent the lapping and fairing effect that you might find in other acrylic based stains. We have noticed that with the clear base stain, it ages to a nice soft amber tone over time. This product will not spontaneously combust so there are no fire safety issues with this linseed oil. The line of stains consists of fifteen different colors each with a blend of UV absorbers and reflectors so the colors remain vivid and true.

Other Products

Target Coatings has a full line of water-base products including super clear polyurethane, universal sanding sealer, high solid grain filler, pre-catalyzed conversion varnish, an exterior polycarbonate urethane, and is always working to develop new products.

OTC Compliant

With the new laws going into effect by the OTC (Ozone Transport Commission), more and more people are looking into water-based products to be compliant with these regulations. All of Target Coatings products are HAPS-free, low VOC, and nonflammable. Our insurance company, along with others, was happy to learn that we were using water-base in our spray room. There are no special needs for disposal of Target products and they easily clean up with water.

So if you ever tried water-base products years before and been disappointed or never tried them at all, then give Target Coatings a shot and you’ll soon be a believer in water-base just like us.

Target Coatings — www.targetcoatings.com — products are available from Maine Coast Lumber in York, ME. You may contact Jim Morris at 800-899-1664.
make a Biedermeier Style Lamp

Building lamps is not a hot topic in woodworking magazines, but is not only a project that is fun, but also one you can use up scraps of expensive materials that have been lying around your shop collecting dust. Scraps that you might have wondered how you might ever use. Building a lamp requires a number of steps, and choosing the correct lampshade when you have finished the lamp is equally important in showing off your finished piece.

About twenty years ago, I was looking at all the scraps of beautiful hardwoods I had accumulated in my wood rack and wondering what I could do with them. So I got out a Fine Woodworking Design Book and thumbed through looking for ideas. I was tired of building boxes and turning small bowls to use up left over material. I ran across a lamp that struck my fancy and have been building several lamps, along with the other furniture I enjoy building, every year since.

When I started to build lamps, I saw it as a way to use up my scraps from other projects. Aside from the shade and hardware, it was almost pure profit! Ironically, some of those first designs I have quit making, as they can run over $300 a piece just for materials now. I began making veneer lamps when I saw great veneer on Ebay at reasonable prices. Freeform, veneered, turned or carved, they are all fun to build!

There are two things my mentor always told me that apply equally to building lamps. One – It is very easy to make something look complicated. Simply make a box shape and stick moldings all around it. To make something look simple, clean and beautiful and make the design work is hard! I always try to make things as simple as possible in my design and have found what he told me to be true, regardless of what I am building. Two – You can take a poorly crafted piece of work and put a beautiful finish on it and people will love it. You can take a beautifully crafted piece of work and put a poor finish on it and people will hate it. The finish makes the piece if you don’t know woodworking, or look too closely.

With the second thing in mind, you can take a beautifully crafted and finished lamp and put a cheap shade on it and it will take five times as long to sell than if you choose a really good shade. Remember you are a woodworker. Find a really good lampshade shop and have them help you choose a shade.

Making the body of the lamp can entail any number of methods, from using a solid block of wood to freeform pieces, turnings and in this particular lamp, veneer and solid wood together. This lamp is heavily influenced by the Biedermeier style so popular in the nineteenth century, but with what I believe is a contemporary flare to it that is at home with most any style of furniture, from antique to modern.

Lamp Body

1. The Tulipwood Veneer I bought from Constantine’s was not wide enough to make the blanks for the front and backs. These need to be 8” wide and 13” long, so I had to glue the veneer together. I also make up equal veneer of a cheaper species for the inside of the lamp at this time. If both sides are not veneered equally, it can warp before assembly is complete!
2. The base material is MDF particleboard and I cut at least two additional pieces to put at the top of my stack to equally distribute the clamping pressure when gluing the veneer to the particleboard.
3. My clamping method is primitive in the age of vacuum bags, but it works well! I just stack the pieces on the edge of my table saw with wax paper between layers and newspaper underneath to cushion and help equally distribute pressure throughout the stack. I roll...
on Gorilla Glue with a small paint roller. This works very well with oily woods such as rosewood.

4 When the stack is dry, I trim off one edge with a chisel and square up the blanks. Joint one edge. Rip to width. Crosscut to length. Tape the veneer where you are cutting so it will not splinter. Leave the sides oversize to be cut to length later. Front and back blanks should be 7¾” wide and 12½” inches long. The sides are 5” wide by 12¾” long.

5 I always have trouble cutting hopper/compound joints to fit exactly, so I make simple jigs to taper the edges and cut the 45° angle.

6 The front and backs of the blanks are cut first with the good side down. With the second jig, they are cut with the good side up. Grain orientation is critical and it is easy to mess up if you aren’t paying close attention!

7 Miter side pieces 4¾” wide on the tablesaw.

8 Rabbet the top and bottom of the front and back with a ¼” deep by ¾” wide rabbet on a router table.

9 To cut sides to length, measure off the side of the front and cut to length at the angle of taper.

10 Rabbet top and bottoms of sides at an angle so the top and bottoms will fit straight into the rabbet.

11 Laying pieces flat on a table, tape together front, back and sides to test fit. Match veneers for best possible grain match. Fold together and tape to check the fit.

12 Glue together the bodies of the lamps with yellow glue using masking tape as clamps.

13 When dry, clean off tape and scrape off excess glue with a cabinet scraper. Make and glue in top end plugs for the top of the lamp and glue in.

14 When the glue is dry, touch ends on a disc sander and miter gage to make ends flush and lamps equal in height.

15 Mark and drill a hole in the top for the lamp pipe and cord. First drill with ¾” spur bit and then ream out hole with ¾” twist drill bit to allow pipe to move freely through the hole.

16 Mark and drill the plug hole for the exit cord in the back face of the lamp. Make the hole ¾” diameter and ½” deep with a forstner bit. Use a filler block so the inside of the rabbit will not break out with the drill bit.

17 Make a ¼” diameter plug with a ½” plug or tenon cutter and glue in making certain grain is the same direction as the veneer of the lamp.

18 When the glue has dried, plane off excess material with a sharp block plane until the plug is flush with the surface. Take care not to cut into the veneer on the lamp face.

19 Drill a ½” hole in the center of the plug.

20 Round over the sides of the hole where the cord exits the lamp using a ½” radius round over router bit. The pilot on my bit does not have a bearing. I believe it is copper so it fits easily into the hole.

21 Rabbet the edges of the lamps with a ½” x ½” rabbet, cut the length of the edges to accept the contrasting wood and hide any imperfections that might have occurred in gluing the bodies together. I generally make these cuts in two passes on my router table, with a fence and a carbide two-fluted straight cutting router bit. The second cut is a climb cut to minimize any chipping. Climb cuts are cutting in the wrong direction with the cutter and you must hold onto the material firmly so it will not be thrown away from the cutter. **DANGEROUS — I would not recommend a climb cut on this operation if you are not accustomed to making this type of cut!**

22 Make 1⅛” x 1⅛” strips about ½” too long for the trim. I like to run these though my wide belt sander for the final size. If they are being made of an oily wood like the Macassar Ebony I used, make certain to clean the wood well with denatured alcohol and a clean rag prior to the glue-up.

23 Glue in the strips with Gorilla Glue and use plenty of masking tape for clamps. You can really stretch the tape tightly and get good clamping pressure, but test the tape first as some masking tapes do not work as well as others! Make certain you wear gloves for this operation though it does interfere with stretching the tape tightly.

24 When the Gorilla Glue dries, I use a chisel and cabinet scraper to clean off the excess glue.

25 To trim off the ½” excess of the trim
pieces, cut a piece of ¼” plywood or melamine to fit underneath the body of the lamp to raise it off the table. With the plywood under the lamp and between the trim pieces, use a ½” trim bit in the router table to trim off the excess. This too I climb cut to minimize tear-out and recommend not climb cutting if you are not familiar with this procedure!

26 Rough sand what the trim bit missed with an orbital sander and 100 grit abrasive and trim off the excess at the ends with a backsaw and finish on the disc sander. Make certain not to cut into the veneer!

27 You can put any type of design you want on the edges, but my favorite is rabbeted, again with a climb cut in two cuts each face. The rabbets are ¼” deep by ¼” wide.

28 Finish sand with 100 grit, 150, 220, 320 and 400 grit abrasives. Take care not to cut through veneer. Make certain to raise the grain and sand again with 400 grit for a great finish! To do the edge designs, wrap abrasives around a small block of wood for a sanding block.

Finial
1 Cut an approx. 1½” square block and mark to drill on the end grain face.
2 Make certain that the nut you have for the finial fits the shade riser before you start. Measure across the flats of the nut and it should be ¾”. Drill a ¾” diameter hole ½” deep with a forstner or spur bit.
3 Then drill a ½” diameter hole ½” deep exactly centered in the first hole with a twist drill bit. The second bit should center exactly in the center of the first hole.
4 Thread the nut onto the shade riser and insert and center in the holes. Strike the back of the shade riser with a soft-faced mallet to mark the hex shape of the nut centered into the block where the nut will fit. I use an old shade riser I keep just for this operation.
5 Chisel out a recess to where the nut protrudes from the block about ¼” and does not fit too tight.
6 File a fresh edge on all six edges of the nut and cut a groove roughly ½” deep in each of the edges with a metal cutting file. Clamping this is about the easiest way to do this, but you must remove the nut and re-clamp each edge. The nut will hold better if the metal surfaces have been freshly cut with the file.
7 Clean both the nut and hole with denatured alcohol.
8 Glue in the nut with epoxy. Use a nail to make certain that there is some glue that wraps slightly up the exposed face and make certain no glue gets on the threads. I use the shade riser to make certain the nut is aligned properly, but take it out so it doesn’t get glued in! Let the glue set at least 24 hours.
9 When glue is set, cut the blank round on the disc sander.
10 Make up a faceplate for the lathe with bolt through the center and turn and sand to 400 grit abrasive.

Top Spacer
1 Cut blanks and square the ends on the disc sander.
2 Lay out a taper and hole for the threaded rod.
3 Drill the hole on the drill press with a ¾” spur bit and ream out to ½” with a twist drill bit.
4 Sand the tapers on the disc sander and finish sand to 400 grit abrasive. Remember to raise the grain!

Top Plate
1 Cut the blank to size. It should overhang ¼” all around the top of the lamp.
2 Drill a hole on the drill press with ¾” spur bit and ream out to ½” with twist drill bit.
3 Cut angles on table saw using tenoning jig.
4 Sand to 400 grit abrasive.

Bottom
1 Cut MDF to fit in the bottom and rout a slot for the cord to pass.
2 Drill countersunk holes for screws making certain not to drill through the sides of the lamp.
3 Since the body of the lamp was trued up on the disc sander, the rabbet may not be quite deep enough to accept the bottom flush, so I rabbet the face on the table saw to fit.

On/Off Switch (Key)
1 I purchase brass on/off switches at Namoi’s Lampshades or my local hardware store and refinish them to give them that “extra elegant” look.
2 Polish the on/off switch on a buffer with white diamond abrasive and then jeweler’s rouge. It gets HOT, so wear leather gloves.
3 Clean the abrasive off with cleaner. I use Barkeepers Helper (In the cleanser/soap area at your grocery store) and a toothbrush and toothpick. Dry thoroughly.
4 Spray with two coats of brass lacquer. Make certain that the area is well ventilated! I spray it outside, as the smell is strong! I use Staybright Brass Lacquer™, available from Woodcraft Supply.

Finishing
1 After sanding everything to 400 grit and making certain to have raised the grain, I like to burnish the wood with 0000 steel wool and seal everything with orange shellac. I use the flakes mixed in denatured alcohol to seal the oils in the wood. When using rosewoods, like Tulipwood, finish rarely will stick without sealing the wood first.
2 Spray with pre-catalyzed sanding sealer and finish with two coats of pre-catalyzed lacquer. It takes a number of coats of sanding sealer to give a good finish, sanding well between coats.
3 Rub out with 0000 steel wool and wax if needed. If the wood is dark like the Macassar Ebony, I use a dark tinted wax like Dark Brown Treewax.

Assembly
1 Cut ¾” diameter lamp pipe to 4½” length and file both outside of cut and inside to remove burrs.
2 A three-way socket is the best choice. The different levels of light can help make your lamp’s wood come alive and it costs pennies extra for the three-way.
3 Tie a safety knot in the cord so the knot will sit in the bottom of the socket. The safety knot is a slipknot tied into another slipknot.
4 Remember to put the cord through the exit hole before final assembly!
5 Test fit everything prior to assembly and put in a bulb and make certain it works!
6 Assemble and screw on the bottom.
7 Cover the bottom with suede leather using contact cement. The suede is available from Tandy Leather. Cut the suede about ½” oversize before glue-up. Make certain to put a minimum of two coats on the wood and three on the leather. The solvent based seems to work the best in my opinion.
8 Trim the excess leather with an Exacto knife with a NEW blade. Be careful not to cut into the wood or your hand!

Choosing a Shade
1 After all the work of building the lamp, I have seen too many of my former students skimp on the shade and ruin the beauty of the lamp by saving a few dollars on a cheap shade. This is one of the most important steps of the whole process!
2 I have bought shades from Naomi’s Lampshades in Lake Oswego, OR for about twenty years now. They have not only great shades, but good advice as well. Selection tips are available on their web site – www.naomislampsandshades.com. It is always best to choose shades in person. The size of the shade and the height above the lamp are important considerations that a lampshade salesperson can help you with to make your lamp look its very best! Buying the correct lampshade makes the lamp. I take my time to get the best results.
3 A lampshade with a gold foil lining costs a bit more, but it really brings the wood to life and is well worth the extra money. On figured woods it is a must!

By now you can see that building a nice wood lamp is more involved than the lamp kit you can buy and install in a gallon jug that was popular for many years. It is tedious work, but it is fun as well and you have built something that is more than just a lamp, a priceless heirloom. It is a project that you can use up some of those scraps of exotic wood you have sitting around your shop and use or develop your woodworking skills as well and a project to enjoy for many years!
I hosted a Granite State Woodturners meeting at Pinkerton Academy in April, 2004. Beth Ireland, the presenter, began by explaining how to be creative and later divided the fifty people who attended into twelve teams to put into practice what she had talked about. Each team was asked to create an object that represented a month. At the end of the workshop, each group presented their object starting with January. It was at that meeting that I thought about how my students would benefit and enjoy similar activities. I met with Beth during the summer of 2004 to talk about what, if anything, we could do. Like many others, Beth was willing to donate a couple days to come to Pinkerton. However, we agreed that a year long program would be the best idea and I was left with the challenge as to how to finance it. I turned to the Guild. The Steering Committee was willing to entertain a proposal. Beth quickly named the program Creative Enterprise and we put together a grant proposal that was funded by the GNHW scholarship program. Basically, the grant covered the cost for Beth to spend a day at Pinkerton every other week for the 04/05 school year.

Creative Enterprise was designed, as the name implies, with three goals. The first is to rejuvenate the students’ creativity that has frequently and unfortunately been stifled. As Beth said, “We want to set people free.” The second is to create an environment where students are willing to explore risky ventures or activities. The third is to offer students an opportunity to market a product line they create.

Graham Oakes was in the first group of students exposed to the Creative Enterprise program at the start of the 04/05 school year. Having completed the introductory woodworking class as a sophomore, no one would have guessed that Graham would become the poster child for Creative Enterprise and so much more. After being introduced to a “skill set” using primarily the lathe and band saw, Graham made eight pine coffee scoops for the first sale. The $40 that he made from that sale changed his life and mine.

What happened over the next eighteen months was beyond my wildest dreams. Keep in mind, that only Graham’s story is being told here. There were dozens of other students who benefited from Creative Enterprise. Between Beth’s visits other woodworkers, mostly GNHW members, came in to supplement the Creative Enterprise program. Donna Banfield, Dustin Coates, Steve Cox, Steve Henry and William Shunute were all involved in this program.

Each of them helped in some way to “set people free.” It was rewarding for me to see the excitement on the student’s faces when I announced these people were coming and many of them came back several times. Once they met Dustin no one was more excited than Graham when Dustin came to Pinkerton, or later when I took Graham to Dustin’s shop.

During this time Graham’s work continued to evolve as he began to refine his skills and techniques. It was apparent that I was not going to provide much assistance in those areas so I decided to promote what I later called his unbridled passion. He presented at the New England Association of Technology Teachers and the MA Industrial Technology Teachers Conferences the past two years. He demonstrated for the Association of Revolutionary Turners (ART) the GSWT, and most recently at the 5th New England Turning Symposium. He has been featured in over a dozen newspaper articles including front page stories in our school newspaper and our alumni newsletter. He was the featured artist in the May 2006 edition of Woodcraft Magazine and recently named the 2006 Tradition of Excellence winner by Woodcraft Corporation. Graham and Pinkerton were both presented with $1,000 Woodcraft gift certificates for this award. Tiffany Eddy at WMUR wasted no time when I submitted a story...
idea to Chronicle where Graham’s story was shared across New Hampshire in April. While all of this was going on, we were producing an “in-house” DVD at Pinkerton called, *One Tool Wonder*. It shows Graham making fourteen cuts with a side grind Ellsworth bowl gouge. Rod Daily, a GNHW member, with whom Graham has bartered, produced the artwork and Peter Bloch duplicated the DVDs.

Beth returned this spring to check on the students she met the year before. During her two visits she made totem poles with students in Advance Woodworking. Many of these students were the ones Beth started with in the Creative Enterprise program. The totem poles were a lot of fun and were displayed at the turning symposium. The full totem pole story will be featured in an upcoming issue of *Woodcraft Magazine*.

In June, Graham won first place at the 3rd New England Student Design Competition hosted at Mount Wachusett Community College. Last year Graham won fourth place with a nestled Cherry Burl bowl set and walked away committed that he was going to win first place this year. His piece, *Turned for Two*, was stunning both technically and artistically.

In addition to the publicity, the awards gave Graham the funds to buy a 20” Rikon band saw and half the cost of a used Nova lathe, which he bought from a GSWT member.

With all of this going on, Graham never lost sight of a goal he set shortly after he sold his eight coffee scoops for $5 each. At that time he decided to “make” $10,000 turning wood before he graduated from high school. Although he fell a little short of his goal, his sales exceeded $9,000 and his work is now featured in several retail outlets including Shaker Village.

You might have seen him this summer at Wood Days or Sunapee where he demonstrated turning. He continues to do a lot of demonstrating and was awarded a Jet 1014 lathe as one of the winners in the Youth Lathe contest held in conjunction with the Youth Symposium at Pinkerton in May. Graham will be attending UNH Manchester in the fall and turning wood at home. I suspect I will see him occasionally when he needs access to the 2436! He has two long term goals – to be recognized as “one of the greats” in the woodturning community and to return to Pinkerton to teach.

I would like to thank the Guild for the financial support and for the opportunity to share the success of one student in the Creative Enterprise program in *The Old Saw*. Last year was one of the most exciting and rewarding years in my 30 year teaching career.

Thanks Graham! Thanks Beth! Thanks GNHW!
By the time you read this, the 73rd Annual Craftsmen’s Fair at Mt. Sunapee State Park will have become history. Our Guild participation this year was unusual in that we had fewer members participate but the results still surpassed previous years.

The weather could not have been better, not a single bit of rain over the nine days. The moderate temperatures and low humidity made working our 20’ x 40’ tent a real pleasure. The raffle of member-made prizes was a smashing success and we were able to better last year’s record ticket sales. Guild members sold $4,107 worth of raffle tickets to benefit our scholarship fund – an increase of $141 over 2005.

The League of NH Craftsmen gave us a new and better tent with more headroom and large windows on all sides making our workspace lighter and more airy. With all the fine weather, fair attendance was large and we almost always had a crowd watching members demonstrate their skills. At all times we had at least two lathes producing turnings and two or more demonstrators showing a diverse selection of woodworking related crafts. Guild representatives sold raffle tickets, explained the guild to fair visitors and signed up a number of new members. For those of you who joined the guild at Sunapee, I hope we’ll meet you at the annual meeting at Dana Robes on September 23rd.

I would like to take this opportunity to thank the 38 guild members who donated a total of 79 working days selling tickets, explaining the guild to fair visitors, and demonstrating bowl turning, carving, shaker box making, furniture making, cutting dovetails and a host of other skills.

Thanks is also due to our members who loaned lathes, workbenches and other equipment for our tent. A special thanks to Peter Scheffer who donated eight days of his time and wowed the crowds while he produced almost a years supply of legs for his windsor chairs. There was always a crowd around watching a master at work. Similarly, Len Chaissen carved and talked with visitors for five of the nine days. Guild representatives were aggressive but not pushy. The ticket sales benefiting the scholarship fund are ample testament to their success. To those members who donated the 22 regular prizes and the nine daily raffle prizes solicited and collected by Jim Dimick, your contribution is greatly appreciated. The Cherry Shaker table made and donated by Greg Benulis and Bob LaCivita was the highlight of the prizes and garnered the largest ticket sales.

Many thanks to everyone who participated or donated! Without your participation and generosity, we could never achieve such great success. The nine days of Wood Week at Sunapee is one of the most important guild events of the year. We are exposed to almost 30,000 visitors, refresh our treasury and have a great time. Will you be one of next year’s volunteers? We need you.
Four Students Awarded Complete Turning Packages

The generosity of those that attended and bought raffle tickets at the 5th New England Woodturning Symposium allowed us to present four complete turning packages to Mark Hansen of Souhegan HS, Madison Barnes - home schooled in Concord, NH, Ben Chandonnet of Pinkerton Academy and Dan Pelrine of Merrimack HS. The packages included a Jet 1014 lathe, Nova Midi Chuck, Slow Speed Grinder, Wolverine Sharpening Jig, tools and wood. The scholarship committee would like to thank Woodcraft (Newington, NH), Oneway Manufacturing, and Turning Blanks by George for their support in this program. A fifth lathe was awarded to Graham Oakes to allow him to continue to demonstrate.

Students were asked to answer seven questions designed by the Scholarship Committee. Twenty-two applications were reviewed. On behalf of the Scholarship Committee and the Guild we would like to congratulate these young tuners. Here are excerpts from the winning applications.

Mark Hansen – “Turning is fun for me. I like the feeling of working the wood and shaping it into something unique and expressive from nothing. I like the smell and feel of the wood and I like the satisfaction of having made something creative and functional, whether for my own use or for someone else’s use.”

Madison Barnes – “When I make something good I look at it and say I can’t believe I made that. Using the lathe is just fun. I think it’s more fun than video games, all of my friends love video games.”

Ben Chandonnet – “I like to turn because it inspires me to design and create works of art, sometimes beautiful, sometimes not. One of the main reasons I like to turn is because it becomes very peaceful and I can forget about everything else that is occurring in my life and let the tool glide into the wood making some form of art, crappy or beautiful.”

Dan Pelrine – “At Merrimack High School there is a program called “Bowls for Hunger” which is sponsored by the Art Department. This organization is for creative students to make bowls to sell at meetings to support the needy in New Hampshire. I have looked at this as an opportunity to practice my skills by spinning bowls in class to support this program and to help the people in need in the community.”

Treasurer’s Report – continued

CashFlow Report
Sept 1, 2005 - Aug 16, 2006
General Operating Fund

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Balance</td>
<td>15,618.73</td>
</tr>
<tr>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>Donation</td>
<td>500.00</td>
</tr>
<tr>
<td>Dues</td>
<td>11,705.00</td>
</tr>
<tr>
<td>Books, Clothing, Videos Sold</td>
<td>4,590.28</td>
</tr>
<tr>
<td>Misc. Income</td>
<td>1,772.25</td>
</tr>
<tr>
<td>Turning Symposium</td>
<td>20,753.00</td>
</tr>
<tr>
<td>Money Market Interest</td>
<td>652.52</td>
</tr>
<tr>
<td>Total Income</td>
<td>39,973.05</td>
</tr>
<tr>
<td>Expenses</td>
<td></td>
</tr>
<tr>
<td>Awards &amp; Donations</td>
<td>(1,576.25)</td>
</tr>
<tr>
<td>Insurance</td>
<td>(500.00)</td>
</tr>
<tr>
<td>Internet Expense</td>
<td>(167.50)</td>
</tr>
<tr>
<td>Meeting Expenses</td>
<td>(677.71)</td>
</tr>
<tr>
<td>Membership Expense</td>
<td>(1,159.95)</td>
</tr>
<tr>
<td>Misc. Expense</td>
<td>(457.30)</td>
</tr>
<tr>
<td>The Old Saw</td>
<td>(8,920.18)</td>
</tr>
<tr>
<td>Clothing, Books, Video Supplies</td>
<td>(6,097.17)</td>
</tr>
<tr>
<td>Turning Symposium Expenses</td>
<td>(15,161.23)</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>(34,717.29)</td>
</tr>
<tr>
<td>Transfer 1/3 Symposium Net to Scholarship</td>
<td>(3,000.00)</td>
</tr>
<tr>
<td>Transfer $5 per Member to Scholarship</td>
<td>(1,595.00)</td>
</tr>
<tr>
<td>Ending Balance</td>
<td>16,279.49</td>
</tr>
</tbody>
</table>

Scholarship Fund

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Balance</td>
<td>13,999.46</td>
</tr>
<tr>
<td>$5.00 per Member</td>
<td>1,593.00</td>
</tr>
<tr>
<td>Raffle tickets (‘06)</td>
<td>4,107.00</td>
</tr>
<tr>
<td>1/3 Turning Symposium Net Income</td>
<td>3,000.00</td>
</tr>
<tr>
<td>Scholarships and Grants</td>
<td>(10,647.35)</td>
</tr>
<tr>
<td>Ending Balance</td>
<td>12,054.11</td>
</tr>
</tbody>
</table>

Equipment Capital Reserve Fund

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Balance</td>
<td>2,023.74</td>
</tr>
<tr>
<td>No change</td>
<td>0.00</td>
</tr>
<tr>
<td>Ending Balance</td>
<td>2,023.74</td>
</tr>
<tr>
<td>Total Cash Assets</td>
<td>30,357.34</td>
</tr>
</tbody>
</table>
Beginner & Intermediate Group

The subject for June, 2006 GNHW BIG at Bob LaCivita’s shop in Nottingham, NH was about sharpening.

Bob began with the restoration and sharpening of hand saws. He covered such things as the difference between the profile of the teeth on rip and crosscut saws, and how the tooth count on a saw relates to the use. As he sharpened a crosscut saw, he spoke about files for sharpening and proper technique for filing. Next he brought out his dovetail saw which has very small (18 tpi) teeth and uses a rip profile. One of the things I found interesting was the method he used to set the teeth. Bob had a steel plate that was a little longer than the blade of the saw and had a very slight bevel along one of the long edges. When the blade is laid down on the plate with the teeth over the beveled edge you can set the teeth by tapping down every other tooth with a nail set. Then you flip the saw around and do all the teeth you skipped in the first pass. One of the big advantages of this method is that it is very easy to get a consistent amount of set across all of the teeth.

The second topic was sharpening boring tools starting with twist drills and spade bits sharpened freehand on a powered grinder. He showed us a hole saw and said that you can touch them up with your saw files. Forstner bits are handled by carefully filing the appropriate edges.

The end of the meeting was devoted to scrapers. Several methods were given for the preparation and maintenance of card scraper edges. Bob emphasized burnishing the edge with just a single stroke. After some discussion of the various types of burnishing tools, Bob finished up with the setup, sharpening and use of scraper planes.

After completing our rounds at Starrett, we adjourned to the Old Mill in Leominster for a very pleasant buffet lunch. We were somewhat under the gun for time but were able to get in and out in an hour.

Our second tour was of Nichols and Stone – the oldest on-going furniture manufacturer in the U.S. This company was also founded in the late 1800s by the Nichols family, although the family had been making furniture on a small scale before this. There was a rough patch in the early 1920s and the Stone family invested and ran things for several generations. This factory was also very large and we only had time to tour the chairmaking side. They also have a table and cabinet operation in the plant as well as a plant in Honduras. They also outsource from China. At one time, they operated their own sawmill.

Their operation starts at their kiln. They primarily build from birch with some cherry and maple as needed. They also use partially air dried wood in their bending operations. They do 80% of their own turning while farming out larger pieces. When they start manufacturing a chair, they will make the components for 1000 to 1500 and then store them awaiting orders. As orders come in, the chairs are assembled, sanded and finished. They work hard at controlling the humidity to keep all the parts fitting. The members felt the tour to be worthwhile and many of us picked up a few pointers.

Dave Frechette

WorkBench...

Laguna 5’ Bench – This bench is in the shop at Pinkerton Academy and we need the space. It is in near perfect condition with the exception of one chip made by an unknown student – www.lagunatools.com/5workbench.htm. Original price is $995, asking $700.

Jack Grube: jackgrube@adelphia.net

Carving Tools & Blanks...

12 carving tools (some Buck) and several boxes of butternut, pine and basswood carving blanks – $100.

Peter James: 603-435-8133

Shopsmith Mark V...

A great multipurpose woodworking tool (drill press, lathe, table saw, disk sander, horizontal boring) in excellent condition. This tool now lists for over $3000 and has changed little since the Mark V came out – Asking $950.00, includes caster set.

Tony Immorlica: 603-673-9629 evenings
Harmony and Balance — Every year, the Granite State Woodturners hold their annual critique meeting at the rustic Moose Mountain Lodge. Located at the top of a mountain (it’s a converted ski resort), they say you can see for a hundred miles. Well, we could see about a hundred feet due to the fog and rain, but the real action was inside anyway. This was my first time at the critique, and unlike our usual technique meetings, I was about to learn a lot about style and design.

I was a little intimidated about the idea of being “critiqued”, but only a little, as I knew most (if not all) of the people there, and they’d commented on my designs in the past. There was a full spectrum of both designs and turners present, from beginners with simple bowls to experts with complex creations. And, contrary to my expectations, there wasn’t a simple relationship between “experience” and “getting it right.” Whether beginner, intermediate or expert, there were examples of both good and bad at all levels. I think everyone learned something, and while nobody was immune to criticism, none of the criticism was demeaning or insulting – the atmosphere and discussion stayed helpful and friendly throughout the meeting, with the emphasis on learning by example, not just pointing out flaws.

I don’t know if there’s a different theme each year, or if there’s a theme at all, but there seemed to be one this year. This year’s theme (or, at least, the phrase most spoken) was “Harmony and Balance”.

It’s not about always doing things one way, it’s about doing different things in ways that work together well. A good balance could mean curves and lines mixed together, or it could mean a simple curved box with a complex detailed lid. Design elements themselves are balanced too; a strong edge can’t be too big, but if it’s the right size, the strength won’t overpower the other design elements.

One common topic was foot size. Even though some folks had a history of extreme opinions on an ideal foot size, there were examples of when it was appropriate to have an unusually large or small foot. Peter Bloch made the rare and unexpected comment at one point that one of the bowls needed a bigger foot (Peter is a fan of small feet) and Jon (a fan of big feet) noted one bowl that could have had a smaller foot. It just proves that there’s no hard and fast rule about design elements – each part of a design has to work with the other parts. We also talked about how the utility of a piece influences the design, such as a salad bowl needing a larger foot than a natural edged bowl, since its purpose requires more stability. Reid’s large maple platter had a foot nearly as big as the piece, but Graham’s set of natural edged bowls appeared to have no feet at all!

One of the trickiest things to get right in a turned bowl is keeping the wall thickness consistent, and the quality of such was noted for many of the bowls. The transition from wall to foot makes this more difficult, and one design element that was talked about was what to do with the area inside the foot. Even though it’s normally hidden, it’s important to do something with that space that works with the rest of the design. This can be either adding some detail that reflects details elsewhere in the piece, such as a trio of burned-in rings on Donna’s hard maple bowl; or continuing the outside curve, such as in my oak segmented bowls, where the “foot” is a lip half way up the side (where the legs attach), leaving the otherwise “hidden” bottom fully exposed.

Smoothness and symmetry of curves was noted on many of the pieces. While the actual curve defines the overall shape of the piece, it’s still important that the curve be smooth and, again, “balanced”. Too many different curves, or curves that change in awkward ways, can detract from a piece. A simple bowl with a well-executed curve can be more attractive than an otherwise exquisite piece with a subtly wrong curve.

I’m not sure exactly what I took home with me after the meeting (besides my bowls, of course), as “design” is still a somewhat mysterious process to me. Maybe my furniture background is still fighting for straight lines and square corners, but I’m a bit more at ease with curves and transitions now. All that was left to do was to be at harmony with the rain, bowls balanced in hand, as I walked back to my truck for the long ride home.
Malcolm Tibbetts Presentation

Malcolm Tibbetts will be doing a presentation for the Mt. Washington Valley Woodturners at their regular monthly meeting on October 19 from 7 to 9 pm in the shop at Kennett High School in Conway NH. Malcolm is a professional artist who lives in South Lake Tahoe, CA but graduated from Kennett HS! After a long career in the ski industry and many years as an amateur woodworker, he became “hooked” on the lathe in 1993. His turnings have won many awards, and he has pieces in many prestigious collections around the world. His signature works are creative applications of segmented turning, but his work is versatile and diverse. He is the author of The Art of Segmented Woodturning, released in 2005, and he wrote an article called Lamination Trickery in the Summer 2005 issue of Woodturning Design. His work can be viewed on his website at www.taboturner.com. Malcolm’s work is pictured (chess table and chairs, all turned) in the August 2006 issue of Fine Woodworking in the Reader’s Gallery section.

Kennett HS is in Conway, NH on the left as you enter Conway village from the south. Admission is $10, with proceeds to benefit the woodturning program at Kennett HS. For further information or questions, contact: Ed Good
603-383-6944 or egood9088@hotmail.com.

Jon Siegel is encouraging members of GSWT to attend this meeting as a way to bring the Mt. Washington Valley and Granite State Woodturners together. This should be an interesting presentation to anyone interested in segmented turning. Email Jon if you want to car pool.

Jon Siegel – big@proctornet.com

NH Furniture Masters Auction

The 2006 NHFMA Auction will take place on Sunday, October 22 and will again be held at the beautiful Wentworth-by-the-Sea Hotel in New Castle, NH, with auctioneer Frank Eaton presiding.

Tickets to the event are $75 per person and entitle the holder to attend the gala reception and auction and receive a 2006, four-color commemorative auction catalogue. To purchase tickets or obtain additional information, visit the Association’s website.
603-898-0242 or www.furnituremasters.org

Annual Discounted Woodworking Book Sale – Nov. 19 Deadline

One of the advantages of Guild membership is the opportunity to purchase books at wholesale prices. We have arrangements with Taunton Press (www.taunton.com) and Sterling Publishing (which includes Lark and Guild of Master Craftsmen titles – www.sterlingpub.com) and others to purchase books once a year at discounts of 20% to 50% depending on quantity ordered.

This year we are adding another publisher, Fox Chapel (www.foxchapelpublishing.com). Fox Chapel is a publisher but also sells books from other publishers such as Taunton but at lower discounts. If there is sufficient demand, I will also place orders from suppliers we have used in the past. However, we need a minimum of ten titles for each…

• Astragal: www.astragalpress.com
• Stackpole: www.stackpolebooks.com
• Tiller: www.tillerbooks.com
• Schiffer: www.schifferbooks.com
• Penguin/Putnam: www.penguinputnam.com

Orders will be accepted at the fall Guild meetings starting at the annual meeting in September. The last chance to place an order will be at the November meeting. Books should be available in early December for pick up at my home in Mont Vernon, NH, or at a future guild meeting.

I will have catalogs at the meetings, or you can view titles on the publishers’ web sites and email your order to me. If you email your order, you must include the following in addition to your name and telephone number:

For Taunton – The exact title, author, type of item (hard or soft cover book, video or DVD), the list price and the Taunton Product Code (NOT the ISBN #).

For all others – The exact title, author, type of item (hard or soft cover book, video or DVD), list price and the ISBN #.

All email orders will be acknowledged within one week. So if you do not get a response, please call me – I have vigorous anti-spam software. I’ll email you with the net cost when the books arrive. Payment is due immediately and the books are not returnable. This gives us a premium discount. Happy hunting for some really good woodworking books.

Note that discounted magazine subscriptions are also an annual event which takes place after the first of the new year – watch the February Old Saw for details.

Tony Immorlica – Book Coordinator
603-6763-9629 (evenings) or use my new email address
anthony.a.immorlica@adelphia.net

Scholarship Awards

Scholarships were awarded this past spring to Jack Minassian, Graham Oakes, Ryan Phelps, Bob St. Laurent and Jo Stone.

Jack Minassian’s scholarship was used to further his work making a copy of a 1736 single-manual Blanchet harpsichord. Jack has been working on his own and in conjunction with Hubbard Harpsichord. This has been a long term project for Jack and he hopes to finish making the instrument this year.

Graham Oakes was awarded a scholarship to purchase the necessary tools to spend time working in the workshops of Dustin Coates and Beth Ireland. Dustin and Beth generously did not charge Graham for the time he spent in their shops.

Ryan Phelps and Bob St. Laurent were awarded scholarships to study windsor chairmaking at Michael Dunbar’s Windsor Institute. Both have successfully completed their courses and I would like to suggest that sometime the Guild might consider a windsor chairmaking symposium inviting chair makers from the guild and elsewhere to demonstrate their craft.

Jo Stone’s scholarship funds were used to help allow her to participate in the 2006 International
Woodturning Exchange (ITE) as this years furnituremaker. As Jo wrote in her application “Each year, the ITE provides work and living space to five woodturners, one furnituremaker, one photojournalist and one scholar to work together for up to eight weeks. The ITE is carried out as one of the primary mission goals of the Wood Turning Center.”

The New Hampshire Furniture Masters Association was awarded a grant to further their educational programs through the New Hampshire Institute of Furniture Making and their current series of lectures and exhibitions.

Congratulations to all of those who were awarded scholarships. We look forward to hearing about your various experiences. – John McAlevey

Upcoming Guild Meetings

• Oct 21 – Small Meetings at various shops throughout NH. There are typically three to five from which to choose. An email will be sent with details of the day’s events. Or you can check in at the Guild web site in early Oct. – www.gnhw.org.

Beginner & Intermediate Group

This year, rather then demonstrate a series of topics as in the past, I would like to take the BIG participants through an entire project. The project will be a small cabinet with a drawer and two doors. The design will have Asian influence – simple and clean. The participants of BIG will obtain a comprehensive understanding of the steps, techniques and processes to accomplish the intended result. I encourage you to take the time and sharpen your skills and knowledge.

The first BIG meeting this year is Oct. 7 at Bob LaCivita’s shop at 365 Stage Road (Rt 152) Nottingham, NH from 9:30 am to 12:00 noon. Please email or telephone (before 9 pm) if you plan to attend.

Bob LaCivita
603-942-1240 or rlacivita@comcast.net

Granite State Woodturners

The next meeting of the Granite State Woodturners will be Sept. 30. This is one week later than normal due to a conflict with the annual guild meeting. David Belser will demonstrate how he makes his turned wood containers which lock with a secret code. The location is TBA. Contact Jon Siegel to be added to the email notification list.

Jon Siegel – big@proctornet.com

Period Furniture

The Period Furniture Group is a subgroup of the Guild consisting of members who are interested in building furniture in styles that originated before the Industrial Revolution – that is around 1820. Meetings typically have a presented topic plus an opportunity for attendees to present projects, either finished or contemplated. It is an especially good place to ask for advice, guidance, and support. All Guild members are welcome to attend. Meetings last year drew between 12 and 24 people and are held around NH and occasionally in MA. Meeting announcements giving directions are emailed about two weeks before each meeting.

The next meeting will be on Sept. 16, 2006 (note this is the 3rd Saturday in September, an exception to the general rule) and will be at Tom Zimmerman’s shop in Moultonborough, NH. Tom makes and restores antique clocks and we will be able to see his workshop and showroom. He is also preparing a presentation on inlay and banding.

As an experiment for this year, I would appreciate receiving RSVPs a day or two beforehand, from those planning to attend a meeting – it helps us plan the refreshments. Meetings run from 9 am to noon. It is a good idea to bring your own collapsible chair.

Contact John Whiteside to be added to the email list. If you do not have email, I will contact you by phone.

John Whiteside: 603-679-5443 or johninfremont@comcast.net

Suppliers offering discounts to Guild members

<table>
<thead>
<tr>
<th>Tools &amp; Supplies</th>
<th>Wood Products</th>
<th>Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Tree Tools</td>
<td><a href="http://www.bigtree.com">www.bigtree.com</a></td>
<td>888-TURNING</td>
</tr>
<tr>
<td>Rockler – Salem, NH</td>
<td><a href="http://www.rockler.com">www.rockler.com</a></td>
<td>603-898-5941</td>
</tr>
<tr>
<td>Williams &amp; Hussey</td>
<td><a href="http://www.williams.com">www.williams.com</a></td>
<td>800-258-1380</td>
</tr>
</tbody>
</table>

Each supplier offers a minimum 10% discount to current GNHW members – some restrictions may apply. Ads are displayed in “The Old Saw” on a rotating basis.
Each supplier offers a minimum 10% discount to current GNHW members – some restrictions may apply. Ads are displayed in “The Old Saw” on a rotating basis. See page 31 for a complete listing.