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

staining & coloring • book review • woodworking schools • adventures in lutherie
shop shavings • bandsaw drift angle • chest of drawers • northern red oak
sharpening carving tools • nine months in rockport • treadle lathe

photo by Jim Seroskie

Calendar

Feb 3  BIG
Feb 17  Guild Meeting
… University of NH – p3
Mar 10  Period Furniture
Mar 17  Small Meetings
… Three locations – p3
Mar 24  GSWT
Apr 7  BIG
Apr 21  Guild Meeting
May 12  Period Furniture
May 26  GSWT
Jun 2  BIG
Jun 16  Summer Trip
Jul 28  GSWT
Aug 4-12  NH Craftsmen’s Fair
Sept 22  Annual Meeting

Bob LaCivita  rough cuts apple stock destined for cabinet sides, top & shelves

BIG Builds a Cabinet

photo by Charlie Leto
Behind the Scenes

I am writing this message from my hotel room at Colonial Williamsburg where period furniture makers gather each January for a furniture conference. An award of the SAPFM (Society of American Period Furniture Makers) is given each year – the Cartouche Award. Tradition was broken this year. For the first time, a group rather than an individual has been honored with the Cartouche. Boston’s North Bennett Street School is the winner and is being recognized for their extensive contributions to the avocation we all share. Congratulations North Bennett Street.

Our Long Range Planning Committee is now established and consists of Dave Frechette, Jack Grube, Bob LaCivita, Jon Siegel, and Andy Young. If you have ideas, suggestions, or thoughts about the future direction of the guild, please talk with or email these folks. Their mission is to explore the possible paths we might take over the next five years. The committee’s charter is unrestricted and allows them complete freedom to develop recommendations.

As I said in my last column, we have both the rapid growth of the last three to four years. The committee will meet several times over the next seven months and will report to the Steering Committee in August. Their report will be published in The Old Saw in September.

John Pitrone of Windham has agreed to take over the job of Video/DVD Librarian from Bob Trahan. A new marriage and other commitments on his time have forced Bob to ask for a replacement. Thank you Bob, we owe you a great debt for your selfless service to the guild.

An oft asked question is – What is the Steering Committee and what does it do? The answer is as broad and varied as the interest and membership of our guild. The SC meets about a month before each major meeting and at other times as needed.

A typical agenda has a review of our budget and finances, a report on membership activities, a status review of The Old Saw, a scholarship committee report, and a report on the last guild meeting. Other agenda items vary widely and can range from reviewing requests from other organizations, planning the guild schedule for the next year, planning Sunapee Wood Week, and general housekeeping duties. Near the end of the fiscal/membership year, the SC reviews financial results and with the advice of the treasurer, it approves a budget for the coming year. All donations to other organizations, new initiatives, and expenditures for equipment are voted on and approved by the SC.

In a nutshell, the Steering Committee acts as a cross between a cabinet and a legislative body. It is the governing body for the day to day operation and it operates largely behind the scenes and without fanfare handling those small details that keep any organization running smoothly.

While occasionally there is a spirited discussion on policy or on how to achieve a specific result, the general atmosphere is collegial. Most decisions are made on a consensus basis. I hope this short explanation gives you a better idea of how the steering committee operates. – Work Safely
Feb 17th, 2007 – 10:00 am

February Guild Meeting

at the University of New Hampshire woodshop in the UNH Service Building

The next Guild meeting will be held Feb. 17th at the woodshop in the UNH Service Building. The regular session will be from 10am-12pm followed by one hour for lunch. There is a two hour demonstration from 1pm–3pm. Bring your own lunch and chair.

Demonstration by David Upfill-Brown

Have you ever tried to tune up your table saw, jointer, or other power tool? Now, David Upfill-Brown in his demonstration Taming the Beast will show you how.

David set out in the early 70’s as a sculptor, working in wood and stone in Central and Southern Africa. Disenchanted with the then growing trend towards conceptual art, he began to focus on furniture and in 1980/81, studied furniture making and design at Parnham in England. In 1982, David and wife Hermione established a bespoke furniture workshop in Canberra, Australia.

Part time teaching at the wood studios of the Australian National University culminated in 2000 in his appointment as inaugural academic director of the Australian School of Fine Furniture in Tasmania. He is now lead instructor of the Nine Month Comprehensive at the Center for Furniture Craftsmanship in Rockport, ME. – Sal Morgani

Mar 17th, 2007

Small Meetings

Now that winter has truly arrived, it is time again to put the March Guild meetings on your calendar. There are three small meetings lined up for March. These meetings will follow the same format of past year’s small meeting venue. Instead of one large meeting, there will be four meetings at different locations during the day.

The Guild’s small meeting format has met with much success, so we hope you are able to take advantage of being able to see some other shops where venue is focused to individual interests.

You must register as there is often limited shop space in each workshop. Just contact me at 603-483-1330 or preferably by email at BLSDesigns126@earthlink.net. – Brian Sargent

Goose Bay Lumber Tour – 9am to 11am

Max number of attendees is 30. The meeting will be at Goose Bay Lumber on Rt 4, Chichester, NH. Carl and Liddia will be giving a tour of their facility, which will include the small vacuum kiln, log yard and lumber facility. Carl will demonstrate their saw mill – weather permitting. This is a chance to learn something about what happens to a tree after it is cut down and how it is processed.

Curved Side Grain Inlays – 1pm to 3pm

Max number of attendees is 10. The cutoff date for registration is March 10. The meeting will be at John Whiteside’s home shop in Fremont, NH. John Whiteside has been making furniture part time for the past 20 years. He is currently taking classes for guitar making and has offered to share what he has learned. John will demo how to make a jig to do curved decorative inlays and the process of making the inlays. Come and see John’s 24x32 shop that he built himself and increase your knowledge of inlay work.

How to Make a Cabriole Leg – 9am to 11am

Max number of attendees is 15. The meeting will be at the Homestead School in Newmarket, NH. Dan Faia is a graduate of the North Bennett St. School. Dan balances his time between making furniture and teaching. Dan will show how to select the wood and then lay out and cut out a cabriole leg. This is a great opportunity to learn from one of North Bennett Street’s top teachers!
Q Moisture Stability – In dealing with a barn or garage shop, should I bring materials and projects under construction into the house between work sessions for stability (moisture threat)? – Ray Atwood

Joe Barry replies: I work in an uninsulated and sporadically heated barn shop. Moving tools in and out will cause rust. The humidity differs greatly between my barn and house. I try to do work like cutting joints and gluing in one weekend to prevent problems. I always allow 2-3 weeks for wood to reach equilibrium in my shop both before and after machining.

Q Jointer Adjustment – What is the best way to adjust the infeed and outfeed tables on a jointer so that the jointed surface is flat and straight so that it is neither concave nor convex? – Jack Minassian

Geoff Ames replies: Given that your infeed and outfeed tables are parallel, the problem with jointing usually results from one of three factors involving setup and technique:

- Your jointer knives are not flush with the outfeed table.
- The infeed table MUST be lower than the outfeed table.
- You should transfer pressure from the infeed table to the outfeed table. Do not lean on the workpiece. Let the stock transfer to the outfeed table by merely pushing the stock over the knives.

Assuming you are flattening a board, run the board concave side down. The same is true for edge jointing. And for safety’s sake, always use a push stick when flattening a workpiece.

Jon Siegel replies: Problems with jointer adjustments are almost entirely of two types: a) the outfeed table is too high (work rides up), or b) the outfeed table is too low (work snipes at the end). Neither of these defects will cause the work to turn out convex or concave. The only way that can happen is if the tables are not parallel. If this is the case you can’t fix it (sell the jointer).

So the question is wrongly conceived. For example, a good question would be: “I am having a problem with my jointer. When I joint long boards, it seems to take off less and less as I go, so by the time I get near the end, it isn’t cutting anything. What’s wrong?” Answer: The outfeed table too high.

Jon Siegel replies: You need a proven straight edge – preferably a machined straight edge that you use only for machine set-up. First check each table from end to end and corner to corner to ensure flatness. If each individual table is not flat, it is time to contact the manufacturer or a machine shop to either replace or flatten the table.

Rotate the cutter head by hand with the power disconnected so the knives are out of the way. Raise the infeed table level with the outfeed table. Use the straight edge again to check that both beds are co-planar. They should be in line with the straight edge along their length and corner to corner.

If the beds are out of plane, you need to use the table gibs to adjust and maybe even add shims to adjust the plane of the table(s). Then drop the infeed table and adjust the high point of the knives to be equal to the outfeed table’s plane.

Q Tool Speeds – Are there ‘rules of thumb’ to decide which speed to use on variable or multi-speed tools such as a drill press, router, power saw and now sanders? – Alan Saffron

Joe Barry replies: Regarding speeds and feeds, there is a lengthy section in The Machinery’s Handbook on this topic. However in working wood rather than metal, you can use this “adage” – the bigger the cutter the slower the speed. To calculate the rpm for a given drill bit the formula is:

\[ RPM = \frac{(12 \times CS)}{(3.14 \times D)} \]

- CS = cutting speed in surface feet per minute. Generally 100 sfpm for low carbon steel & soft gray cast iron. 250 sfpm for aluminum or brass.
- D = diameter in inches for drills and other circular tools

Use of power feeders for shapers and planers will also vary the speed required. If there is evidence of chips being pressed into the cut surface, it usually indicates a need to either increase feed speed or improve chip clearance. If you want another rule of thumb, it is that it is always safer to start slow and bring the speed up rather than start fast and have a catastrophic failure. Router bits usually have the speeds they are designed for in the catalog. Again, the bigger the bit, the slower the speed – and no hand held big bits!

Q Scraping vs Sandpaper – On numerous occasions I have heard the advantages of using a cabinet scraper in place of sanding. I find it hard to believe that scraping can provide a better result than progressively sanding with finer and finer gritted sandpaper using a random orbit sander and following with ultra-fine wet (oil) sanding. Please explain. – David Steller

Jon Siegel replies: The current issue of Fine Woodworking (#180) has yet another article which explains that there is no advantage to sanding beyond 220. When you use finer grits, you may think you see a difference in the surface of the wood, but once the finish is applied, actual tests show that there is no difference. There is certainly
no advantage to “ultra-fine wet (oil) sanding”.

The advantages of scraping over sanding are these: scraping smooths projecting defects such as those caused by a nick in a planer blade or a spot of glue better than sandpaper; scraping smooths planer knife marks faster than sandpaper; scraping is essentially free while sandpaper is consumed and costs money; scraping creates very little dust in the air; scraping makes very little noise; scraping consumes no electricity. In short, scraping is an aesthetically pleasing activity, while sanding with a machine is a noisy, messy chore.

Can you get smoothness with a scraper that is indistinguishable (after the finish is applied) from that of 220 sandpaper? The short answer is yes. Some people sand with 220 after scraping, and offer the opinion that wood which has been scraped is still fuzzy, and only sanding will eliminate the problem. Of course this occurs because you normally sand in both directions (reciprocating or random directions) while most people scrape in one direction only. You cannot eliminate the fuzzies going in one direction only.

Someday, when time and space permit, I will write an article about how to use a scraper in a reciprocating, back and forth, motion (like sanding) and how to sharpen it in four seconds.

Q Tablesaw Blade Guard — Does anyone know of a tablesaw blade guard that is safe and effective yet still does not get in your way?

— Bob Jarratt

Roy Noyes replies: I have been using the Microjig GRR-Ripper system for several years and wouldn’t consider anything else. The best way to understand the Microjig approach is go to their web site: www.microjig.com and view their video. The GRR-Ripper system consists of one or more push blocks (I use two for longer pieces) and a little splitter that mounts on the table saw insert. Some of the advantages are:

- Blocks cover the saw blade and keep your hands out of the way.
- Grips both the cut part and the cut off to prevent kick backs.
- Great control of wood at all times with no snipes at the end of cut.
- Holds wood down to ¼” wide.
- Saves resetting the fence when cutting narrow strips.

They aren’t cheap but are a lot cheaper than having an accident and the more you use them, the more you will like them. At least 18 GNHW members are using the GRR-Ripper. I can’t say enough good things about the GRR-Ripper system. However you have to really use them for a while to fully appreciate the advantages.

---

**Improved Table Saw Dust Control**

Openings in table saw cabinets allow dust to escape. The opening through which the saw elevation wheel moves as the saw is tilted is a significant exit hole for dust because it is in line with the blade.

The first photo (left) shows the opening in my cabinet saw. This is typical of most. Hitachi is one of the few cabinet saw manufacturers to address this problem. They have designed a moveable fitting in the cabinet of their new saw to cover the slot through which the elevation control moves. Some users have resorted to removing the table top and covering the opening from the inside with flexible plastic foam having a slit through which the shaft moves.

There is a simple fix for this problem. The telephone books I receive each year often have an advertising refrigerator magnet included of a size useful for covering this hole. The second photo (right) shows some of these sheet magnets covering most of this opening.

Using refrigerator magnets for improved dust control was easy to achieve and has worked very well.
Wood choices can have a profound impact on a design. Each type has distinct colors, grain patterns, figure, workability, stability, hardness or ability to hold detail and stand up to wear and tear. It even affects the width of the boards you are likely to find. In my last Shop Shavings, I discussed these many characteristics. Two thoughts are worth repeating. Very beautiful objects – ones with stunning form – can be made from well selected common woods. And the process of going from drawings and cutlist to a pile of rough cut materials, all before actually making anything, can take a long time.

An organized cutlist is the place to start. – how many of what sizes, which will be most seen, what might have to be glued up, and secondary woods such as for case backs or drawer bottoms. I always list finished sizes but will rough cut longer and wider. If all lumber came in wide, clear and long boards, going from cutlist to rough stock would be easy. More likely is lumber with defects, sapwood, end checks and maybe some warp. Exceptional wood has become so expensive I could hardly justify slicing a wide board into 4” strips anyway. I’m looking for stock of quality consistent with what I am making with as little waste as practical. But I don’t compromise for the sake of economy and use pieces I like less than 100%. About 15% extra is enough to handle surprises such as unseen defects, off color hidden under the rough sawn surface, weird grain – or mistakes.

Some parts in my cutlist are naturally more important than others, such as nicely matched drawer faces or a single board tabletop. I’ll choose from my best stock for these and my longest parts first. For easier color and grain matches, I look for boards from the same tree, which I can sometimes tell by finding ones the same length and width. Long boards are often better quality than short ones, because they came from trees with longer straight trunks. If I am going to use figured wood, I have to keep looking until I find enough of similar intensity. To get a better look at the color or to see how deep a sticker stain might go, I plane off the rough surface or pare some away with my knife.

The end and face grain of a board will tell you a tree’s history if you can read it. The more the grain lines resemble a topo map of hills and valleys, the more curved that tree grew, and the more chance it will remember this later on.

A crotch is the extreme of this. Swirly wood is less stable than straight even growth, but it also might be a more beautiful and interesting choice for a tabletop or drawer face. For door stiles and rails, I want the harmony of straight grain and the stability of end grain more quarter sawn than flat sawn. Uneven growth rings indicate potential problems, maybe tension or twist that will show up later.

The center pith and early growth of the tree should be avoided (it might be very dark too), but such boards can yield some beautiful narrower stock to either side. The flatter the board, the better behaved it’s apt to be as finished parts.

Any defects or knots deserve special scrutiny. Tiny, tight and bark-free knots might be blemishes, but they are probably not going to cause structural problems. Big knots can. The grain swirls around every knot creating at times some exquisite figure, but also tension in the fibers. Even the “echo” of that knot in other boards from the same log can cause a noticeable kink. Black knots or with ingrown bark can fall out. To be safe, I give most knots and defects a wide margin – unless I am clever enough to lay out cuts where they will be eliminated in a shapely chest base or apron. Knots are also entry points for rot or stain.

I mark everything as I go with a red crayon but I cut nothing until I know I have every part. It’s a lot easier to re-mark something than make do with a miscut board. To get maximum yield, I’ll cut the board any way that I have to, sometimes like a big puzzle. At a minimum, I cut parts ¼” wider and 1” longer, or more if I can, and include some extras for the most important parts. Extra longer and wider stiles can become shorter rails if I need them later. I don’t cut the smallest parts difficult to
things of almost infinite number and variety have altered human existence attest to the significance of wood as a material in everyday life...The little things...are often more difficult to perceive because they are common...But shoes, matches, toothpicks, rulers, pencils, clothespins, and the like are essential precisely because they are so used and so common, and their history, form, and shape reveal to us more complicated and unexplored regions of experience, if we know where and how to look at them.”

Green says he did not write this book for woodworkers, but rather for anyone curious about the material in a historical and cultural context. Nonetheless, I found it a fascinating read and I think other woodworkers will too. Harvey has woven a story inspired by his own experiences in woodworking and his love of New Hampshire forests.

It is hard to believe that such a broad subject could be covered in one book, but Wood by New Hampshire author Harvey Green is an amazingly complete treatment in 400 pages. A quick scan of the contents, reveals that shelter, ship building, and fine furniture are major topics, but there are also chapters on everyday objects ranging from boxes to pencils.

Interviewed on New Hampshire Public Radio’s The Front Porch shortly after the book’s release, Green said this is not just a book about a material, but because wood is organic, it is also about trees and all the symbolism they possess – life, rebirth and renewability.

So many books of this type are written by journalists who attempt to make themselves experts on some narrow subject for the purpose of cranking out a book. Green’s book is different. It has substance and depth because he is a professor of history at Northeastern University and his broad knowledge is woven into every fiber of this book. Each topic, from bows and arrows to golf clubs are given the background of history they deserve.

For example, on the seemingly mundane subject of firewood, Green writes, “As late as 1850, wood still provided more than 90% of the energy used in the United States...” It was sobering for me to consider that in 150 years, we went from that point to getting most of our energy out of the ground in the Middle East.

Green’s exhaustive knowledge of European history is nowhere more evident than in the chapter The Empire of Wood. It is largely about ships and their importance in national power, both for trade and military purposes. Few of us can imagine the quantity of lumber (two million board feet, 50 acres of trees) consumed in building just one of the 100 cannon war ships of the 18th century. Attempts to secure supplies of lumber throughout Europe and how this played a significant role in history is described in this chapter. There was also the realization of the abundance of trees in North America. Green writes, “Almost from the beginning of European contact and exploration, voyagers to the northern parts of North America remarked on the abundance of enormous conifers growing within sight of the shore. It took no genius or vision to recognize that on this vast continent were the raw materials of empire that, if secured from the invasion of one’s enemies, could be the source of riches for centuries to come.”

From immense buildings and ships down to toothpicks, this book has it all. The following quote from the wonderful chapter Little Things With a Point exemplifies the scope of this book. “The myriad ways in which small wooden
Traveling south, you’ll find that our neighbors in Massachusetts provide plenty of options for the New Hampshire woodworker. I visited Boston’s North end in November and stopped at North Bennett Street School’s annual open house.

North Bennett Street School has earned a reputation as one of the best. First established in 1885, the school got its start teaching valuable skills to immigrants. They remain true to these roots by offering unique education in bookbinding, jewelry making, preservative carpentry, locksmithing, and the making of fine musical instruments in addition to the cabinet and furnituremaking program.

Today, in the midst of the often hectic city of Boston, North Bennett Street School seems to calm things down. They pride themselves in teaching “time honored methods and skills.” At their open house, Janet Collins showed visitors around the school’s first floor workshop, and explained the pieces of furniture typically completed by students.

A talented woodworker and a gifted teacher, many of us might remember Janet from the demonstration she did a little over a year ago at Pinkerton Academy. Her lesson was one of the most clear and well put together the Guild has offered since I’ve become a member. If you missed it, or would like to follow it up with a more in-depth lesson, she is scheduled to teach a similar course at NBSS from March 26-30.

North Bennett Street School offers a calendar filled with tempting workshops like the one Janet will be leading at the end of March. Curtis Buchanan will be teaching Traditional Windsor Chair Making from June 11-22. And later that month, from June 25 to July 6, Brian Boggs will be a guest of NBSS. His week long workshop Ladder Back Chair Making promises to be another highlight of the school’s spring/summer schedule. Both workshops will be unique in that students will learn to work with “green” wood in a traditional chairmaking fashion.

If you are looking for something more than a specific workshop, NBSS offers a Three Month Fine Woodworking Intensive. The course will fulfill both Fundamentals of Fine Woodworking and Fundamentals of Machine Woodworking. It will also cover drafting and reading furniture plans, choosing and purchasing lumber and project organization. Students will use all they learn in completing projects that have been specifically designed to involve a wide variety of woodworking joinery and technique.

In addition to the workshops and three month intensive program, North Bennett Street School remains committed to turning out graduates ready to enter into a career in woodworking. To this end, they have developed their Full Time Professional Training Program. The program introduces students to all phases of cabinet and furniture making, and graduates craftsmen that are prepared to enter into the trade. The NBSS website states, “Graduates of this course work as employees or for themselves in fields such as custom furnituremaking, architectural millwork, teaching, furniture repair and restoration.”

Outside of Boston and the North Bennett Street School, Massachusetts is peppered with a number of experienced craftsmen that have organized small schools in order to teach the in-depth lessons of their specialty. David Calvo of Calvo Studio, Bruce
Hamilton of *The Wood Finishing School*, and Paul White of *Paul White Woodcarving* are examples of this brand of schooling. In contacting these specialty schools, I found them very helpful and willing to send information. I’m convinced they could be the best option for a woodworker looking to pick up or fine tune a specific skill.

Other schools, like *The Furniture Institute of Massachusetts*, have grown to compete with more established institutions like North Bennett Street School. FIM is headed by Phil Lowe, a frequent contributor to *Fine Woodworking Magazine*. Like his articles which cover all aspects of furniture making, the Institute offers a diverse schedule of workshops. Topics range from building a workbench to carving a ball and claw foot.

The Furniture Institute of Massachusetts also offers a full-time twenty-month Furniture Making Program. Students enrolled in the program will be involved in “a thorough study of classical furniture.” This year’s class graduates on June 16th. The day will also be an open house for anyone interested.

The side bar provides an extended list of Massachusetts’ woodworking schools and their contact information. Most of them have comprehensive web sites that include the new 2007 spring and summer schedule, and a good description of the school’s programs.

Like North Bennett Street School and The Furniture Institute of Massachusetts, many of these schools will hold an annual open house. And, from my experience, they are glad to have visitors by appointment. So, if you are planning to invest your time and money in woodworking education, you might also pay the school a visit to get a clear idea of what they offer. With so many options available, this extra effort can guarantee your expectations are met.

---

**Massachusetts Woodworking Schools**

**North Bennet Street School**  
www.ndss.org  
39 North Bennet Street  
Boston, MA 02113  
(617) 227-0155

**The Eliot School of Fine and Applied Arts**  
www.eliotschool.org  
24 Eliot Street  
Jamaica Plains, MA 02130  
(617) 524-3313

**The Furniture Institute of MA**  
www.furnituremakingclasses.com  
116 Water Street  
Beverly, MA 01915  
(978) 922-0615

**Calvo Studio Wood Carving School**  
www.davidcalvo.com  
186 Main St,  
Gloucester, Massachusetts 01930  
(978) 283-0231

**New England School of Architectural Woodworking**  
www.nesaw.com  
One Cottage Street  
Easthampton, MA 01027  
(413) 527-6103

**Heartwood School**  
www.heartwoodschoo.com  
Johnson Hill Road  
Washington, MA 01223  
(413) 623-6677

**Paul White Woodcarving**  
www.paulwhitewoodcarving.com  
295 Rte 6A  
E. Sandwich, MA 02537  
(508) 888-1394

**The Wood Finishing School**  
www.patinarestoration.net  
Bruce Hamilton  
P. O. Box 835  
West Newbury, MA 01985  
(978) 363-2638

---
Unlike most woodworking tools, many carving tools will perform very well right out of the box with just a little stropping. The more you carve, however, the more the need will arise to change the factory grind to perform better in a special situation.

The carving tool that I find is a primary one in most of my carving is the V-tool, and happens to be the one that I find almost unusable in as-bought condition. The reason for this is that the tool is too thick and the bevel too short so that in order to create a V-groove of the size intended, the handle must be raised way up in the air. This is an awkward position to carve in, preventing the user from resting the hands on the work, which gives the control needed.

What I do is to re-grind the tool in two major ways. The first lengthens the bevel to a long, continuous one with no discernible transition. Photo 1 shows an unmodified V-tool above a re-ground one. This regrinding enables the body of the tool to pass through the cut made by the front of the tool with very little resistance.

Photo 2 shows a bottom view of the two tools showing how the rounded keel of the factory grind (which will not pass through the cut made by the V-shaped tip) has been reground to the same pointed shape as the inside of the tool. This not only allows the rest of the tool to follow the front, but also lets the tool track in a straight line or an even sweeping curve.

This lower angle of attack permitted by our new gradual bevel also allows the carver to apply the power to the tool in the same line that the tool is travelling so that a line drawn from the front of the tool to the elbow would pass straight out the handle through the hand, wrist and forearm.

The second modification I make to some of my V-tools is to grind the front of the tool so that the wings of the tool slice the wood before the bottom of the V does thus acting like the nickers on a rabbet plane running cross-grain. This is done by lightly touching the front to a grinding wheel and putting about a five degree angle back from the tops of the V to the base where they intersect. The bevel is then carefully brought up to the edge.

I do this on the side of my wheel so that I can see what I’m doing. This back-bevel will allow you to cut not only across the grain but also in curly wood and sometimes even into oncoming grain with no tear-out.

Photo 3 shows cuts made by gouges and V-tools ground back, all cuts done across the grain.

Photo 4 illustrates the cross-grain cuts made by a small veiner with a back-grind. This shows how the cuts can be made very close to each other without tearing out.

As useful as this back-grind
is, there are places where it will not be able to cut up close to a line without damaging the wood ahead of it. In this case you’ll want to grind your V-tool or other gouges so that the bottom of the V precedes the top as in photos 5 and 6.

Here, I’ve cut a line with a razor blade and cut to it with a 9-10 gouge and a small V-tool to show the cuts. This grind is handy when reeding or fluting terminates at a turned element or where a shell’s lobes stop up against a central motif such as the rosette in an incised shell.

The ball and claw photo shows two more of my favorite modifications to gouges. Here I’m using a 5-25 gouge to smooth the ball. The front of the gouge has been slightly rounded to fit up against the web of the foot so that the ball can be finished with one or two final passes without the worry that the factory corners at the front will chew up the web. Again, grind the rounded profile first and then gently bring the bevel to it.

The second tool visible here is approximately a 7-20 with the wings preceding the bottom of the gouge and the bevel ground in a channel, or on the inside. I find this tool enormously useful in shaping the backs of the ankles of ball and claw feet as well as the claws and the transitions at the ankle in front. The modified tool is doing the work of a back-bent gouge, and the beauty of it is that you can create an endless variety of back-bent sizes not available off the shelf. You have pretty much put these gouges out of use for anything else, but if you’re doing some carving where a dedicated tool will speed things up, it’s worth it.

As far as modifying your tools is concerned, use some restraint both in the decision to do it and in the actual process of grinding. Don’t modify a tool until you need to for a specific cut. Changing it will make it great for that cut but maybe useless for most everything else, so you’ll probably have to get a replacement with a normal grind for most work.

Where the actual grinding is concerned, I can attest that most of my carving students take more than one try to get it right, especially on the V-tools. Use a very light touch, holding the tool with your fingertips.

Grind the angle of the back-grind first, then the gentle bevel of the keel back towards the handle, then chamfer the corner where the flat grind of the keel meets the side angle, slowly grinding until there is only one plane on each side that converges in a pointed keel at the bottom.

Gouges are easier. Roll the tool on the wheel and slowly lengthen the bevel until it is one continuous gentle taper back towards the handle. Remember that as you progress, the steel gets thinner and becomes more prone to burning, so you need to have a lighter touch at the end. Don’t grind right up to the edge, save the last tiny bit for a stone. I rest the tool on a bench and pick up my 1000 grit waterstone and push it away from the handle on the bevel.

Finally, when choosing carving tools, I find that the thinner the tool is forged to begin with, the less time needs to be spent at the grinding wheel and the more time can be spent doing the fun stuff – carving! ■
This is a very close copy of an original Shaker chest of drawers that is pictured in *The Complete Book of Shaker Furniture* by Timothy D. Rieman and Jean M. Burks, pp 175. I had just bought the book and was thumbing through it, looking for ideas for a piece of furniture to build for the annual Guild exhibition at the Sharon Arts Gallery. This piece was one of several that caught my eye. The original piece was built and used as a work counter. With a smaller top, I thought it would serve quite well as a chest of drawers in our bedroom. This was a piece that we could use to replace one of the old bureaus that we have. Shortly after the show, I was contacted by a woman who had seen the piece at our show. She bought the piece and I went about building a second one to have in my booth at the Sunapee Crafts Fair. That piece also sold at Sunapee and I never did get to build one for myself.

I'm still stuck using that ratty old bureau whose style is somewhere between Early Salvation Army and Late Relative. It has been a very popular piece for me, and I have designed a complete collection of bedroom furniture to go with this chest of drawers.

**Materials and Construction**

The piece is done in cherry, curly maple, and instrument grade birdseye maple to match the bed and tables that I had already built for my client. It measures 34˝ high by 52˝ wide by 20˝ deep. The drawer arrangement of four by three is proportioned in a horizontal one third to two thirds. The legs, top and frame are cherry. I chose curly maple for the side and back panels, and instrument grade birdseye maple for the drawer fronts. Poplar is the secondary wood used for the bottom panels and drawer bottoms.

Construction of this piece is fairly simple and straightforward and easily accomplished having only the basic woodworking skills. I pre-finish all of the panels before they are assembled in their frames. This way, when the humidity level drops, the panels will not be left with that faint line of unfinished wood. The case is a good exercise in frame and panel construction with the legs acting as the stiles of the frame. And with the drawer runners also mortised into the legs, it becomes an extremely strong piece. Assembly can be a bit tricky but if broken down into component groups and then assembling those groups, it really goes together quite nicely.

**Case**

The three poplar bottom panels and its frame constitutes the bottom group. Three curly maple panels, the top and bottom rails, the two center stiles and the rear legs are the back group. The two front legs and the drawer dividers and center stile are the front group. This is where the accuracy of your layout really pays off. After turning the lower portion of the legs, I clamp all four legs together and mark them as a group, using a square to transfer my lines across all four pieces.

Chop your mortises and rout a groove for the panels. Pay particular attention to which sides are your outside face and on which edge of the inside face the mortises are to be cut. I’ve ruined more than one piece by not taking the time to check all my marks before I started cutting.

I begin by making up the case front, the back of the case, the case bottom and drawer runners as separate groups. I also make two extra pieces of stock mortised the same as the side of the rear legs. These will be used to aid in alignment of the drawer runners, and

*Zero entry dovetail*
the top and bottom side rails during gluing up. I leave the bottom a bit oversize and then plane it to size as it is fitted in the whole assembly.

Most important is to keep checking for square as it is very easy to glue this up slightly racked which would make fitting the drawers a real nightmare. When I have the front of the case glued up and out of the clamps, I glue the drawer runners to the front of the case, the top and bottom side rails and then slide in the side panel. I use that extra piece with the side mortises cut into it to align and square the sides. I put a red mark on the rear tenons to remind myself not to put any glue there just yet.

With the sides attached to the front, I slide the bottom into a dado that I cut in the bottom side rails. I positioned this dado so that the top side of the case bottom is flush with the top of the front bottom rail. In doing this, the dust panel frame also acts as the bottom drawer runners. I'll then remove the two side alignment pieces and glue on the back assembly.

**Drawers**

I originally planned on re-sawing the birdseye into ¼˝ veneers and then applying it to the drawer fronts. But by cutting and sanding wood with this amount of figure this thin, I was destroying more pieces than I was making. Trying to scrape out the saw marks was a complete disaster – it only produced more tear-out. Due to the very limited amount of this birdseye maple that I had, I would not be able to resaw it any thicker than ¼˝. At that thickness, I would have just enough material for the drawer fronts.

Matching the color and figure of this wood from another board would be nearly impossible, and finding more stock with this amount of figure right now was not possible. After lots of praying and rechecking the bandsaw, I decided to go for broke and cut for a ¾˝ front. After lots of sweat and more prayers, I had my drawer fronts. With this success under my belt, I decided the drawers would look better if they were lipped with a thumbnail bead.

The drawer boxes are of straight grained maple with poplar bottoms. In cutting the dovetails for the drawers, I like to use what some call a “zero entry dovetail”. This type of dovetail is where the cut for the narrow point of the pin is just the width of the saw kerf. A pin this narrow may not be as strong as a wider pin but is still plenty strong enough given the forces the drawer will be subjected to. That fine look more than makes up for anything that may be sacrificed in strength.

I also pre-finish the inside of the drawers before assembling them. This not only saves time but it also makes glue clean up much easier.

I turned the cherry knobs from scrap stock making the four knobs for the smaller drawers slightly smaller than those for the larger drawers.

**Finishing**

I sand all of the parts to 120 grit when I do my final dimensioning and before I cut any joinery. After glue clean up, I’ll sand up to 180 grit and then wet the piece. This is not only to raise the grain but it also makes any missed glue spots more apparent and raises any of the little dents and dings that worked its way into the project during assembly. Then I back down to 150 and hand sand back up to 180. Wet again just to make sure you've got all the glue and if so go to 220.

I finished this piece by spraying three thin coats of lacquer and then a light sanding with 220 grit followed by three slightly thicker coats. After letting the finish cure for a few days, I rub it out up to 600 grit using mineral spirits as a lubricant. Polish off with 0000 steel wool and a coat of renaissance wax. ■
Good joinery is an area of woodworking that brings me great enjoyment. There is something about making and putting together a well engineered and fit joint – one that has mechanical integrity, is sympathetic to the structural and hygroscopic characteristics of wood and is not necessarily dependent on adhesives to hold it together. If I could put my finger on it, I’d say it’s making something that will have longevity.

The Slide Lock Dovetail

I occasionally use a “slide lock dovetail” which is mostly router cut. I learned it while working as an assistant in Jere Osgood’s studio. It’s roots can be found in traditional Chinese joinery. Jere was building a large office credenza made from Sonokeling – a plantation grown rosewood. It had an assortment of drawers, file drawers and storage shelving behind doors. It required a number of interior partitions.

After seeing the joint go together, I eagerly looked forward to trying it in my own work partially so I could remember how it was done. It’s a great joint to use when joining wide solid panels that intersect at a right angle. This could be in a cabinet partition to a cabinet bottom or an extra wide drawer front where the front overhangs the sides.

Using a standard sliding dovetail when making connections in stock 10˝ and wider presents a number of problems. The number one issue is the basic fact the tail has to travel a full 10˝ or more before it’s home. This can be tough if the joint is nice and tight. Start paring some off the tail so it will go the distance and you end up with a sloppy joint. We soon learn that the tapered sliding dovetail is the answer because it gets tight just before it’s home. I feel I have more control with the slide lock dovetail because the tail section is dropped in and slid a short distance until it’s home no matter what the width of the stock.

Accuracy

It is a joint that requires accuracy with your router set ups. Actually, having two routers would be a plus – one with a straight bit and one with a dovetail bit. I’ll try to touch on accuracy as I lay out the steps, but basically for me, it amounts to being able to put a sharp point on a pencil, draw a straight line and having a full and complete understanding of what square means and is… and of course being able to measure. So excellent layout tools are essential.

Drawing full scale can be a valuable tool when building furniture especially when planning joinery, so this is where I start. After laying out the size of the tail proportionate to the stock I am using on paper, I transfer my layout lines onto the stock. The socket piece will be made first and I’ll need two lines delineating the thickness of the side that will be joined to it and a center line.
**Router Setup**

To get the router setups, I have a test piece that is the exact thickness of the tail piece, and a test piece for the socket. I clamp a straight edge to the socket piece and with the dovetail bit set at the finished depth, I run it in a short distance.

From this test cut, I can get information for the exact location of the fence in relation to the cut. I square up and measure as needed and make a small layout block from a piece of ½˝ hardwood plywood that will be used for setting the fence. I have a collection of these little blocks each made for a specific fence setting depending on what bit is in the router.

**Cutting the Socket**

**Standard** practice when making a sliding dovetail socket with a router is to waste the bulk of the material in a few light passes with a straight bit first. Set the depth just shy of the finished cut to let the dovetail bit do the final milling of the bottom as well as the sloped sides of the socket.

Setting the fence once and switching between the straight and dovetail bits is the key to maintaining parallelism in the joint. This is where two routers can be helpful. Use spacer sticks as needed against the fence to get both bits running on the same center.

To lay out the “escapements”, the socket is divided into equal increments of about 1¾˝. A story stick is helpful here if you are doing multiple joints. An odd number of increments will give you a “locking tail” at both edges which is important.

A straight bit is used on alternate sections to remove the sloped sides created by the dovetail bit. Use enough width to permit the tail to be dropped straight in. Again the fence has not been moved and spacers have been used to achieve the desired cut.

**Cutting the Tail**

Next it’s on to the tail section. For large scaled work, I’ll make the cuts with the panel clamped vertically in the vise. I’ll clamp a squared up 2”x4”-plus block of hardwood to the side of the panel and flush with its top edge. This gives a wider and more stable base for the router to ride on. Smaller size pieces could be done on the router table.

I’ll get my router fence settings with the test piece and set the depth just a blonde hair shy of the socket depth so the tight tail will pull the shoulder tight. When I’m satisfied with the fit of the tail on the test piece – admittedly this can be fussy – I mill the tail on the panel.

With the story stick I lay out the increments on the tail and mark clearly every other section opposite to what was done on the socket. With the straight bit now in the router, remove the slopped sides of those sections leaving only a web between the tail sections. This web has no real structural value when the joint is together other than to give strength to the tail sections. It’s always a relief to put the noisy router away and pull out a sharp chisel to cut back the front tail slightly for a shoulder.

**Glue Up**

After checking the fit, the joint is ready to be glued up. The glue can be managed nicely here by just brushing it on the tails and sockets. Since it’s not going a great distance there shouldn’t be excessive squeeze out. Drop the side in and tap or pull forward with clamps if necessary the 1¾˝ or what ever your increment is until it’s home.

The first time I made this joint, I spent a little time trying to figure out how the joint could come apart. It became obvious that it was going to be together for a long time…and that is a good feeling.

Ted Blachly makes fine furniture in Warner, NH. Ted is also a past Guild president.

---

**Editor’s Note**

If you have a joinery technique you’d like to share, we’d like to hear from you.

– Jim Seroskie
As reported earlier, Franz Summers, myself, and Paul Miller received a Guild grant to help us study lutherie – the art of guitar making. We are just over four months into what will probably be a year-long effort in building our first guitars. This is the second in a series of three articles detailing our adventures. Fortunately both Franz and Paul have become excited enough to plan their own articles, leaving me free here to focus here on an aspect of lutherie that has utterly captivated me – the making of rosettes.

I have now spent about 200 hours on the work here described and the first photo above shows what I have so far achieved. What you see is a side-grain guitar rosette in a circular modification of the classic Greek key pattern. The 130 separate pieces (each of which is in turn made up of small strips glued together) are placed loose on a test board. The test board has a 1 mm deep circular channel cut into it, with outer and inner diameters of 68 mm and 55.5 mm respectively. This is exactly the size of the channel on the soundboard into which these pieces will eventually be placed, glued, planed flush, and French polished. The woods are ebony and holly. The ebony dust you see on the holly is a result of sawing the pieces and will disappear with the final planing of the surface.

It is difficult to convey how much fun it has been to progress this far and how surprised I am to be doing intricate inlay, something I never would have imagined wanting to undertake. It just goes to show the remarkable benefits of belonging to the Guild which provides inspiration, camaraderie, and even financial support.

The process of doing this is fairly elaborate, so this article will just cover some of the highlights. One highlight is that this is side-grain inlay – the grain of the holly and ebony strips runs parallel to their long axes. Most guitar rosettes are not like this. Instead, they use bundles of tiny strips with end-grain showing, which is considerably easier.

Another highlight, in terms of an interesting problem to solve, is the geometry. The Greek key is a rectilinear design which I wanted to transpose into a circular pattern. Below is my final ten times scale drawing which shows some of the intricacies. The right angles in the original pattern fall along precise diagonals.

In a circular version, this is impossible because the points describe a spiral. So the design has to be a compromise of some sort. If you look carefully, you will see several places where the corners do not fall precisely on the diagonal lines. Many adjustments were necessary to get them as close as they are. One of the most important was recognizing that the vertical strips do not have parallel sides – they have a slight taper.

I achieved this taper by building a special jig. Indeed the entire pattern required making twenty jigs and this one shows how they work. It consists of two maple blocks mounted on a flat piece of MDF. Between the blocks is a channel in which a third piece of maple sits (Photo 1). The top of this third piece is slanted such that on one side, it is 1.95 mm below the surface, and on the other it is 1.55 mm below. A small slab of ebony or holly, precisely 12.5 mm in width is placed into the channel and then a block plane is run repeatedly over the top until the slab is planed down to the level of the side blocks. The plane blade does not dig into the side blocks because the blade does not extend all the way to the sides of the plane. Notice a rabbit plane would not work in this application.

The next photo shows how this works from above with the plane in place (Photo 2). In case I am not making a slab, rather I am defining one side of a glued up sandwich of slabs, which when flipped and planed on the other side will become a log. This particular log makes the “alpha” piece which you can identify in the drawing – I found it necessary to give all
the pieces names to keep them straight. The alpha log itself is shown in the next photo (Photo 3). Later the actual inlay pieces that go into the rosette will be sliced off this log, in fashion similar to slicing pieces of bread from a loaf. First, though, in the case of alpha, there is another special operation. Consulting the diagram we see that alpha, the top-most element, is in the shape of a triangle. The long side butts up against the edge of the groove, which is curved. The diagram shows how the alpha corners extend outside the groove by 0.35 mm. To correct this, I sanded that edge of the log using as a sanding block the inside surface of a 68 mm diameter hole cut in a piece of wood. This had to be done before slicing off the 2 mm thick elements which are too small to handle for such an operation. The need to do this made for a further complexity; the outermost ebony slab on the alpha log had to be 0.35 mm thicker than the other slabs – which meant, of course, an extra jig.

The next photo shows all of the five pieces needed to make up the pattern (Photo 4). The most complex is the right-most piece, called delta – notice the tapered elements in this piece. Delta required five jigs. The first two are shown in the next two photos, giving some idea of the shaping sequence (Photos 5 & 6). Notice how once one surface of the log is planed in jig delta 1 (Photo 5), the log is rotated to fit properly into jig delta 2 (Photo 6). Thus the jigs have to be used in exact sequence. The striped log bits glued in the ends of the jig channels are stops. I made them of the logs themselves to give a visual guide as to how to place the log in the channel in the proper orientation.

For all of this to work out, elements have to be cut to an accuracy of 0.1 mm or less. The angles have to be extremely precise as well. I had to redo a number of the jigs several times to get them right. Getting the angles correct is not as hard as it sounds. Notice on the delta jigs that corners are taken off the maple blocks to get the correct angle for the groove. To cut these corners, I scribed lines along the length of the blocks using a marking gauge set to whatever distance was required as given from the master diagram. Then I planed down to those lines with the block plane. As a double check for accuracy, I also measured the width of the revealed angled surface, which is derivable from the master diagram.

A final check on accuracy is whether the patterns come around full circle. According to the plans, it should take 27 pattern repetitions. The picture shows 26 and a gap that is not large enough to hold a 27th. It is about 7 mm

Continued on Page 23
This past fall, I had an opportunity to show recent work at the Anderson-Soule Gallery in Concord, NH. This show was unusual in that it was not speculative work being shown, but was part of a collection of work I've been doing for a customer of over twenty years running. The pieces exhibited were the most recent of these fifteen pieces. A settee in the show, while having a different owner, was related to these other works both stylistically and by its original patronage of the first rendition.

There were four pieces shown – all significant and all consuming in conception, design and creation. They were: stone and cherry hall table, library table, armchair and the settee. As with most of my work, I follow a traditional format and aesthetic. It works for me and I enjoy designing within prescribed parameters while also pushing my ideas and interpretations of its pattern language.

I will concentrate my written efforts here on the library table.

Griffith Library Table

I consider this mahogany table one of my finest pieces to date. I truly enjoy the challenge of taking successful existing form and redesigning it to reflect my aesthetic sensibilities as well as my patron's interest in my work and its function and presence in her home.

In the case of this table, inspiration was found in the documented library table made by John and Thomas Seymour of Boston of about 1815. This period design is especially appealing for me because its form in both proportion and detail is delicate, highly detailed and employs differing materials and processes in its creation. Also, the fact that this classical design is also the

Materials
- Primary wood – mahogany and cuban mahogany veneers
- Secondary wood – white oak, maple and cherry
- Brass, leather

Griffith Library Table 2006

photos by Bill Truslow
root form of much of Shaker design is important to me because of my connections to Canterbury Shaker Village.

I did feel, however, that the inspirational piece was lacking in design development. To me the connection between base and top was ill conceived and irrelevant to the rest of the design. In my redesign, I elected to transform the uninspired rectangular posts into two pairs of turned columns that are a reflection of the medial stretcher and tie in seamlessly with the formal drawer arrangement.

The second major visual introduction I made was in the use of carving. These carved details in the legs and turnings follow a random, organic nature rather than the typical and expected carved detail. Typically carvings are repetitive, symmetrical and rigid as on the Seymour table. I was looking for something much more playful and relaxed but at the same time developed and formal. I chose to use native wild flowers for this purpose. Blue flag (wild iris) was chosen for the legs. The form of the plant perfectly fit the space, is linear yet flows and is sensuous. The turnings use the bindweed (wild morning glory) vine for its propensity to wind around and climb objects. A more random and chaotic approach was chosen to create balance. Five patterns of flowers and multiple patterns of leaves were developed from life drawings and later clay modeling. These patterns were then orderly but randomly laid-out on each turning. The result is a balanced look on all these parts but clearly each being distinct and varied. I believe it is very successful and a unique approach.

The upper casework contains four drawers, finely dovetailed with interiors of quartered white oak. This table has two drawers on each side. One of the sides employs disguised slides that function as an alternative writing surface to the main table top and an adjustable pitched book support. These slides are framed in mahogany and paneled with leather. The articulating book support was particularly challenging in that I had ½˝ to create this feature, make it function and have strength. Using veneered plywood and cocobolo framing, I was able to overcome these challenges. I also spent considerable time developing a brass mechanism that could solidly support a heavy reference book and fold away. A local model shop supplied me with brass stock that I later attacked with a hack-saw, drill and torch. The result was very satisfying.

The polished drop-leaf top has extraordinary Cuban crotch mahogany veneer. The exceptional width and swirl pattern of the veneer reflects the randomness of the carved detailing. The drawer fronts also use this same Cuban mahogany material and demonstrate a randomness in the material layout that is very pleasing. The two drop-leaves are each supported by a pair of solid wooden knuckle hinges carved of mahogany with an elegant profile.

The final design element is the use of brass. The feet and pulls are a typical approach. I chose a simple form of ring pull for the drawers so as not to distract the eye from the mahogany figure but still relate to the feet. One of my favorite uses of brass on this table is here on the beading on the base plinth and on the lower edge of the drawer faces. These fine lines of brass are just enough to tie the elements together and provide a solid sense of formality to the design.

There are many subtle details in both construction and patterning on this piece that seem difficult to include totally – such as the veneer detailing around the drawers faces and framework. Hopefully the viewer will relish the discovery of many of these features over time and appreciate the incredible effort of such work the longer it is in ones’ presence.
My interest in woodworking was always percolating beneath the surface. I got a Shopsmith about thirty years ago and eventually taught myself to turn. Syd Lorandeau then introduced me to the Granite State Woodturners, which in turn caused me to start going to Guild meetings. I took a one month course at the North Bennet Street School to see if I was really interested in learning more and decided I was. I applied to the two year program at North Bennet and was wait listed. The Guild field trip in June of 2005 was to Maine visiting Lie-Nielsen and the Center for Furniture Craftsmanship. The Center’s emphasis on design and doing a variety of projects and the fact that it was nine months instead of eighteen and the fact that the shop never closed won me over. I applied and was accepted.

I rented a house about 25 minutes from school and moved there in September. School was from 9 to 5 with an hour for lunch, but these were the hours of instruction. You could come and go as you pleased. I usually started between 7 and 8 and finished between 6 and 7. There was one instructor, David Upfill-Brown, who was with us for the year. However, he always had a co-instructor who changed with each project. Two half days a week were devoted to didactic learning which included drawing, inlay, veneering, finishing (paint, shellac, lacquer spraying, varnish, stains, dyes, etc.), carving, etc. We also took field trips to furniture companies, woodworker’s shops and museums among others.

The projects were:

- Four boards joined with dovetails and a through mortise and tenon (usually a stool)
- Tool box to a set design - a machinery project (finger joints, hinges, curved piece with shaper
- A door and a drawer - something with at least one and no more than two drawers and doors
- Bending - something with bent wood, either laminated or steam bent, veneer encouraged
- Multiples - something with a retail value of under $300 made in a batch mode
- Chair - had to be a dining chair
- Final - anything we wanted - an opportunity to explore new things or make a show piece.

There was a set period of time for each project and it was to go in the basement at the end of it.

I have included pictures of my projects. The three that drew the most interest were the coffee table, the chair and the cradles. Pictures of the coffee table were published in Woodwork and Woodshop News and the chair was in an article in Maine Boats, Homes & Harbors and was shown at the Philadelphia Furniture Show. I will briefly describe the making of each. Like all the projects (except the tool case), these were of my own design but there was a lot of help from the instructors.

**My Tool Chest**

The tool chest was an exercise in machinery. Only the interior was of the students design. It held our hand tools for the remainder of the course and each of us hung our’s on the wall by our bench. The hand tools I used most were the bench chisels (in my case a motley selection purchased at auctions and antique stores) followed by the bench planes (mostly #5 & #6), block plane and scrapers.

The tool chest was made to teach us how to use machines, to work from a pre-existing plan and to work in a production mode. This was our second project, the first being a stool from four boards which taught us to use hand tools. For the tool chest, we were instructed in the use of the jointer, planer, shaper, band saw, drill press, router and table saw (with use of a finger joint jig). The chest carcase was made with solid rails and stiles joined together with finger joints. The door frames also had solid rails and styles. All the corners of the doors were mitered with the inner corners (hinged side) with a spline running across the grain and the outer corners joined with a spline running parallel to the grain.

Each door and the carcase was required to have a permanent shelf attached. These were jointed with a through mortise and tenon and we were given the option of using birdmouths on the doors. The back and door panels were plywood and we were given the option of veneering these. The rear panel was two pieces with a solid stile in between. These were joined using biscuits. We had the option of putting in permanent or adjustable shelving and
After one side of each was done, fixing them was a large part of our learning. Since the plywood was birch, I varnished or shellac. Because I had veneered the door panels. I did wood mainly because I had some. was attached to a jig which would hold both curved pieces in place for running through the shaper. After one side of each was done, the pieces were swapped and the procedure repeated so that both sides of each piece were clean and identical.

I choose cherry as my solid wood mainly because I had some. Since the plywood was birch, I also opted to veneer it. I picked out some matching sheets of curly cherry and, using a vacuum press, veneered the door panels. I did not do the back but put the dark cherry and, using a vacuum press, veneered it on with a poor quality brush and finished with a choice of varnish or shellac. Because I had not used shellac before, I chose it and learned what not to do. I put it on with a poor quality brush and spent a lot of time sanding off the streaks. Making mistakes and fixing them was a large part of our learning.

The interior was customized by each of us. I have a mixed set of paring and mortising chisels and wanted to have the most used readily available. I drilled a series of holes and then cut channels to each hole. Finally I countersunk holes to screw the board to the door panel, drilled pilot holes in the door and mounted the chisel holder. I did two more holders for my carving chisels and put the ones I used mostly on the door. I used the shelves in the carcass to hold my bench planes which ranged from #3 to #8. I found I used the #5 and #6 mostly, probably because they were tuned the best. I also kept a couple of block planes (used all the time), a jack plane (used a lot in making the cradles), and a shoulder plane. I made a holder for my small square and for my collection of scrapers as well as a holder for my markers which have little gates to keep them from falling out when the shop is humming.

The chest is now in my shop and still holds about what it held before. The carving chisels have moved out to join their brethren it a bigger rack on the shop wall. I have yet to decide what will replace them in that space.

Cherry Coffee Table

The coffee table top was made of four plywood discs with space routed out of each for the glass. Two discs were sandwiched over the glass on each end to form the top. The lips of the discs over the glass opening were veneered after routing but prior to gluing. Then the two sets of discs were glued together and the remaining surfaces veneered. The glass was attached by sliding it into the slot and using a silicone adhesive.

The legs were made with considerable difficulty. Cherry was resawn to approximately ¼”. Then a ¼” groove was cut in the center of each board to allow another piece (also grooved) to cross it to form an “X”. All pieces were then steam bent around a mold. After drying, the now somewhat curved pieces were epoxied together and vacuum laminated around the same mold. There was a hole in the center of each board to hold them in place, but the methodology left something to be desired. It was hoped that the x-legs would be usable right from the mold, but there were some epoxy filled gaps at the joints so, after cleaning up the legs with a spoke shave, the legs were also veneered to hide the gaps.

This was an opportunity for me to learn to use hide glue. The rail between the legs was turned with a dowel at the end to go through the guide holes in the legs and the balls to cover up the dowel were also turned. The legs and rail were very rigid when glued together. The top was attached with dowels and the table was shellacked.

Bent Wood Chair

The chair was to be a reproduction Chinese chair. Our co-instructor was David Caldwell and I was talked into making a chair from bent wood with considerably fewer joints. As with all our projects, we did drawings and mockups. Please look at the picture of the chair so you will have some idea what I am talking about. My mockup for this chair was made with an adjustable spoke going to the curved leg. The chair has spring because the bent ash is not restrained at the top. By moving the spoke, the fulcrum changed and so did the seating characteristics of the chair. With the spoke in the middle, there is some spring for a small person but not too much for a large. In using the chair for dining, when one leans forward to sip one’s soup, the chair goes with you and when one leans back to savor the post prandial brandy, the chair moves too.

The chair legs were made by steam bending ash to a mold then drying the ash in an oven to keep the precise curvature desired. I did not think this would work but it really did. I was able to reproduce the curve without difficulty. The leg assembly was made separately from the seat assembly. Other than the curved piece, the remainder of the leg assembly is made of dowels and hubs like tinker toys. This hub
and spoke idea was carried to the back assembly. The seat was made of a plywood base and then wedges and a plywood cut out to contain the upholstered plywood center. Initially the seat was attached to the legs with hidden furniture bolts covered with epoxy. But the epoxy would move in relationship to the surrounding wood and I never was able to get a good paint surface. Eventually, the hidden bolts of the seat were drilled out and replaced with carriage bolts. The seat was upholstered with foam and fabric. The most work and the least fun was getting a good enough surface to cover with black gloss paint.

**Two Cradles for Twins**

I had heard of people making furniture from wet or green wood. As a turner, I was familiar with green wood and wanted to make something from it. The instructors assumed this would be a chair but they were wrong. My son and his wife were expecting twins so I decided on cradles. I visited Plymouth Plantation to learn more about riving wood, but no one was riving that day and the furnituremaker was off. That was a bust but I got information on the internet on pegged mortise and tenons and clearly people made things from green wood. My brother-in-law came up with a fresh red oak log and I was in business. That was until I split the log which had an amazing twist. After a few days of frantic phone calls, I found some white oak logs at a firewood mill near Bangor, ME. Off I went and we split it on the lot with wedges and a hammer and found it to be reasonably straight. The guys were so interested they gave me the log.

The process of producing boards was straightforward but time consuming. The split log was cut into lengths using a chain saw and then split into smaller sections again with wedges. Once manageable, the boards were split off using a froe. For those of you who have not used a froe, it is very different than splitting with wedges. The froe is started at the end of the log using a mallet, then the non-froe end of the log is wedged under something (traditionally a tree fork) and the handle of the froe is bent down or up forcing the wood fibers apart. A block is inserted in the end and the froe moved down into the just made space and the process repeated. If the grain is true, it goes rapidly. Hit a knot and it takes forever. The nice thing is that you end up with a board that is unlikely to cup or warp because it is in the same shape as it was in the tree. It will of course shrink somewhat. Once split out, the board is squared up by removing the pointed side that is not thick enough and removing the material from the thick side. This is done with an ax, draw knife and jack plane. It takes a while but is very soothing. The board is then flattened with a plane or in this case, since I wanted a rough look, the inner board was flattened and the outer was wire brushed until there were no more splinters. I used a power drill with a wire wheel.

Once the boards had been made, the rest was straightforward. Mortises were cut in the posts but rather than the usual rectangular mortises, they were adjusted to fit the incoming boards where they were thin so they were a little wavy. Tenon were then cut on the thicker parts so the board and the whole was joined with draw pegs. I was very nervous about using draw pegs where the holes were designed not to line up to force the tenons to be tight. My fears were for naught. I made my own dowels out of oak and hammered them in without difficulty. They did draw the joint together nicely but when there was a problem which there inevitably was, I found that I could pound out the pegs, fix the problem and pound new ones back in. The rockers were made from thick boards (about 1” - 1½”) and I started out by sawing them with a coping saw. That did not work, so I chiseled them to shape and smoothed them with a spoke shave. They were also pegged onto the corner pieces. The floor boards drop in and are pegged. The upholstery is foam covered with a king size pillow case. This was fortuitous – not good planning. Before final assembly, I carved the twins names into a board. The finish was linseed oil and beeswax.

While far from an accomplished woodworker, I do know a lot more than I did and I also know that I am going to keep my day job. I would like to thank the Guild for the scholarship grant.

![Two Cradles for Twins](image1.jpg)
Ever notice how hard it is to rip a piece of wood on the bandsaw, especially ripping a tall, thin piece – re-sawing. You set your fence which you previously aligned parallel to your miter slot. You set the width of the cut allowing a little extra for a jointer pass. You line up the board against the fence and push. And pretty much without exception, it will either crawl away from the fence, or bind against it causing the blade to deform sideways away from the fence. The end result, in either case, is a tapered, irregularly shaped piece of work.

The effect is usually exaggerated as you rip taller pieces. And it’s more noticeable when you are ripping thin pieces. It is usually devastating to your project or else you cut extra thick to plane it true, wasting valuable wood.

This is a 100% common experience with bandsaws. The basic reason is that the blade is not parallel to the miter slot. Several factors are the cause including blade tracking on the wheel, wheel alignment and blade tension. In the ideal world we would tune those out. In reality it’s very difficult, won’t stay for long periods, and actually has a pretty easy work-around. The answer is to “compensate”

Take a piece of ¾” scrap at least two feet long and about 4” wide with one clean, straight, jointed true edge. Draw a line one to two inches parallel to the clean edge. Use a gauge if necessary but the line must be parallel to the edge.

Loosen the angle adjustment on the fence. If you have a factory fence that takes a wrench to set the fence angle, you might want to build a your own adjustable fence system. See the photo of mine for one approach; this one also has a tall fence for 10” re-saw.

Slide the saw fence safely off to the left but keep it accessible. Start a freehand cut along the line on the test board. Be smooth in your adjustment to follow the line. Don’t wander back and forth. In other words, don’t be swinging the board left and right to stay on the line. Make little corrections so that you ultimately establish a “cut path” before you run out of board. Cut slowly and continue until you get a cut that is tracking the line.

About three quarters of the way through the cut, or when you are sure you have established the track, holding the board firmly, turn off the saw. Do Not Move the board. Clamp it to the table in this exact position or hold it firmly. Slide the fence against the clean edge and tighten the angle adjustment. That’s the tracking angle for this blade under this tension at this particular time.

I was skeptical, especially when I could see the offset angle. But then I cut a ¼” slice off a 6” board three feet long. Awesome! I never knew the saw could perform so well.
Fine furniture and cabinet work often starts with carefully chosen woods that have appealing grain and color. Although the natural wood is often desirable, even the most colorful woods can be enhanced by the addition of extra color. The many brands of stains on the market have one or two basic components that make up color. 

Dyes are colorants that totally dissolve in a vehicle (solvent) and are nearly transparent in that they do not obscure the grain.

Pigments are finely ground, solid particles that, when suspended in a vehicle, will partially or totally obscure the grain. Partial pigmentation would be typical in a glaze color for a translucent effect. Full pigmentation makes a paint. If you want to alter or enhance the color while maintaining the clarity of a nicely grained wood, then a dye type stain is the best choice.

A basic finishing schedule combines an application of stain followed by two or three coats of a clear finish. But the addition of color can be much more creative by using a layering technique. For instance, a thinned coat of stain can be followed by the addition of a little color in the first sealer coat. Some finishes like varnish already have a natural amber tone and shellac, an excellent sealer, is available in a range of subtle ambers and browns. To these or any finish, you can add compatible aniline dyes, either liquid or powder, in very small amounts to vary the tone. This toning “layer” still maintains the clarity of beautifully figured woods.

After stain and sealer you may want to highlight the pores of open grained wood. I am not a big fan of thick, slow drying grain fillers, but I do find that when thinned with the appropriate solvent, they can be used as a glaze to highlight grain. Alternately, there are manufactured glazes and wiping stains available in basic colors that use pigments and dyes. The key ingredient here is pigment because it provides the contrasting color that will lodge in the pores of wood. Open grained woods like oak, mahogany and walnut readily accept glaze when applied with a wiping technique. Even close grained cherry will accept some glaze.

I often apply a relatively slow drying oil based glaze that has a dark brown, almost black pigment, wait a few minutes for it to partially dry and wipe off the excess.

If your desired result is enhanced grain without an aged look, experiment with a lighter, perhaps medium brown glaze. Let your glaze coat dry thoroughly. This is important, especially when using an oil based glaze because your subsequent top coats must adhere well. Twenty four hours should be enough for a well wiped, thin coat of glaze.

Shellac comes in handy again to seal in the base layers of stain, sealer and glaze. I recommend that you brush or spray this coat (approx. 2 lb cut) rather than wipe on so that you do not pull the glaze color. Remember that the shellac can be either clear or colored, giving you the option of one more layer of color for the finished effect. Dewaxed shellac is a good choice because it provides good bonding between the initial base coats and the following top coats.

It is ideal when you can topcoat a project with the same or compatible finish. If you use shellac in the sequence described above, then shellac remains a logical choice.

When table top durability is needed, however, I often switch to varnish. It’s tricky to assess every combination of compatible finish over stain, sealer and glaze.

Rely on the manufacturer’s recommendations and do a test board. One or more topcoats will produce a fully finished look and, in keeping with the layering technique, you can add small amounts of color (usually dye) in your top coats if desired. Remember that the natural ambers and browns in varnishes and shellacs will add a minute amount of color at this stage.

Many finishes get rubbed down after the topcoats have dried. An old stand-by for “finishing the finish” is to use fine steel wool followed by wax. Here is your last opportunity to add color. Light or slightly colored paste wax on light woods and darker wax on dark woods will add depth to a finish, but also consider that colored wax can slightly alter the final effect. Two examples are a reddish wax that can highlight the color in a finish or a medium brown wax that often can tone down the color in a finish.

Coloring wood is challenging and, of course, practice is the key. Study the supply catalogs, get to know what colorants are compatible with the finishes you use and make sample boards for yourself. The next time you are asked to do a special color, you may find yourself moving beyond an off-the-shelf can of stain.
As a tree, the botanical family that includes the oaks began about 90 million years ago, probably in Asia. Evolutionary studies suggest the first Quercus appeared in Southeast Asia around 60 million years ago.

The northern red oak is a member of a very large conglomeration of trees; the Quercus genus is now variously estimated at about 500 species worldwide, depending on who is counting. Fold in the tan oaks of the genus Lithocarpus and the number increases by 100 to 200. Further increasing the numbers (and confusion) is the fact that the oaks are an incestuous lot, commonly hybridizing among one another.

All oaks today are found in the Northern Hemisphere except for a few outcasts in Columbia and Indonesia. Of the 68 species indigenous to North America, 58 are found in the U.S. These oaks are generally “simplified” into two groups: the white oaks that include the white, chestnut and the live oaks, and the red oaks that also include the willow oaks.

The northern red oak (Quercus rubra) is the most cold-loving and widely distributed oak in North America. It ranges from Nova Scotia and the northern tip of Maine across southern Canada to Minnesota, and south into Oklahoma, Alabama and Georgia. A notable exception to this range is the central Adirondack Mountains of New York where it gets too cold.

Northern red oak may be called red oak, gray oak, eastern red oak, mountain red oak or common red oak. It grows well in a variety of soil conditions doing best in deep, well-drained loam in any topographic position. Not very fussy in climatic requirements, it only seems straight, supporting a broad, symmetrical, rounded crown of heavy radial branches and an upright lead shoot. Forest-growing trees have taller clear stems and smaller crowns, sometimes reaching 150 feet with 6 foot diameters. The oaks tend toward large, deep taproots. A record northern red oak, reported in Monroe County, NY, is 80 ft. x 10 ft.-9 in. diameter with a spread of 102 ft.

Leaves, on 1"-2" stalks, are 4"-8" long with a wedge-shaped base and 7-9 lobes. The leaf is generally oval in shape. The lobes are separated by V-shaped, round-bottomed notches, tapering from base to tip, the larger bearing several bristle-tipped teeth. Upper surfaces of the leaf are dull green on top, pale underneath with tufts of hairs on the lower vein joints. Leaves turn rich red in autumn. Dead leaves may cling to the branches through winter. Tannin in the leaves makes them very durable and resistant to composting.

Red oaks are monoecious; male and female flowers are produced on the same tree. Male flowers are in the form of multiple 4"-5" pendulous catkins; female flowers are tiny and inconspicuous. “Spin-drift” pollen from catkins of neighboring trees fertilizes the female flowers.

The fruit of any oak is an acorn or nut. Its shape is quite variable, generally unique to each species. This oak’s large acorn is about an inch long and wide. They usually hang in pairs from short stalks. The saucer-shaped cap encloses about a quarter of the nut. Acorns of the red oaks ripen in the autumn of their second year. A red oak will usually produce first fruit at about 25 years of age, but won’t produce abundantly until about age 50. It will then bear good crops irregularly at 2-5 year intervals. A 12" tree may produce 14,000 acorns in a year and a million in its lifetime.

Red oak is a ring-porous hardwood. Earlywood pores...
are quite large, distinct to the naked eye, solitary, occurring in up to four rows. Tyloses are usually absent. Latewood pores are also solitary, not numerous, distinct with a hand lens and occur in radial lines. Rays are up to an inch high, of two widths. Narrow very numerous rays are one or two cells wide, easily seen with a hand lens. Wide rays, many fewer, may be 30 or more cells wide, conspicuous to the naked eye.

Earlywood is light tan to almost white, up to 2” wide. Heartwood is pinkish to light reddish-brown. Growth rings are quite conspicuous, typical of the ring-porous hardwoods. Transition from earlywood to latewood can vary from gradual to rather abrupt, usually well defined by the earlywood pores. Wood of the various oaks of the red oak group cannot be reliably separated.

Northern red oak wood is classified as strong, heavy and hard with a sp. gr. of 0.68 and weight of 44 lb. cu. ft., at 12% M.C. It is usually straight grained, coarse textured, pleasingly figured, strong in bending and high in crushing and shock resistance. It is rated satisfactory in steam bending.

Red oak dries quickly, about one year per inch of thickness, but requires special attention to minimize a great tendency to warp, check or split. End sealing is helpful. Careful stacking with many (dry) stickers and lots of weight on top of the stack will reduce degrade. A rain shelter will eliminate water staining. Iron must be kept away from green oak to prevent metal staining. Shrink from green condition to oven dry is high at 14.7% of volume, 8.9% tangentially and 4.2% radially. Some dimensional change is to be expected in service.

**Northern red oak has good to excellent machining qualities and works well with hand tools if grain direction is respected.** It finishes nicely to smooth, polished surfaces. Carbide tooling is recommended as the wood has some dulling effect. Fasteners hold well but pre-drilling is necessary to avoid splitting. Gluing requires careful control with good adhesives. Unless treated, this wood is not durable when exposed to soil, weather or moisture. The wood has no characteristic taste or odor.

Red oak stains uniformly and readily accepts all finishes except paint. The large earlywood pores require filling to achieve fine finishes. Try a quick rub of wet steel wool to highlight the grain. Typical of the red oaks, this wood can be fumed (carefully) with ammonia to produce rich dark brown-black surface staining. Worth noting…figure can be very different between flat-sawn and quarter-sawn surfaces. Boards for a project should be carefully selected to avoid undesirable matches at joint lines.

Tannin content in red oak results in some toxicity that can cause skin, nasal passage, eye and lung irritation. Appropriate precautions are well advised.

**Acorns have been a primary food source for Native Americans as well as some early Americans. The nuts were removed from their husks, boiled in water to remove the biterness and then ground into flour for bread. Acorns remain a vital food source for many animals, domestic and wild.**

Galls, a hollow, insect-induced growth common on oak leaves and twigs, were dried to produce a high-quality black ink. Fluid drawn from fresh galls was drunk as a sweet treat.

Abundant glucosides in red oak provided many astringent, early health remedies from bark collected in spring. The astringency constricted capillaries to reduce blood flow. Wounds, burns, sores, boils and hemorrhoids were treated with bark poultices or tea.

Bark tea also relieved diarrhea, stomach distress and menstrual cramps. Bark infusions were gargled for a sore throat and bundles of leaves were used with soap to cleanse the body. These cures are not recommended today because of the high tannic acid content of the bark!

**Northern red oak is reputedly the most widely used and commercially most important domestic hardwood in the U.S. It is used for charcoal, dry cooperage, sliced veneer, interior paneling, sashes, doors, trim, dimensional lumber, general millwork and plywood. It is also used for farm equipment, truck and trailer beds, handles, pallets, boxes, crates, paper pulp and firewood. It is popular for steam bending, flooring, furniture, especially desks, tables, chairs and cabinets and for caskets. Great quantities of oak were cut for the bark to obtain tannin for leather processing.**
I have always been interested in treadle lathes ever since I was ten or eleven years old. My neighbor and friend, Ray, had built a “Shopsmith” type machine that was a circular saw, lathe and jigsaw all powered by us kids. It was made from an old treadle sewing machine and a collection of junk that used to be found around every city neighborhood in the 1930s.

Another 60 years passed before I saw my next treadle lathe. It was at a museum in Pennsylvania. This lathe was about one hundred years old and restored to running condition by Dave Hardy. That hooked me enough to want to build one for my workshop. There was not much information available, but I was lucky enough to meet Richard Starr who was also on that visit to the museum. His book Woodworking With Your Kids (Taunton Press) had just come out. He wrote it while taking a year off from teaching.

Richard’s lathe used a bicycle sprocket to convert the up and down motion to a rotary one. The best part is that this can only rotate in the right direction. A crank and pitman can turn toward the operator but also the way depending which way it was started. I used the basic idea from the Starr book but used a tailstock and tool rest from an old lathe.

My latest lathe has a sprocket that is not in the headstock like the previous one. A small regular lathe can be used by making this change. Perhaps a jigsaw, bandsaw or grinder can be substituted when the need changes.

Like Richard Starr mentioned in his book, building a treadle lathe or anything similar calls for “seat of the pants planning” one step at a time, trying one idea or another or several until at last the end result is what you want. A case in point was when I made the change to use a lathe that could be slipped in place or exchanged for another.

This change required the addition of pulleys and a belt besides the original chain and made necessary to guess how big a flywheel would be needed. The one pictured needs to be larger than the 12˝ diameter I used. I will replace it with one about 18˝ and hope for the best. Maybe using a heavier wood would also be a good idea.

For wood, I used what was hanging around the shop. Most is construction 2x4s. I used the better grade from Germany and glued pieces together to get the 2x6s and 2x8s that were needed. The treadle has some pieces of mahogany for added strength.

The basic size of the base is 28˝ wide, 28˝ front to back and 27˝ high so that most lathes will have the center of the spindle between 36˝ to 42˝ from the floor. These dimensions were dictated by the need to have it fit in a Ford Escort Wagon. If it will never need to travel, it would probably be better to make it larger.

Be sure to use a sprocket from a five or ten speed bike so that the chain can return while the sprocket is free wheeling. And by obtaining the sprocket first and mounting it on a shaft, you will be doing what is the most difficult work first.

Building one is not too difficult but not too easy either. The best part is that since each one will be different, you will be using math, some geometry and who knows what that you haven’t used since your high school years. And if you are like me, you might find it better than what is on TV and it sure beats falling asleep in the rocking chair after dinner.
Small Meetings – Big Day

How to Make an Adirondack Twig Chair
Steve Winchester in Center Barnstead, NH

He has evolved his craft over the years selecting branches with subtle bends to place legs at a slight backward lean for sitting comfort. Lower supports for the spindles have a slight inward curve to provide lumbar support. The chair is narrower at the back than the front.

All this requires precise angles for stretchers, chair rungs, and spindles. Steve has evolved a group of jigs to allow proper angles to be made repeatedly.

The tenons are cut with a 5/8˝ tenon cutter mounted in a drill press with the appropriate jig holding it in position. All this sounds automated, but it requires the craftsman touch, intuition and experience to bring the project to fruition. We all tried our hand at the tenon process with modest success.

The tenons have to be dry before assembly and are textured with channel lock pliers for gluing. The shoulders of the tenons are whittled toward the tenon to accomplish a hand carved appearance. The branch points on the twigs are preserved but positioned so they don't interfere with comfort. They are glued up with Tightbond II and multiple clamps to maintain the chair true. The tenon/mortise combination have to be twitched to insure an accurate fit.

Finish varies depending on use. Steve shared with us pictures of several projects including a love seat with a slate seat done with more weather proof glues and finish. Steve is an excellent teacher, well prepared and knowledgeable about his craft. An enjoyable morning! Steve works only on commission. He is renovating an old rundown automotive garage and so far has a superb shop up and running. He has completed a new front to the building with signature pillars.

Steve Winchester has been a woodworker for years and made his first rustic twig chair in 1995. Since then he has refined his technique and art. He is much more than a rustic furniture and cabinetmaker. One of his greatest challenges was complete cabinetry for a bedroom of a house on Squam Lake duplicating the interior of a sailing yacht with all the complex angles and curves and interior like a ship would require.

Steve had his first chair on exhibit and has built a demonstration spindle back chair which completely dissembles to show stretchers, legs, spindles, tenons and mortises. He begins with a collection of twigs – maple, birch and cherry. If gathered in the spring, the bark peels off easily and he washes the wood. Fall wood is left with the bark in place. His storehouse is the great outdoors, fields and woods as people invite him to come over and clean their lots.

We all tried our hand at the tenon process with modest success.
Small Meetings – Big Day

How to Organize a Small Project
Peter Breu in Manchester, NH

I always say that at every guild meeting, I pick up a hundred ideas. Slight exaggeration maybe, but I always learn. The meeting at Peter Breu’s shop as part of the Small Meetings was no exception.

Our first “stop” was the Saw Stop. Peter has one of the new saws that you have no doubt seen written up in the woodworking magazines that comes to a screeching halt (in 5 ms) when it come in contact with skin, or a hot dog, or, in Peter’s case, a cross country ski. Saw Stop was sufficiently intrigued that they gave Peter a new “brake” mechanism instead of charging him for it and wanted him to send a sample of the ski. This is why we visit each others shops. Seeing is believing and understanding.

Peter is a professional in every way, except that this is still a sideline and hobby and not his prime vocation. He does take commission jobs and showed us extensive photographs of previous work. We also got up close and personal with two very different tables that he built. One is a beautiful side table and the other is a dining room table, measuring 40” x 84”, complete with a marble inlay work that Peter has done, all of which was new for me. Listening to others, especially people with Peter’s experience, provides confirmation of beliefs already held such as best methods to do things, preferred brands, or even sometimes buying cheap (excuse me) inexpensive router bits. Often we get a tip or ideas that would only come from others, such as the high grinding table that allows you to use a grinder much closer to your vision. It is more comfortable, and therefore (with good safety glasses) safer. Skills or knowledge that we currently process can be expanded such as our discussion and demonstration of various sharpening functions. We looked at and discussed inlaid and veneer work that Peter has done, all of which was new for me.

I understand that notice was short and attendance low at both the Small Meetings but you missed a real good one at Peter’s.
Two Period Furniture Group meetings have taken place since the last issue of *The Old Saw*.

The November meeting was at my shop where I presented my guitar rosette work. Also at the meeting, Franz Summers shared his progress on his guitar-making project and Bill Daunis brought a beautiful Queen Anne side chair he has since completed and upholstered.

The January meeting was at Sal Morgani’s shop and was just excellent. Sal elaborated on his philosophy for tackling difficult projects, a topic that he has written articles about in this magazine. What comes across in person though, is Sal’s enthusiasm. Unquestionably he could have a career as a motivational speaker. We all want to stretch ourselves and take on more ambitious projects. If what we heard at the meeting doesn’t give us the gumption, nothing will. Sal explained the crucial importance of convincing yourself you can do something before you start and not to let doubts creep in. Then it is largely a matter of persistence.

The photograph shows, for example, five attempts at carving the cartouche which sits atop the Townsend-style grandfather clock Sal built. On the right is the first effort, next the second, and so on to the final one on the left. Each attempt is approached with the idea that it will be the final one. The first one is quite primitive. Surely any of us, with no carving experience at all, could have produced it. The second one is better, and so forth. Notice, crucially, how Sal has saved all these efforts and in no case does he belittle himself for falling short of his goal on any particular one. Its all part of taking joy in the process itself, of noticing and delighting in the very process of getting better.

The second thing Sal emphasized is the importance of information gathering. He extensively tours museums, camera and notebook in hand. He has no qualms about asking masters how something is done, even through unsolicited phone calls, and is rarely turned away. Also, he has developed an extensive library of period furniture books which, while no single one gives all the information needed to build a particular piece, nevertheless provides an important clue or stepping stone along the way. Even figuring out how to build a significant period piece needs to be approached as a research project in and of itself. There is only rarely a manual that gives you all the steps and even when there is, the piece might not fit your exact requirements or taste.
The November general meeting was held in the woodshop at the Keene, NH high school. Dave Anderson spoke about the formation of a long range planning committee, the possible formation of new sub-groups, the function and make up of the steering committee, and several grants the Guild has made in the support of continuing woodshop education in the schools.

Dave stressed the importance and purpose of our participation in the Sunapee Craft’s Fair each August. Our presence and success at the fair is made possible by the hard work of member volunteers. If you wish to donate a piece for next years raffle, please contact Jim Dimick.

Grant Taylor announced that he has formed the Upper Valley Carving Club to meet at his shop in Acworth, NH. Grant’s web site is www.celticwood.com.

The main presenter was wood sculptor Jerry Williams. Jerry brought a table with a sculpted leg structure as an example of his work. In the beginning of his exploration of this style of work, the legs were shaped with drawknives, spoke shaves and rasps. His epiphany was the discovery of the angle grinder for wood shaping. He said it gave him more control and much more speed in generating the shapes he envisioned.

For joinery, Jerry showed a preference for the floating tenon. Joinery and assembly is done before he shapes the wood. With this process you have to be careful to provide enough material around the tenon to allow the shape to be formed without exposing the tenon.

He roughs out the shape on the bandsaw after the joints are assembled. He then uses the angle grinder to do the majority of shaping. Jerry had a band sawn leg assembly with which he demonstrated this process for us. The joint is further refined using a patternmaker’s rasp followed by a cabinet file.

Jerry finished up by describing his design process. He starts with a thumbnail size sketch and keeps increasing the size of the drawings until he has a full sized drawing with the shape fully developed. Certain elements of the design are then modeled out of plywood to work out their relationships in the total piece.
DJ presented his personal approach to segmented turning in a three hour tutorial at his shop in Deerfield, NH. At the onset, let us say that DJ did a tremendous job of conveying in three hours what normally would require a text and several weeks to become familiar with. There are several approaches to cutting mitered segments including table saw, chop saw and bandsaw, but regardless of the approach, the keyword is precision. DJ chooses to use a table saw and an Incra miter gauge and sliding table. In general the whole procedure is labor intensive with roughly 70% precision cutting, fitting and gluing and 30% actually turning.

One needs to start with a design and plan. Multiple rings are built using a set number of pieces. These pieces are trapezoidal and side grain with angles at each end cut as divisions of a full circle. For instance, if each ring is made of twelve pieces, then each piece will have two angles – a left & right of 15° – 30° for the combined angles in one piece. The plans lists each ring, noting the height and width of each segment to allow for appropriate vessel contour. The rings are made in half rings so you can fine-tune the joint.

The glue up can be by one of several techniques. DJ provided handouts at the beginning of the meeting detailing the techniques. The handouts included basic steps in segmented turning as well as an example of a bowl layout. The half rings are assembled right before they are added to the bowl. Each ring is sanded on a home made 12˝ disc – a disc of plywood or MDF faced with 80 grit sand. The disk is held by a faceplate on the lathe. Titebond will bond well enough within an hour to allow another ring to be added.

The ring must be faced to be dead on square to allow for appropriate joining of the next ring. DJ uses a jig with the tailstock as a clamp to apply each ring to build up the bowl. After an hour, another ring is added. The rings are all assembled in the same day to prevent the rings from suffering the effects of wood movement.

The bottom layer is made with a plug in the middle to allow for wood swelling. The rings are made with alternating glue seams.

Though DJ uses a similar wood for all his segments, different woods can be used for different effects. A signature ring can be made, but these are a labor that can triple the effort of making the wood rings described above.

DJ sprays the assembled bowl with water to raise the grain and then he sands to finish. For finish, he uses ten thin coats of polyurethane (Sherwin-Williams). Malcolm Tibbets, Curt Theobold, and William Kandler are excellent recourses in print or on the internet. Calculations for segmented miters are readily available as well as stave miters. Kevin’s www.woodturning.com is an excellent source for miter and stave jigs as well as calculation for free. Kudos to DJ for this presentation. We had several first time attendees for this tour de force of segmented turning and I certainly would expect they were duly impressed.
The December BIG met at Bob LaCivita’s shop in Nottingham, NH for the second part in the cabinet design and construction series. Twenty-one members attended this meeting – a new record for BIG.

We opened with a review of the last meeting which focused on the design process for a wall hanging cabinet. This involved developing your idea with sketches, drawing the working plans, creating a parts list and selecting the wood.

In this example the cabinet will be made from apple wood. Following this Bob showed how to take a rough milled board, size and section it to obtain the boards we will need for our cabinet parts. Bob had already marked out for the cuts to get the top and bottom pieces.

He went into great detail on how to find, visualize and work around the defects found in the rough milled air-dried boards. Bob stressed that when he is working with rough boards he is not looking for high yield as much as just enough high quality boards to bring out the best in his design. Usually this results in about a fifty five percent yield, sometimes more, sometimes less. When working with rough boards you can minimize the effects of wood movement by cutting everything as small as it initially needs to be. Bob likes to use the band saw for the initial cuts as it is much more forgiving of wood movement than the table saw.

After all the boards are cut to their rough sizes, we moved to the jointer to start the finish milling of our boards. We started with the preparation of our reference edges and faces stressing safe and proper technique on the jointer. I was very impressed with how beautiful the color and grain of the apple wood was after jointing the faces.

Apple boards of this size are not that common as most apple trees are pruned to keep them small enough to allow easy picking of the fruit. Bob got these boards from Wolfgang’s Wood in Strafford, NH, a GNHW supporter and Old Saw advertiser. Wolfgang is an excellent source for not so common domestic woods.

When the boards had been faced and edged, it was back to the band saw to resaw the boards to a 1” thickness. Bob used a single point fence of his own design for the resaw process. He likes this type of fence because of the control it gives him in maintaining a straight and even cut.

When all the boards had been cut, it was off to the planer to smooth the cut face and bring the boards to their working thickness. Bob gave plenty of advice on the safe and efficient use of the planer.

The next meeting of the BIG will be on February 3, at Bob’s shop in Nottingham. This is shaping up to be the most popular series that BIG has done, so you might just want to check it out. As always please email or phone Bob if you plan to attend.
Scholarships
The November 1st Guild scholarship deadline came and went with two scholarships applied for and awarded. Matthew Dworman was awarded a scholarship to attend Michael Dunbar’s Windsor Institute where he took a workshop on building a windsor settee. Jerry Burt was able to fulfill a long time desire to attend the workshop on building a windsor settee at Al’s studio in Enosburgh Falls, Vt.

The March 1st scholarship application deadline is drawing near and the woodworking school course catalogues for the upcoming summer workshops are arriving in the mail. From what I see, there are a lot of interesting courses being offered. Perhaps this is the year to sign up for a course and apply for a Guild scholarship to help enhance your skills and further your knowledge of woodworking.

Scholarship recipients are asked to share their learning experiences with Guild members in the following ways, either by hosting a GNHW small meeting or demonstrating at Wood Days or the Sunapee Fair. Some recipients may be asked by the editor of The Old Saw to write an article for the newsletter while others may be asked by the Guild’s program chairman to speak at a Guild meeting about their workshop experience.

Scholarship recipients may also want to donate work to the raffle at the upcoming summer workshops to continue awarding scholarships and grants to its members.

Applications are available either from the Guild web site at www.gnhw.org or by contacting me at:
John McAlevey: johnmcalevey@adelphia.net

Discounted Taunton Magazine Subscriptions
Once again, we are making subscriptions to Taunton magazines available at special group rates. Discounts are available on any magazine Taunton offers and are applicable to both new and renewal subscriptions. Since we do this only once a year – by the February Guild Meeting – you may wish to renew now even if your magazine expires mid year. Taunton will simply add to your current term. The following are the group rates offered to the Guild:

<table>
<thead>
<tr>
<th>Magazine</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Woodworking</td>
<td>$27.96</td>
<td>$47.96</td>
<td>$67.16</td>
</tr>
<tr>
<td>Fine Gardening</td>
<td>$23.96</td>
<td>$39.96</td>
<td>$55.96</td>
</tr>
<tr>
<td>Fine Cooking</td>
<td>$23.96</td>
<td>$39.96</td>
<td>$55.96</td>
</tr>
<tr>
<td>Threads</td>
<td>$26.36</td>
<td>$43.96</td>
<td>$63.16</td>
</tr>
<tr>
<td>Fine Homebuilding</td>
<td>$30.36</td>
<td>$52.76</td>
<td>$75.16</td>
</tr>
</tbody>
</table>

If you wish to take advantage of this opportunity, send your name and address, the magazine(s) and term(s) you want specify and if this is a new or renewal subscription. I do not need your current label for renewals. Taunton will search their database using your name. Send a check to me made out to the Guild for the appropriate amount. Orders will be accepted up to the February Guild meeting.

Tony Immorlica
6 Purgatory Road
Mont Vernon, NH 03057

Highland Hardwoods
Highland hardwoods is open Thursday nights until 7 pm – a great way to save your Saturday mornings for the good stuff! – Steve Costain

Acworth Carving Club
The Acworth Carving Club meets on Mondays from 7pm to 8:30pm in my shop on 191 Tucker Rd, South Acworth, NH. Every week we all look forward to the time we meet to carve, learn and gab a little. The group is open to girls and boys, men and women ages thirteen and older.
Grant Taylor:
603-835-2992 or grant@celticwood.com

Closing Shop ...
Cabinet/furnituremaker (18 yrs) on Cape Cod getting out of the business & have a shop’s worth of tools I must sell. All are in good functioning condition & are in storage in Falmouth, MA.
Powermatic 66 10”T-saw w/ Biesemeyer, shop-built 3 drawer cabinet for blades, etc. & extension tables, 1ph—$1800
Delta tenoning jig (heavy, old cast one)—$100
10” carbide saw blades—$25-$50 ea
Dewalt 10” radial arm saw, 1ph—$500
Crescent 26” band saw w/shop-built cage, pre-1900, 3ph—$800
Walker-Turner 14” band saw, ‘40s, 3ph—$1000
Delta 14” band saw, ‘60s, 1ph—$800
American 24” jointer, ~1900, 3ph—$1500
Union 8” jointer, ‘50s, 3ph—$1000
Powermatic 18” planer w/ knife grinder, ’70s, 1ph—$3500
South Bend lathe, ’40s, 3ph—$2500
Bridgeport machine, ’40s, used as mortiser, 3ph—$2500
Delta 3/4” shaper, ’50s, 1ph—$1000
Bench-top drill press, big & solid, ~1900, 3ph—$800
Delta benchtop drill press, small & not so solid, ~4 yrs old, 1ph—$100
Dewalt 10” compound mitre saw, 1 yr old, hardly used—$400
10hp phase converter—$500
Lexaire LX70 HVLP turbine w/ hose—$400
I also have some mahogany, quartered white oak & beautiful 1st growth cypress beer barrel staves (10’x21/2”x4-8”) & some furniture grade plywood. This all has yet to be tackled & priced. Also a lot of clamps.
Bert Wickersham: 508-274-2840
or bw92259@aol.com

Beginner & Intermediate Group
This year, Bob LaCivita is taking BIG participants through an entire project. The project is a small cabinet with a drawer and two doors. The design will have an Asian influence – simple and
the tour, there will be ample space for
members to mingle, show off their latest
project or jig, and to ask questions and
seek advice.
To receive meeting specifics, sent out
10-14 days prior to each meeting, you
need to get on the group list which is
done by contacting me below. If you do
not have e-mail, I will call you. When
you receive notice of a meeting, please
RSVP. It greatly helps in planning.
John Whiteside: 603-679-5443
or johninfremont@comcast.net

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.
10% Discount on Stock Items to Guild Members

Gary R. Wood & Co.
Select Finishing Supplies

Shellsacs, waxes, stains, varnishes & tools for an elegant finish. Your questions are always welcome!
24 Grismill Hill Rd • Canaan, NH
www.garyrwood.com 603-523-4337
10% discount to Guild members

MILL OUTLET STORE – 10% DISCOUNT FOR GUILD MEMBERS

Northern and Appalachian Hardwoods
Ash • Basswood • Birch • Cherry • Maple • Mahogany • Oak • Poplar • Walnut
4/4 - 16/4 Rough or Surfaced Kiln Dried Lumber
Fixed and Special widths • FSC-certified wood from well-managed forests
NORTHLAND FOREST PRODUCTS
visit www.northlandforest.com for stocking info
36 Depot Road, Kingston, NH • 603.642.8275

Furniture Making Classes
Enjoy a mini apprenticeship with some of America’s best woodworkers!

www.experiencewoodworking.com
338 Baptist Road
Chichester, NH 03616
603.679.1960
10% annual discount for GNHW

The Wood Finishing School
978-363-2638
www.patinarestoration.net
Learn wood finishing individually or as part of a group
Twenty-seven years experience
10% Discount for Guild Members
Teaching & Class Instruction Only
Bruce Hamilton Antique Restoration

ROCKLER® WOODWORKING AND HARDWARE
373 S Broadway (Rt 28)
Salem, NH 03079
603-899-5941
10% Discount to Guild Members

The Breed School
American 18th Century Furniture
By Hand
13 Liberty Street, South Berwick, ME 03908
15% Discount to GNHW Members!
www.allanbreed.com • 603-749-6231
email: breeds@comcast.net