The John E. Kraus Tool Chest
designing strong joints

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

tail vise extensions • what do you see • prison outreach program
stripping for fun & profit • a simple leaf inlay • padding
black ash • at the lathe • crown molding
blood sweat & tears

Center Table
David Lamb – secrets of a compound curved apron

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Calendar

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Random Thoughts

It’s always a thought provoking time when this message is due for *The Old Saw*. What topic is of interest to members, how do I want to use this podium, and what needs to be said that isn’t covered in other articles of this publication? As usual, the message gets written at the last minute after procrastinating and making several false starts. The usual result is an article made up of paragraphs of totally unrelated topics. This one won’t be any different.

I would like to take this opportunity to publicly thank Syd Lorandeau for his great efforts in putting together the annual meeting and his continued work in doing the addressing and mailing of each and every issue of *The Old Saw*. This is a major task and is a clear example of how much the guild depends on its membership to step up and get involved.

Volunteer Organization – As an all volunteer organization, our success is in the hands of each and every one of you. This also means that you as members are responsible for whether or not the guild meets your needs. Love something we did in the past, hate the way we do some things, want some new programs, have an idea? We need your input, your constructive criticism, and most of all, your participation. The Steering Committee is a small group, and while it tries to represent the whole membership, it remains a miniscule fraction of our total membership. Let us know how you feel by email or in face to face conversation.

Starting with our November meeting, I intend to allot some time during the business meetings for both questions and answers, and for suggestions. Please think about and voice your suggestions all the way from the simple to those that are “pie in the sky.”

Web Site – One of our goals for this year is to revamp the guild website to make it more attractive visually, increase user friendliness, and to make it of greater value to you. Here again we would like your suggestions about what you like, what needs improving, and what is missing altogether. Jim Seroskie, *The Old Saw* Editor, and DJ Delorie, our webmaster, will be the leaders of this effort.

Any organization with a website which has a member’s only area is always faced with two conflicting and opposing concerns – the trade-offs between user friendliness and security. In our case, this is magnified by the fact that our member database is on the website behind several layers of security. Access is strictly limited to protect your personal information and our privacy policy.
Saturday, November 17th, 2007 – 10:00 am

Guild Meeting at St. Paul’s School in Concord, NH

The next Guild meeting will be held on November 17th at St. Paul’s School. The school has ample parking. They will provide chairs, so there is no need to bring your own. But do bring your lunch, they will provide a refrigerator to keep your lunch and drinks in. The meeting will start at 10am with lunch from noon to 1:00 and then continue from 1:00 to 3:00.

I would like to try something different for this meeting. I think it would be great if we brought to the meeting a piece of furniture we made, be it a chair, table or case piece, or a turning we have done, bowls, pens, etc. Even a work in progress would be something to share. I think seeing what others are doing may be both informative and inspirational.

The morning session will feature Web Andersen who will lecture on Dust Collection. Be sure to bring questions about your own shop dust collection problems, as we will have a question and answer period after the talk. The afternoon session will be a talk on Debunking Finishing Myths.

The meeting will be held in the Captains Room in the Coit Building. The website for St Paul’s is www.sps.edu. For a map, click on “About St. Paul’s” then click “Campus Map.”

President’s Message – continued

has worked well without exception for several years now.

A suggestion has been made to change next year’s (2008-2009) membership application to add a check box which would allow members to “opt in” and have their personal contact information available to other members in the member’s only area of the website. This information would not be available to the general public visiting the public website. This would allow members to contact each other more easily but still keep the information away from spammers and other undesirables. What do you think?

I would like to remind you that we need your participation, input, and volunteer efforts to make and keep this organization responsive to your needs. There are still job openings which need filling and we will present them to you in November.

Steering Committee – I recently had a question about the workings of our governing body – When are the Steering Committee meetings and where? Can you tell what has happened at steering committee meetings?

The Steering Committee usually meets six times per year about two to three weeks before each major guild meeting at the League of NH Craftsmen’s offices in Concord from 6-8pm.

Meetings follow an agenda which starts with a treasurer’s report, membership report, a report on The Old Saw status, a scholarship committee report, and a report by the program coordinator. Additionally, there are always a number of other administrative matters which require attention such as votes to authorize expenditures, budget planning, and responses to requests by sub-groups or members. Usually each meeting has one or two major topics for discussion such as the Long Range Planning Committee report. Past topics have included setting a privacy policy to safeguard members personal information, symposia planning, program enhancement, and topics for both small meetings and regular guild meetings.

Work safely folks.

Scholarship Committee Report

There have been several significant changes made recently to the scholarship process.

There will now be applications accepted one week after each full guild meeting and reminders made at the meetings to encourage participation. Recent scholarships and grants given will be announced to allow everyone to know how the money is being spent. The application will be shortly available on the website for downloading. There are several other changes being discussed including increasing the ratio of money granted vs. cost for high school and college students. All of these are intended to encourage greater use of the scholarship funds.

Two recent grants were to the New Hampshire Furniture Masters to support their exhibition, and to a new carving group headed by Grant Taylor. If you have any questions or suggestions do not hesitate to contact me.

Peter Breu: peterbreu@comcast.net or 603-647-2327
**Scraping vs Planing**

Q  — When smoothing figured wood, when should I use a scraper vs a scraper plane or a hand plane?  
— Steven Marcq

*Al Breed replies:* I always feel that planing will give a cleaner finish than scraping when possible. I'll plane unless the plane is pulling out chips in the surface. To plane figured wood like bird’s eye maple, I use a plane with a very narrow throat and with the chip breaker set very close to the edge of the blade. You may have to file back the inside of the casting of the plane at the throat to allow the chips to exit without jamming up.

Wiping the wood with a damp rag before planing will reduce chipping by softening the fibres. And you’ll just have to get over the trauma of getting water on your planes.

I have a Stanley #6 that I’ve tuned up as above that will plane bird’eye just fine. This isn’t to say that I don’t scrape. Often I’ll scrape the narrow bands of grain in very narrow throat and with the chip jamming up. With a really sharp scraper but be careful generally end in misery. Scrape these in the headstock, and bring the tailstock inside of the casting of the plane at the throat to allow the chips to exit without jamming up.

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Scraping vs Planing

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**Resawing**

Q  — How do you set up a resaw on a bandsaw for very thin (less than $\frac{3}{16}$) pieces? Or should it be, can you?  
— John Pitrone

*Guy Senneville replies:* Make sure your bandsaw is tuned to perfection. Use a sharp blade and a tall fence. Tension the blade properly. Set your fence for drift. Make sure your stock is dead square at least on one edge and one side. A light pass in the jointer between each pass will ensure you have a smooth side to every veneer slice.

**Sanding Dust in Inlay**

Q  — For inlay work involving light and dark woods such as maple and ebony, after planning and scraping, how do you sand the work without the sanding dust bleeding into each other?  
— Paul Miller

*Al Breed replies:* I’ve always put the veneers and bandings down with hide glue, which I suspect fills the grain to a certain extent, because I don’t recall having a lot of color pollution. The other alternative might be to scrape then seal with shellac so that you’re sanding the finish instead of the wood surface.

*Guy Senneville replies:* Very simply, Don’t! The inlay work should be done after the piece has been final sanded and ready for finish. I prefer to finish right off the plane rather than sand. If you have inlaid properly everything should be pretty close to level. The scraper would be the proper tool to use next because the inlay will probably have grain going in many different directions. This would bring your inlay to the exact same level as the surrounding piece.

**Turning Cross Grain**

Q  — Near-ly all bowls are turned cross grain. Aside from the issues with pith, what is different about turning end grain? What wood species are good for end grain bowls?  
— Tony Immorlica

*Graham Oakes replies:* All wood species can be used for end grain bowls. Exotic woods will be difficult to use but can be done. The wood species is less important than the technique used to hollow the bowl. The cells in a piece of wood look like a bundle of straws facing up the tree. When cutting cross grain you are cutting the sides of the cell walls when using a push cut, which cuts quite nicely. When cutting end grain, you are trying to cut the ends of the cells while using a push cut. This causes tear out and vibration.

The thing to do when doing end grain bowls is to use pull cuts or back hollowing techniques to hollow out the bowl. You will get very nice cuts on the bowl by making a small depression in the middle of the bowl and then working outward to the rim of the bowl. This should be repeated until the bowl is at the desired thickness. This is completely opposite from standard bowl turning techniques but this is what is needed for end grain bowls.

One more point for end grain turners is to try turning green wood very thin. I have done this and have had many bowls not crack on me. The key is to go for $\frac{3}{16}$” wall thickness or thinner and use straight grained non-porous wood. Happy Turning.

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The old adage that you can never have enough clamps applies equally as well to bench space. There just are not enough horizontal surfaces in my shop to permanently mount all the vises, jigs and other items that I use on an occasional basis.

I found a use for the tail vise jaws of my workbench as a tool holder. I screw together two scrap pieces of plywood with a smaller keel piece to fit into the tail vise. Tightening the vise secures the tooling to the bench temporarily. When I’m done, I can loosen the vise and put the item back on the floor under the bench and out of the way.

I have used the same principle for other items such as a shooting board and bench hook. I tried it with my farrier’s vise but found that the bench did not tolerate heavy hammering with an item in the tail vise. This particular bench is not secured to the legs or floor. The bench top just sits on two positioning dowels and the top will come loose if used with the farrier’s vise.

You can mount router jigs in this way. Here is my pin and cove jig which I will review at a later date. I wanted it at a higher working height to decrease the stooped over posture required to use it at bench top height. Note the rib extending down into the tail vise. Initially I made just one wooden extension with threaded inserts so that I could use just the one with multiple fixtures. I found changing them to be a hassle and now have a dedicated extension optimized for each jig.

Rather than use the tail vise, you can also use the front vise. All it requires is a plywood platform and a 2x4 keel such as I use on my miter trimmer. This set-up allows me to have the miter vise in the tail vise and the miter trimmer right at hand in the front vise while doing test fitting.

Power tools such as my disk sander see only occasional use.
Just below the sidewalk on West Prince Street in Lower Manhattan, there is a life-sized clay turtle, which can be seen through a metal grate. A few chosen rocks and bonsai plants, perfectly arranged, surround the turtle. For two weeks this interesting discovery caused me to extend my walk from Bond Street to the subway station on 5th avenue. It was also enough to distract me from seeing the window display of shoji screens, lanterns, gates and an accompanying sign which read ‘Kai Ito Woodwork’. This apartment-sized storefront flanked the subterranean garden. When I finally did see the window and sign, I was compelled to knock on the door. After a brief wait I was greeted by a round-faced gentleman with an almost shaven head. He looked very tired and asked me what I wanted. “Work. Do you ever need any assistance? I’m a woodworker and I’m struck by the pieces in your window.” He did not invite me in, but suggested that I come to his workshop on West 39th street tomorrow and we could talk.

The next afternoon within the workshop, I found myself giving up my lucrative job of the past year – working in a high-end veneer shop – for a position with Mr. Ito making shoji screens for $8 an hour. For the next twelve months I did not have the time to wonder why. The question has never surfaced since.

Although there was no dust collection system and the days rarely ended at five, the learning never stopped. In addition to screens, we built square chairs with tatami mat seats, gates, tubs and tables. There were always very clear drawings, never dimensions – only rough measurements of the space the piece was to occupy. But the drawings served only as an introductory point of reference. The design process gained momentum with the milling of material and continued right through assembly.

“Place the rail next to the stile. Tape the legs to the seat. Hold the stretcher in place. What do you see? Can you see that this member is too big in relation to that? Plane it down and place it there again. Does the top look thick enough for it’s length? If a piece looks too weak, it probably is. Beyond solid joinery and proportions, there is little else that is needed. Why did you cut that taper? Does it make the piece stronger? Does it make it better? How? If you execute the work simply and cleanly, there is no need for embellishment. It is enough. This is not cosmetic carpentry that we are doing.”

Sometimes I imagined that my eyes were just not sharp enough to see some of the subtle differences made by planing another few passes off a member or by chamfering a piece with a single pass of the plane. It was barely perceptible. Mr. Ito would frequently cut a piece to length without measuring. It always fit, and this reinforced self-doubts surrounding my ability to see. But when I placed one of my finished pieces next to one of Mr. Ito’s, I could see quite clearly the differences that these subtleties brought about.

We frequently employed a simple dovetail joint (one tail between two half pins) on cases for shelves or on bed frames, even on boards as wide as 10".

...my introduction to design

by Dennis Capodestria
From one of Mr. Ito’s previous coworkers I learned that it was favorable to place vertical members in their original orientation, (the bottom of the tree towards the earth, the top upwards), if they can be identified in the board.

From the beginning I imagined that sharpening would occupy a lot of our time. How could I have foreseen hand planes with replaceable cutting edge inserts and ryuba saws with disposable blades? There was a small wooden tub full of water and water stones with a board fixed across it’s top. Chisels were sharpened here, quickly.

It was soon apparent that the sharpening of a discerning and critical eye was as important as the honing of our planes and chisels. It was clearly the strong characteristics of form and dimensions in Mr. Ito’s work that drew his clientele to him. While each woodworker might come up with different answers, being able to develop questions which help you to look at the work and determine if the design has succeeded in the expression and function that you intend is a valuable tool worth maintaining.

Mr. Ito’s get-it-done ethic seemed to grow out of his appreciation for his clientele, to whom he felt equal measures of respect and responsibility. But as a wave of Financial District renters swept through midtown, Kai Ito was forced out of his 39th Street workshop. He moved out to Long Island and I returned to my shop in New Hampshire. The time was right as my wife’s medical residency in the Bronx was nearing completion.

The construction and design of shoji screens affords a great opportunity for learning joinery and design. There are generally a couple of dozen mortise and tenon joints and an equal number of half lap joints in a single screen, and screens are often made in multiples. Installing tracks and trim can provide the opportunity for many other diverse types of joints. Repetition is the best practice. Simple forms with backbone and characteristics emphasizing strength and function, while often not as sensational or dazzling as highly detailed surfaces or alluring curves, can none the less be as reassuring as a smile from a very old friend.

One can surely cultivate such skills on their own, but a generous designer willing to take the time to include you in the design process can supply one of the most useful and valuable tools a woodworker can possess – good questions. What do you see?
The Isabella Stewart Gardner Museum in Boston is a wonderful museum, both artfully and architecturally, with an interesting past.

For those who have not been to this museum, its history starts out with Boston socialite Isabella Stewart Gardner during the early 1900s. During her life Ms. Gardner traveled the world collecting art and architecture of all kinds and bringing it to her home in Boston. She would give concerts and open her home for tours in the early part of the twentieth century.

Her home was built along the Fenway with every intention that it would become a museum following her death. She passed away in 1924 and thus the museum, her home, became open to the public. In her will, she specified that nothing could be added or removed from her collection. For decades, patrons visiting the museum would sit in her chairs and relax on her couches while enjoying the art collection or gazing upon the lush courtyard within center of the home.

As the years went by, the chairs and couches became worn and damaged from use. Eventually, the museum curators were forced to consider them part of the collection and made them off limits for use. Thus, for years the museum was pretty much standing room only. A few chairs were placed around the museum, but for the most part, it was difficult to find a place to simply sit, relax and enjoy your visit.

In 2000, Alan Chong, the current curator of the Gardner Museum, commissioned me and another woodworker to build benches for the museum which perhaps some of you have sat upon.

One of the benches was designed to fit in the Dutch Room by a balcony overlooking the courtyard below. This room still has the empty picture frame hanging on the wall that once held Rembrandt’s painting Storm on the Sea of Galilee (1633). Around every doorway and window opening in this room were hand carved leaves. I took this leaf motif and used it in the bench.

The bench is made of cherry and the inlaid leaves are made of tiger maple – the second bench was made with figured walnut and had no inlay work. For days, I drew different leaf shapes and cut out paper patterns arranging them on the bench trying out several designs until I settled upon this rather simple arrangement. The lines of leaves start at the ends of the bench and follow the curve of the bench and meet near the center. Each leaf is about ¼” thick and about 2” long. Since I wanted each leaf to be the same, I made a pattern using hardboard that could be flipped over to create the mirror image of each leaf.

To cut the recess in the cherry, I used a router fitted with a special bushing and a ⅛” router bit. The bushing has two collars that allow you to make a perfectly matched inlay every time. I purchased this set from Woodcraft. With the extra bushing installed, the router bit is held ¼” away from the edge of the pattern. By following the edge of the pattern and then removing the rest of the material with another router or a chisel, I was left with a recess ready to accept my maple inlay.

Continued on Page 9
Many of us do our finishing entirely by hand or we hand apply wax as a final step. Applying shellac with the French polish technique is often the way for me to get a smooth, highly polished surface. But when a glossy finish not needed, the French polish technique can be simplified to create an attractive finish with what is called “pull over.”

Shellac can be used to make a complete finish in multiple coats. For instance, using a mop brush, shellac can be quickly built up in a few layers, sanded or rubbed between coats as needed, and pulled over with a pad in the final step. Since each shellac coat dissolves into the previous coat, padding with a light overlapping circular motion, combined with a straight pendulum motion, blends the shellac layers.

When using shellac in this final stage, I often thin the mixture to a 1½ or 2 pound cut to avoid swirls. After application, the result is a blended sheen that can be left glossy or lightly rubbed with steel wool and waxed.

All waxes with a solvent base will give you another opportunity to use the pull over technique, and wax can be applied in one or more coats over almost any finish. The circular and pendulum motion is the same as just described. Even the buffing of wax, whether by hand or power buffing, slightly pulls over the relatively soft wax and gives an even look to the final finish.

A smooth cotton faced pad is the right tool for applying shellac or wax by hand when using the pull over technique. Keep the pad tight and add just enough finish to keep the pad moving freely over the surface. Those who gain experience with a pad may use very little finish to create just a little drag or friction to assist with the pull over.

It should be mentioned that some lacquers are formulated to enable a pull over technique. These are often used in the touch up and repair industry and vary in their ease of application. Varnishes, oils and water based finishes are generally not suited for pulling over, but I find the circular and pendulum motion to be second nature when applying almost any finish by cloth pad.

Years ago, a very experienced French polisher told me, “You can build up your finish any way you want, but you have to French polish the last.” He probably meant the last several coats to create a museum quality finish, but for many jobs, a single pull over will enhance the final look.

I hope the next time you are visiting the Isabella Stewart Gardner Museum you will take a moment to sit down and relax on this bench to enjoy the artwork and architecture that surrounds you.
In the last article (Sept ’07), we went through five exercises for turning basic shapes. These are illustrated in simplified form – Figure 1. After you have practiced these sufficiently to have confidence in your ability to execute them, it’s time to combine the skills you have learned and learn how to make a perfect inside corner.

**Classic Forms & the Importance of the Inside Corner**

One need only look at the base of a classic column to see the fundamental application of the classic order – bead, shoulder and cove. Turning columns with their appropriate caps and bases is enough to fill another article or two. For now I will only mention that these designs have been relatively unchanged for thousands of years. As a result, they have exerted tremendous influence on turning designs in architecture, furniture and everyday objects.

Wherever, it presents two distinct lines – Figure 2. Both inside and outside corners must be sharp, and the outside in particular must not be rounded by careless sanding. In classical architecture, the narrow band is called the cincture and is always flat. Woodturners call them shoulders or fillets, and there are many variations in form – Figure 3. If the projecting details are too sharp, they are apt to be fragile and may be broken by normal wear and tear.

**First Step: Make Room**

Careful planning in the roughing out stage will lead to efficient finishing of the inside corner. The pair of illustrations show two plans of attack. Plan A, is the most direct approach – Figure 4. First, leave sufficient material for the width of the shoulder. Second, you must get to a depth that is deeper than the height of the shoulder. This is what I call the “make room” step. Plan B is best for beginners – Figure 5. It involves making parting tool cuts at the location of the shoulders. After roughing out with the gouge, the shoulder may remain slightly protruding. This diameter is easy to check with a caliper that is set 1/32” to 1/16” oversize to allow for finishing – Figure 6.

**Forming the Inside Corner**

The previous article explained how to make a vertical cut to slice the end grain with the point of a skew chisel. This is referred to as the shoulder cut. The next step involves cutting sideways with the heel of the chisel to meet that first cut exactly. I’m sure you realize...
Figure 1 – Five basic shapes to practice — see the Sept '07 issue of The Old Saw

Figure 2 – A narrow band is used to break a curve into separate convex and concave segments

Figure 3 – Variations of the shoulder or cincture

Figure 4 – Plan A is the most direct approach

Figure 5 – Plan B is best for beginners

Figure 6 – After roughing with a gouge, check the diameter of the shoulder with a caliper
why it is essential to make the vertical cut first. This acts like the spur on the side of a rabbet plane or dado blades when used for cutting across the grain, sometimes called scoring. The vertical cut must be deeper than the planing cut, but this difference may be so small as to be unnoticeable.

There is much discussion in woodturning literature about rounding beads with a skew versus a gouge. I like to round the tops of beads with a gouge (Figure 7) and finish the inside corner in a second operation with a skew. You may decide to do more or less of the bead with a gouge, but at some point after the diameter of the shoulder has been established with a caliper, you must use a skew in a nearly vertical position to slice into the end grain – Figure 8. This is in preparation for the second cut from the side which will meet it exactly.

**The Cove**

The final stage is the formation of the cove. Here the piercing cut is executed as described in the previous article, and the width of the shoulder is thus established – Figure 10. When first learning the piercing cut, err on the safe side. Tilt the edge of the chisel toward the open space, so if you do get a catch, it will run into the space and not toward the finished shoulder. If it does run, straighten up the edge a little and try again.

**Entering from the Side**

In the last article, I discussed piercing entry cuts. This involves bringing the point of the chisel into contact with the work without the benefit of the bevel being in contact first. These cuts require the chisel to be placed at a precise position to enter the wood without creating a catch. In this case the skew chisel is held with the bottom bevel horizontal to make a planing cut and enters from the side. To ascertain the correct angle to hold the chisel, place the bevel on the rough shoulder, and draw back the skew until the edge just starts to engage. Then move off to the side and make the entry at a slightly lower point – Figure 9. Proceed until the heel of the skew meets the previous cut. Sometimes you will hit the right diameter the first time, but often a few very light cuts are required to get the inside corner to look clean. If you go too far, a large amount to fuzz will appear right in the corner, which will not come off. Unfortunately, it is then necessary to make an additional vertical cut somewhat deeper, and an additional shoulder cut to meet it.

**Conclusion**

The classic shape of bead-shoulder-cove is ubiquitous in turning. Every woodturner will develop a system for doing this form and it becomes routine. There may be some difference in how the gouge or the skew – or the type of skew – is used, but always start at the top (that is, the middle of the bead) and work down in stages to the bottom of the cove.
Blood Sweat & Tears

It was Christmas 2005 and
I was wondering what I would build…

Being a hobbyist woodworker has had many advantages over the years. The biggest would probably be no customer-implemented deadlines. I have put myself in that situation before by making gifts but this is of my own making. This was one of those times.

It was Christmas, 2005 and I was wondering what I would build next. All my gifts were done on time. I did not have to wait to wrap that gift because the finish I applied last night was still a little tacky! I actually had time to sit back and relax, as is often not the case. I wanted to build something challenging and meaningful. Then it came to me! A silver chest for my in-laws. We were on our way to their house for dinner that evening. They had been adding to their silverware pattern over the years and had pieces tucked away in numerous places. Why not display it all together in one special place. I will make it for next Christmas. I will surely get it done in a year. It has never taken me that long for any project.

So out comes the sketch pad for a brain dump. It has to be of the Federal style. Since they are from Maine, the seacoast has to have an influence. I know, Portsmouth Federal – this is going to be great! Slow down, you have a year. Think about this for a while. Taking time can be a good or bad thing depending on how bad of a procrastinator you are. I have not done anything this complex before, at least not all together in one project. I can do it. You just have to break it down to a series of smaller tasks! Does that sound familiar? It really is the truth. I always like to challenge myself and learn a new technique in every project I do. This project certainly fell into those criteria.

A ton of research had to be done before I felt I had an accurate design. The sketch pad eventually turned into a full size drawing. As I had been taught at North Bennett Street School, this would prove to be invaluable. The chest construction is straightforward. The details would include stringing on the top, drawer fronts and legs. Edge banding on the skirt, inlaid bell flowers on the legs with inlaid shells on the plinth. A monogram on the inside of the cover would top it off.

As with any project, you should collect all materials before you begin. Therefore, I purchased the lumber then began to build my inlays and banding. The ebony I used in the banding came from my mother in-laws father. It was a piece he collected while overseas in WWII. For the white, I would have liked holly, but I had a hard time finding it. I did have a piece of basswood that was white. Once again, it came from my mother in-law’s father. He was a decoy carver. Perfect, a piece of family history!

Next, I had to build the inlays. From a previous project, I knew this could be very tedious. I have since found someone to laser cut the veneer to fit with my plans. It is well worth it.

It’s funny how you learn something and for some reason just forget about it. Even though it is essential to an assembly, I just about cried the day I saw the dust frames rip out of the front of the chest. I do not know how many times I have built a frame like this, but for some reason I glued the back tenon. I was able to cut them out, rebuild them and put them back in. I was sure glad I used hide glue. This is where the tears were shed!

The drawer fronts are curved which proved to be a challenge. After talking to a few people, I decided bent laminations would be the way to go. I will leave it at “it was a learning experience!”

The cockbead on the drawers went OK. However, I was reminded (by the tablesaw) to always use a feather board when cutting thin strips. Here is where the blood came in.

This has been without a doubt the most challenging project I have undertaken. There were a number of things I was reminded of as well as learned along the way. I did not keep track of time but I can tell you that I have as much time in the drawers and tills as in the rest of the project. I never did finish it for Christmas. In fact I am just finishing it now. To say I sweat throughout this project would be an understatement. Procrastination is a bad thing especially when you do not know what lies ahead of you.

I would definitely do it again though. My suggestion would be to keep notes of things that worked as well as those that did not – especially for a long project. It will make the next project that much smoother.
Designing Strong Joints

Furniture making is part engineering. Build a chair—or anything else for that matter—and you’re designing joints to keep it together. The mere weight of a body in your chair, or leaning back and rocking around, twists those tenons in their mortises, tries to pull them apart, force them together or shear them off. Almost every furniture joint at some time feels the same twist, tension, compression and shear forces.

Good joint design is about balance, between the size of the tenon, its mortise and the area of the shoulder. A good rule of thumb is a tenon one third the width of the part it’s cut into, but it could be as much as one half. You might think a thicker tenon makes for a stronger joint. But its big mortise could unnecessarily weaken the part it’s cut into. The tenon takes tension stresses pulling the joint apart or twisting it, but plenty of shoulder is key to resisting compression forces. The shoulders don’t have to be equal, but it’s best to have at least two shoulders along the long sides of the tenon (the cheeks).

Well-designed joints do more than just keep parts strongly connected. They also keep parts aligned to one another. Drawer slides and guides that stay aligned with the drawer rails make for smooth running drawers. Well thought out mortise and tenons of a breadboard end keep it firmly connected and flush with the top.

Glue

The best joints have mechanical strength independent of any glue. Dovetails are a good example where the wood is physically interlocked. So is a tight mortise and tenon which any glue more firmly locks together. Joints that rely on glue for strength, such as an open bridle joint, have nowhere near the strength of a whole mortise. In a mortise, the integrity of connecting wood fibers top and bottom can resist twisting forces spreading it apart.

The most effective glue surfaces within a joint are long grain to long grain, with long grain to end grain having some but far less strength. You want plenty of cheek area of a tenon mating snugly with the long sides of the mortise. Double parallel tenons are a lot more work to cut, but they double the glue surface and strength for the same size joint. Pins through the joint, even draw bored to force the joint snugly together, are nice insurance and add some strength. Where it works aesthetically, it’s far stronger to wedge wider the end of a through tenon, into a dovetail. This adds the mechanical strength you want, but be careful of very long tenons and potential shrinkage of the mortised part.

Center the Mortise

Where you can, center the mortise (and usually the tenon) in a part. The reason, well known in engineering, is that the center of a part sees the least stress; the outer fibers feel the most tension or compression forces. A good example is a frame and panel door, where centering the joint also makes sense for a centered groove and panel.

Sometimes shifting the joint off of center has advantages, such as an apron to leg joint. Moving the joints further towards the outside of the leg (the face sides) allows for longer tenons. An additional ⅛” of length might add 15% or more glue area to both tenons. Where tenons meet inside a joint such as this one, miter them, so that each stays as long as possible. If for some reason, one side needed more strength than the other, leave it’s tenon full length and butt the other (shorter one) to it.

Size the Tenon

In typical furniture work tenons
¼” thick, especially in soft woods, are vulnerable to snapping off. A ⅜” thick tenon is my minimum, except for within very small joints where I have made tenons as thin as ⅛”. A very long tenon might seem like a good idea, but unless you are joining large pieces, tenons longer than two or three inches can have diminishing returns. The mortised part can shrink and actually force the tenon out and open the joint. Long tenons will also flex. I don’t know any rule of thumb for tenon length related to thickness, but something in the range of 4 to 6 times seems very adequate.

**Haunch the Tenon**

Far more important is to have a tenon as tall as possible as this gives maximum resistance to twist. Ideal is a full height tenon with no shoulder top and bottom. This is no problem for a seat rail into a rear chair leg other than you have to cut the mortises accurately – there is no top or bottom shoulder to cover any miscuts. For the front leg, cutting a full height mortise to the top of the leg – essentially the bridle joint I mentioned earlier – is weak and unattractive. The solution, useful any time a mortise is cut at the end of a part, is a haunch

A haunch is a shorter part of the tenon, generally angled, and at most about ⅜” deep into a mating part of the mortise. How wide a haunch depends upon the overall length of the mortise, but between ½” and ¾” works well. The haunched tenon adds a small amount of glue area, and more importantly gives maximum resistance to twist. Repairing furniture over the years, I have seen how important a haunch is. Where the tenon is unhaunched, the rail is able to warp out of alignment or a small gap opens up where the haunch should have been.

**Two Tenons or One**

Mortises longer than about 4” start to lose the integrity I spoke of. Their internal strength and stiffness that makes for a strong joint is independent of glue. On very wide rails it’s best to cut two narrow tenons with 3” or so of space between them. The mortises retain their strength, and to lock the rail over it’s entire width – very important – cut a stubby tenon into a groove in the area between the tenons. Breadboard ends use this arrangement. For any wide rails you’ll have to take seasonal movement into account and be careful which tenons you glue.

In any project, but especially for complex ones, making a full scale drawing helps to design and lay out the joinery. You can see the actual size of the tenons, their shoulders and the depth of the mortise. When it comes to cutting the joints, you can then lift their positions and dimensions right from the drawing, and make fewer mistakes.

There’s no need to invent joinery. If you have a challenging situation, find a book on Chinese joints. You’ll find some amazingly complex and elegant solutions to joining anything but are not always as challenging to cut as they look.
As a professional designer/craftsman, the New Hampshire Furniture Masters annual auction event provides me a great opportunity to develop new structural and design ideas. It’s a way to get your thoughts out there in a very public way with the good chance that follow up orders will result to expand upon these ideas and refine details.

The value of maintaining a sketchbook cannot be over-emphasized. Ideally, all serious furniture makers should spend time on a daily basis either putting down ideas on paper or developing established ideas. A sketchbook is such a great resource and the following story is a result of this active process.

I always review my ideas file for past thoughts when I’m approaching a new commission or piece for the annual Furniture Masters auction. I am often surprised by ideas that I’ve completely forgotten about, ideas that may have been embryonic at the time but seem relevant now. Relevant because in my eye I can now see the final form. Not only that, but sometimes multiple ideas can come together.

So…as I was going through my design file, I stumbled on a concept sketch for a pier table that I ended up making in 2000 and is now owned by the Currier Museum. I have always wanted to revisit this piece for a couple of reasons. First – to try it in an in the round format so it is viewed from all sides. Second – to revisit the complex, but visually pleasing apron treatment.

My first decision was to go from a pier table design to a center table design, and from four legs to six legs. This arrangement I considered somewhat as a revolt to the usual pedestal approach. And a center table is always in the middle of a space, so it is viewed from all sides.

The second interesting aspect of this project is the shaping of the skirt and the joinery involved to successfully join leg to apron. I am always interested in geometry and how shapes play off each other. This intersection of leg and apron develop a very interesting shape, one which is then echoed in the veneering that faces the shaped apron surface.

“I am always interested in geometry and how shapes play off each other. This intersection of leg and apron develop a very interesting shape, one which is then echoed in the veneering that faces the shaped apron surface.”

Center Table

by David Lamb
form to be the focus and the wood secondary. I chose cherry as the material because of its mild coloring and quieter figuring. However, cherry also, as do other woods, has a wide variety of figure available, potentially within the same tree. In this piece, I use the straight or quartered figure, crotch and burl figures. Straight grain was used in the legs and bracing where form is the dominant feature. It was also used to frame the top sunburst pattern and as a foil or counterpoint to elements in the apron. Crotch figuring was used to create a dynamic top surface where there is no shaping but a beautiful display area and also on the apron. This crotch figure was perfect for the apron because the arching pattern in the wood is reflected in the Gothic arch pattern of the leg post, the apron treatment, and the form of the bracing. Burl figure was used as a focal point in the center of the top because burl is non-directional. The feet and the bracing hub also used turned solid burl for its textural effects.

**Laminating techniques** were used extensively here. *First* – in the bracing for strength and ease of forming the parts (which were then cross banded). *Second* – in the apron. The apron lamination was well over 2” thick. This much material was needed to shape the face and still have stock for the joining of the legs. A holding jig was made once the two half-circle laminations were joined together

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**Evolution of a Design**

Demi-Lune Table at the Currier Museum of Art by David Lamb, mahogany, schist, serpentine 30 in. x 45 in. x 16 in.

The top surface is green schist that contains a unique “bird’s foot” crystal pattern of darker minerals along with inclusions of garnet. Along the lower edge of the apron is a thin bead of serpentine. Serpentine is also used for the turned feet. The interplay between the curved apron and cylindrical top adds harmony to the form.

*photo by Dean Powell*

*sketches by David Lamb*
so they could be safely shaped on the shaper. This was easily done on my Whitney shaper by virtue that it easily handles the 4” tall knives in its collar head. Also, the large top beautifully supports the large jigging that contains the 36” diameter apron ring.

The legs needed to be turned next. But first, the joinery needed to be cut. What is unusual here is that the legs tenon into the apron frame rather than the other way around which is the more common approach. This joinery needed to be cut while the stock was still square with flat references for layout and cutting. The intersection of the curved apron face with the leg means this same curve needs to be reflected in this leg joint also allowing for the layer of veneer that covers the apron.

There is no room for error here. This curved joint is cut freehand on the bandsaw. After this cutting, the legs can then be turned. Once turned, waste is removed from the tenoning operation and the legs ready to fit to the apron. This is a very touchy and precise operation.

It is no secret my wife, Janet, helps extensively in the shop. She has a very sharp eye and can do very fussy work. She fit all the parts of the apron facing which was no small task. Although cutting patterns were used to prepare each piece, much hand fitting was required to get a seamless joint.

I call this facing technique “Tailor Veneered”. This apron face is a compound curve. It curves in two directions at once – kind of like a reverse eggshell. Compound curved work such as this table apron often requires special facing techniques to cover the exposed lamination lines. Wood seldom bends in two directions at once without cracking or buckling from bending stresses.

To overcome these problems this tailored veneering approach is employed. The idea came from seeing Janet putting in “darts” when making clothing. This allows a reduction from one diameter to a smaller diameter. Working in wood veneers in smaller parts allows for this change in sizes and also allows for a decorative approach that takes it beyond just a functional solution. This Gothic arch design is reflective of the shaping at the top of the leg, which is also the result of geometry where the curving apron bisects the cylinder top of the leg.

The bracing was made next. Its function is limited in that it is not needed to really strengthen the tables’ structure but has the important function of strengthening the table’s aesthetic design. This is accomplished by causing your eye to follow its lines. Once the eye sees the top and apron, it follows the leg down and then the sweep of the bracing returns the eye up and back to the top. The result is a form that is whole and visually stimulating.

Once this bracing was made and the joinery cut and fit, the nightmare of the glue-up occurred. It worked out fine, but to me it was the aspect that I sweat over the most because so many parts came together simultaneously. The specter of “glue grab” before joints closed gave me the ‘willies’. I took some meditation time before I was ready to spread the glue and pull all twelve joints home at once.

This is one of my favorite designs and I look forward to its next step in this evolution of design.
For the past seven years, The New Hampshire Furniture Masters has regularly taught woodworking courses in the New Hampshire State Prison system.

The idea was first discussed at a Masters exhibition by Furniture Masters founder Tony Hartigan and Superior Court Judge Kathleen McGuire. Judge McGuire was aware of the well-equipped Hobby Craft workshop in the prison at Concord and the outlet gallery that sold the work the inmates produced.

But she felt that the inmates could benefit greatly if some of the Furniture Masters were willing to share their skills and work to raise the quality of their work to the point that perhaps a few inmates could participate in the annual auction. Judge McGuire and Jon Brooks visited the prison to work out the logistical details of a group of volunteers going into the prison workshops on a regular basis and teaching the inmates.

After their initial visit, and because I had briefly taught at a small prison in Vermont, I was asked if I would go in to assess the skill level of the inmates and to design the initial set of courses to bring up their skills to an acceptable level so that two of the inmates could participate in the next year’s auction.

What I saw that first day was a very busy, well-equipped workshop where the inmates were producing work more akin to high school level woodworking – hardwood plywoods, screws and plugs, toys and whirligigs. The more skilled among them were making Shaker-esque bedside tables.

The seminars we teach there have an average of twenty-five student inmates, however, the prison workshop administrator was asked to pick the two most talented of the group so we could work more intensely with them. The first two, Eric Grant and Tim Eldridge, were chosen, and a couple of very supportive and generous people agreed to patron (or commission) their first projects for inclusion in the Furniture Masters Auction.

Both these first projects included drawers, and one required the application of Crotch Mahogany veneers. It was obvious that the subject matter of the first seminars would have to be — hand dovetailing a traditional drawer, veneering, sharpening and tuning a hand plane, the sharpening and use of a scraper, etc.

After the first few seminars got underway, Tom McLaughlin got excited about the program and began his involvement. Tom took over as coordinator of the Concord program and began to expand the curriculum to include other furniture masters who would share their knowledge and particular area of expertise.

To date we have had such well-known presenters such as Garret Hack, Jon Siegel, David Lamb and Jere Osgood to name a few.

It never ceases to amaze how hungry the inmates who participate in the Prison Outreach Program are for the practical knowledge we share with them. The seminars are always very well attended, and during subsequent visits to the prison workshops, you can see how the inmates incorporate the new skills they are learning into the pieces they are working on.

Based on the success of the program in the Concord prison, about three years ago we began to discuss the possibility of expanding the program to the new Berlin Prison. Since the Berlin facility is all new, they also planned space for the Hobby Craft workshop and equipped it with some nice new machinery. To assess the new facility, the Furniture Masters Education Chair Person Mary McLaughlin and I drove to Berlin to meet with the warden and staff to discuss the possibility of expanding our current program.

Although the space was roomy and all the new machinery was in place, it was evident to us that they, like Concord had no good hand tools to speak of, and because they had spent the budget on the needed machinery, there was no money left to buy the needed hand tools. Mary and I decided to go begging.

Continued on Page 25
The John E. Kraus Tool Chest

Upon returning from a quilting “camp” my wife told me that she had passed my e-mail address along to a woman whose husband had some “old tools” that he was trying to find a home for. The next day, I received an e-mail from John Kraus, Jr., with some photographs of his tools – Figure 1. I was struck speechless looking at the photographs of a largely intact chest of tools that had been owned by his great-grandfather, John Erhard Kraus, and used by him as a professional woodworker in Syracuse, New York, beginning in the 1870s.

As an amateur woodworker, seeing the photographs was like looking into a treasure chest. Or, more correctly, it was like looking through a window into the life and times of a craftsman during the waning days of the wooden plane when it was still the professional’s tool of choice over the newfangled metal ones.

I was able to acquire this tool chest complete with tools, and as a bonus I was also given the workbench that John E. Kraus used. I have learned a great deal about the man, his life, and the tools of his trade, and I expect to continue to learn more.

Let’s open this “treasure chest” of tools and look back in time.

The Original Owner – John Erhard Kraus was a twenty-eight year old Bavarian army veteran when he arrived in Syracuse in 1869. In 1871 in Syracuse, he married a Civil War widow whose first husband was killed at the Battle of Lookout Mountain. He began his career probably as a jointer or interior finish carpenter within the large German community in that city. He had most likely been trained in his profession as a woodworker in Bavaria before his army service in the Austro-Prussian War of 1866, and his tool chest still contains three German wooden planes from his earlier life. His first job in Syracuse was as part of a team of three who finished the interior of the newly built Salem Evangelical Church in Syracuse.

According to a history of the church published that year, Kraus joined that congregation and remained an active member until at least 1907. His name appears in the Syracuse city directories from 1873 to 1883 as a carpenter and in 1884 and later as a “contractor.”

The mixture of tools in the chest seems consistent with interior finish work, although he also constructed some furnishings, at least for his own family. Kraus is remembered in family lore as a practical and frugal man. That frugality is reflected in an oak pedestal desk, attributed to him and still owned by his family. The top and sides of the desk have been cleverly made using leftover oak flooring boards. The steel stamp Kraus used to mark his tools was included in the chest, and it also suggests frugality. In Kraus’s initial listings in the Syracuse city directories from 1873 to 1876, his first name is recorded as Erhardt or Erhard. In 1880 and later, the directory changes and Kraus is listed with a first name of John with “E” as a middle initial. The stamp and his tools, however, are all marked “A. Kraus.”

There could be several explanations for this discrepancy, but my theory is that when he ordered the stamp, he verbally gave his name to the supplier as Erhard Kraus, which perhaps the vendor assumed from German pronunciation began with an “A” and not an “E.” It appears that rather than buy another
The ten-hour day was first in vogue in 1850 in towns and cities, but in the country a day was from daylight until dark. But no fault was found if you were off work an hour now and again. I have known all the men on the job, boys and all, to leave the work to run to a dog fight and stay off for an hour or more – the boss, too! No grumbling followed. Things were hard for the boys, and yet things were comfortable, made so by the fire and easy surroundings at home. Those days were the happiest of my life, and if I had to live over again, I would like nothing better. It was hard work, but the rest was more delightful and more than made up for the stress.

Good framers were always in demand and their wages were from $1.75 to $2.25 per day with board. With regard to wages, at this distance they look small; but it seems to me that the buying power of a day’s wages in 1850 was nearly equal that of today, though it did not count as much in figures. Wages paid to ordinary workmen were from $1.25 to $2.00 per day. Sometimes foremen and specialists, such as hand railers, would receive from $2.25 to $3.00, but this was a rare occurrence. There was as much rivalry in taking jobs of work in those days as today. Every ambitious workman wanted to be a contractor.

The expected contents of a tool chest are also included in the book...

In those days a journeyman’s full tool chest was quite a costly investment, and many a man found it an expensive undertaking to supply himself with all the tools he needed. Besides his ordinary bench and everyday working tools, he was obliged to carry a lot of odd tools that are not thought of these days. Sash planes, match planes, moulding planes, beading planes, coves, rabbits, side filisters, try and other squares, mortise gage, and three or four other squares, bevels, miters, and half a dozen or more saws of various kinds, including a dove-tailing saw – a saw which is now almost extinct – plumb-bob, and two or three dozen chisels, gouges, and many other things the modern carpenter never wants or thinks of. The moving of tool chests was quite a big job, and the chest itself was a fearful and wonderful combination of usefulness, clumsiness and adaptability. I keep mine as a “mechanical relic,” now over sixty years old.
The Guild of New Hampshire Woodworkers

The tools of John Erhard Kraus — The tool chest itself is constructed from a single wide board 22-inches wide by 7⁄8-inch thick dovetailed curly maple with a mahogany panel in the lid. On the outside, Kraus added more 7⁄8-inch curly maple to simulate the frame-and-panel construction of the chest. The frames are trimmed with mahogany molding. The overall finished size of the chest is 401⁄4-inches wide x 253⁄4-inches deep x 231⁄2-inches high. The inside is unfinished and has three tool tills in the base and side brackets mounted for three sliding tills above the base. Only one sliding till remains with the chest, and it appears to be a partitioned tray constructed of dovetailed 3⁄8-inch thick mahogany. The supports for the sliding tool tills appear to be cherry.

The chest is massive, weighing in at 125 pounds when empty. Moving the chest over the generations has caused a crack to develop in the back and one side of the chest. The original handles on the sides have also been replaced with newer ones.

The chest lock, with the key still present, seems to be original hardware along with the brass hinges.

Wooden Planes — The back storage space in the bottom of the chest was designed to store the wooden molding planes and still contained twenty hollows and rounds all made by D.R. Barton in Rochester, New York — Figure 2. The back storage row also contained five sizes of beading planes ranging from 3⁄16˝ to 7⁄8˝ (two from D.R. Barton, two from Sandusky Tool and one from Auburn Tool) and two sizes of skew rabbet planes, a 1-inch wide from G.W. Denison, and a 11⁄2-inch wide from D.R. Barton & Co. — Figure 3.

The front section of the chest base was designed to hold five saws, but these have all unfortunately vanished over the years. The center section of the base holds the wooden bench planes, including two toted fore planes (22-inches), one toted jack plane (16-inches), two German horn-style smoothers, a rectangular German smoother, and three sizes of American coffin smoothers in different sizes - Figure 4. There is also a D. R. Barton & Co. two-iron, 1¼-inch nosing plane and a Sandusky Tool thumbnail pattern casing plane.

Finally, there is a D.R. Barton & Co. toted beech plow plane with boxwood screws and fence. Three of the original irons for the plow plane remain in the chest. Two other plow irons appear to be well used replacements, suggesting that Kraus used the plow often for quarter-inch and half-inch applications.

In all, twenty-six of the thirty-nine planes in the tool chest were made by D. R. Barton and Co., a large, well-respected edge-tool company during the period when the chest contents were purchased. The Barton & Co.’s five-pointed star inside a half circle mark on four of the larger planes, including the plow plane and one fore plane, suggests a manufacture date of 1874 to 1880.

There are no complex molding planes in the chest. Kraus may have used the hollows and rounds in conjunction with his other planes to prepare any molding shapes needed, or the planes were not stored inside the chest and have been lost over time.

Measuring & Marking Tools — Aside from the large assortment of wooden planes, the next category that is well represented is measuring and marking tools — Figure 5.

The chest contains two boxwood folding rules (one from Upson Nut Co.) and a thin, 6-foot folding steel rule made by an unknown German company. There are also four framing squares. Three are 2-foot size, two of which are from Eagle Square Co. and the other an inexpensive unlabeled one, and a single 1-foot Hart Manufacturing Co. framing square. There are also two try squares. One is a T.E.Wells & Co., Sheffield, 11-inch size, and the other is a small 4½-inch try-square/bevel combination with the 1869 Winterbottom patent date stamped on the handle.

For layout work, Kraus had two micro-adjustable...
steel dividers – a 5-inch and an 8-inch. Four mortise gauges are in the chest, varying in quality from a nice boxwood gauge with brass micro-adjustment thumbscrews, to inexpensive beech gauges with wooden adjustment thumbscrews. None of these had obvious manufacturer markings.

Completing the layout tools are two bevel gauges, a 10-inch manufactured by Star Tool with an 1867 patent date and an unmarked 12-inch size. There is also a short punch or awl with wooden handle, which I assume was for marking.

Boring and drilling tools include two 10-inch sweep braces – one from John S. Fray with a Spofford stamp and an 1880 patent date and one unmarked – Figure 6. Spofford patented a sweep brace in 1880 and his name was stamped along with the manufacturer on the braces from that period. There are a range of center bits, two spoon bits, a countersink, two tapered reamers, and some screwdriver bits. The chest also contains a range of double-spiral augers and an expansive bit marked “Wm A Clark.”

Two large diameter augers, a 1½-inch and a 2-inch, appear to have been used for structural post-and-beam framing. The National Builder article noted...

The writer or editor of the 1914 story may have made an error in the last sentence. A 1½-inch diameter bit for pinning the tenons would have been too large. The 1½-inch size may instead have been used for mortising beams of hardwood while the larger 2-inch bit would be used on softer wood. The pin diameter would typically have been more like 1-inch or slightly less.

There are also two T-auger handles in the chest. One has a 24-inch long, 1-inch diameter, double-spiral bit mounted. The other handle has no bit mounted, but there is an 18-inch long screwdriver bit that seems to be suitable for that T-auger handle.

The three more standard screwdrivers with handles range from very large to very small – Figure 7. The longest is a huge 21¾-inch size followed by a 16¾-inch length and a small screwdriver, 5-inches overall in length. This small screwdriver is one of only two Stanley labeled tools in the chest and has a June 6, 1871, patent date. The other Stanley item is a 1½-inch wide plane iron, with no slot for a chip breaker, that is not mounted in a plane.

The selection of chisels in the chest is less than would be expected for his profession. There are four mortise chisels ranging from ¼-inch to ½-inch wide. There are also two firmer chisels – ½-inch and 1½-inch wide – and three gouges, a ¾-inch, 1-inch, and 1¼-inch wide. Three cold chisels and a nail set are also in the collection.

Tools used for cutting belonging to Kraus that still remain in the tool chest are a draw knife with a 9-inch blade marked “Geo. Parr, Buffalo,” a lathing hatchet with a 2½-inch wide blade manufactured by C. Hammond, Philadelphia,
a nice un-labeled spoke shave with a brass wear plate and brass adjustment thumbscrews, and a pair of Peck Stow Wilcox Co.’s no. 8 tin snips – Figure 8.

**Remaining bench tools** included three hammers, including one early claw hammer; an adjustable Coes wrench marked with July 1880 and 1884 patent dates; a 12-inch file marked “Eagle Works, Sheffield”; an A. Stillman saw set with a patent date of 1848; four 2½-inch C-clamps that appear to be hand forged; and inside a wooden box, an oil stone for sharpening.

There is also one “mystery tool” in the chest – Figure 9. This appears to be a layout jig of some sort consisting of a metal expandable frame with ten sharp points on the back which are positioned to form a rectangle 2-inches wide by 3½-inches long. A central 8-inch long wooden bar runs through the center of the tool with a nicely turned wooden knob mounted on the bar on the side of the frame away from the sharp points. There is also a brass stop screwed into the far end of the wooden central bar. The width of the frame can also be adjusted slightly between 2 and 2¼-inches.

The last “tool” belonging to Kraus is his workbench. It is a classic woodworking bench with a wooden screw front vise and a metal screw dovetailed end vise. Both of the original handles for the vises have gone missing. The dimensions are 77½-inches wide x 26-inches deep x 32½-inches high. The top is about 2¾-inches thick and has no “tool tray” feature included in the back. The workbench top is located to the base by four pins, allowing the top to be easily removed for transport to different work sites. The base frame also has wedged-through tenons to allow it to also be dismantled if needed. The workbench top is located to the base by four pins, allowing the top to be easily removed for transport to different work sites. The base frame also has wedged-through tenons to allow it to also be dismantled if needed. A shelf made from a wooden packing case for “Unfermented Grape Juice” bottles was added by Kraus or possibly by his son. The bench still has two metal bench dogs included for clamping.

This workbench has seen much use over the last 130 years or so, functioning as the family workbench for subsequent generations. There is a great deal of spilled and dripped old paint to clean off before the vises and bench dog holes can again work smoothly. One of the Kraus’s descendents, probably as a child, also had a fine time using the “A. Kraus” steel name stamp to emboss the end vise twenty or so times.

While the tool chest contains a large number of the original tools, it is certainly not the complete set of tools that Kraus would have needed for his profession. Comparing the contents with the description of typical chest contents presented earlier from the National Builder 1914 article, some of the missing elements can be identified. The most obvious missing items are the five saws that had their own tool till area in the bottom front of the tool chest. In addition, a plumb-bob, a level, and mallets would have been essential tools, as well as a much larger assortment of chisels and gouges. These seem to be the type of tools that a descendant may have removed from the chest at some point in time for personal use and became mixed in with another set of household tools. There may also have been additional wooden planes, such as sash planes or more complex molding planes. If they had ever been present, they would probably have been stored outside the tool chest or been passed on to fellow professionals upon his retirement.

**Looking over the working tools** of John Erhard Kraus, several conclusions can be drawn. Kraus’s choice of curly maple and mahogany for his tool chest attests to his pride in his woodworking skills. The chest is a step up from the more common pine tool chests that are often seen for carpenters and contractors. When it was first completed, the chest would have made an impressive statement to co-workers and customers.

Figure 8 – Hammers, cutting and shaving tools, clamps, file, saw set, and sharpening stone used by John E. Kraus.

Figure 9 – “Mystery tool” contained in the chest, with an adjustable metal frame, pointed on one side, attached to a central wooden bar with a wooden knob and brass end stop.
Kraus selected quality tools suitable for a professional. They are certainly not the finest in quality available at that time, but provide a good compromise of quality and cost that one would expect from the frugal craftsman. It appears that he was willing to try to glue a crack in a coffin smoother plane, owned and possibly discarded by a D. F. Einer, although the repair was never quite completed. One plane also has an insert mortised into the sole to narrow the mouth and extend the life of the plane. A second plane was mortised for a similar patch, but the repair was never completed. Kraus seemed to be trying to get the most life out of good tools.

The tools are well cared for. Other than the Coes adjustable wrench and one mortise chisel, which have taken a beating at some point in time, the tools show little indication of mistreatment. The draw knife, for example, does not show signs of being hit with a hammer or mallet for use like a small froe, a condition I have often seen when examining antique draw knives.

The tools do, however, show that they had been heavily used. This is particularly apparent for the bench planes, the try squares, bevels, and his best mortise gauge. The result is tools that are not as pretty as some I have seen, but they do have character.

The patent dates marked on the tools range from 1848 to 1884. There is also no indication that he had switched from using the wooden planes of his youth and early adulthood to metal body planes even as they became more common.

John Erhard Kraus died at age 73 in 1915. Was he successful at his chosen profession as a contractor? He was able to provide a living as a craftsman for himself, his wife, and his son (his daughter died before adulthood). He was able to send his son on to college at Syracuse University. That son, Edward Henry Kraus, later received a doctorate from the University of Munich in 1901 and went on to become a Dean of the College of Literature, Science and the Arts at the University of Michigan, where the Natural Science Building now bears the Kraus name, and one of the founders and then president of the Mineralogical Society of America. Kraus’s grandson, John D. Kraus, became a professor at Ohio State and an international authority on antennas, electromagnetism and radio astronomy. His two great-grandsons are a physician and a staff member at the University of New Hampshire. Certainly, this is a successful legacy for a German immigrant woodworker who first landed in an unfamiliar country in 1869. His descendents clearly had a fondness for Kraus as they have so carefully preserved the contents of his tool chest and workbench through moves from Syracuse to Ann Arbor, to Columbus, Ohio, and now into my custodianship near Boston.

My goal, after completing my research into the past of this chest and the man, is to once again put the tools back into use. A frugal man like John Erhard Kraus would, I think, be pleased.

References
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Prison Outreach – continued
– it’s just like shopping – but without a checkbook.

The most obvious need was for some fine hand planes and a dovetail saw. The obvious choice was Lie-Nielsen Toolworks in Warren, Maine. Since these are the planes I use in my workshop everyday, I was confident they would stand up to the rigors of everyday use by the inmates.

When I talked to Tom Lie-Nielsen and explained the prison program and the inmates need, Tom asked me to send him a list of what was needed, and he would endeavor to help out in any way he could. I sent the list and was totally shocked when UPS delivered boxes of new Lie-Nielsen tools to my shop. It was a humbling and gratifying experience to see people respond to these needs. The same was true of Vacuum Pressing Systems of Brunswick, Maine. They gave us a 50% discount on a veneer bag. We also received a deep discount from Woodcraft Supply Co.

The Berlin facility now has a well equipped shop of woodworking machines, and beautiful hand tools. A few weeks after they were delivered to the prison, I called to ask how they were enjoying working with the new tools. The reply was that the inmates felt the tools were of such high quality and beauty, that no one would touch them until we taught them how to sharpen and care for them correctly. Consequently, both Garret Hack and I taught courses on hand tool tuning and sharpening. The result of all this is a dramatic improvement in the quality of the work being produced at both Concord and Berlin.

Inmate mentoring is another significant element of growth that is very evident to me as I visit both locations and meet new people. One specific instance illustrates this very well.

A few months ago, I had just taught a class on dovetailing a drawer at the Berlin facility. At the end of the seminar, Tim Eldridge, an inmate that we taught in Concord and who is now in Berlin, showed me a beautiful new desk he was working on. He informed me that the drawer had been dovetailed by one of the newer inmates who had been mentored by inmate Eric Grant and by

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You can strip for your spouse, your customers, and even your friends. For this strip, however, you don’t need a stage, but an old cart or table may help a lot. As you might have imagined, the stripping that I am referring to is furniture stripping.

Though most of us primarily make new furniture, eventually, the ability to strip off an old finish comes in handy. Most of the time I send my stripping needs out, which is easy since my favorite stripper is just down a flight of stairs for me. Having someone else strip is easier, but may come with a price. This price may be more than monetary. If the stripper uses a dunk tank, the process may remove the glue that holds the furniture together and may also remove veneers. The second method is the flow over system, which pumps the stripper through a brush. This method typically uses straight MEK (methyl ethyl ketone) to do the job. This is very efficient, and from my viewpoint, the best method of stripping. The next method is the one I use in my shop, and is also used by some commercial strippers. This method uses the stripper available at your favorite hardware store, some basic tools and a little time and elbow grease.

Before we begin, a word about safety. Stripper will burn your skin, always wear protective gloves. Stripper will ruin clothing, always wear an apron. At least, stripper will cause great pain if splashed in your eye, wear eye protection. Fumes from strippers are neurotoxins and may also cause cancer (this is also true for most finishes). Wear a mask with a carbon filter. Please be aware that the carbon filters are only good for a few hours and need to be replaced. In addition to the mask, work in a well ventilated area. One positive note to this section is that strippers are usually non-flammable. Finally, follow the directions to your particular stripper. I am describing the method that I use, which may not be suitable to your situation or type of stripper.

Materials needed for most stripping jobs are basic. First, get some stripper. I use Klean-Strip KS-1 available at Home Depot. It is strong and does a good job. Under this brand there are lower strengths of strippers. These still work, but not as fast, and may need more repeat passes. Environmentally friendly strippers are also available. I have personally not tried any of these since I have been told that they are ineffective. In addition to stripper, you will need a wide putty knife (3” to 4” wide will do nicely), shaped scrapers and possibly dental tools to get into crevices, a disposable brush (I use the china bristle available in boxes of 25 for $12), lacquer thinner or alcohol, #2-3 steel wool and a container to put the stripped material into. Also, stripping can be messy. Cover surfaces that you want to keep clean with newspaper or plastic. I have found plastic to be slippery on flooring surfaces and usually opt for newspaper. I also use scrap ply to cover the working table surface.

Before the stripper is opened, cover any area that is not to be stripped with plastic. If you do not cover these areas, a stripper splash may cause you to strip more than you desire.

To start, pour some stripper into a plastic container. I usually use a disposable one quart mixing cup. Proceed to brush a thick layer of stripper on the surface to be stripped. This is not the time to be frugal. I apply stripper to a flat top surface up to approximately four square feet, less for detail and vertical surfaces. After application, patience is required. Removal of the stripper before it has had time to work will result in additional applications of stripper, which will cost you more time and material than if you just wait.

Initial indications of the stripper working is usually bubbling of the finish. As the stripper works, it will become more solid and should be removed before it becomes too solid. If the stripper sits too long you will need to add stripper to remove the initial stripper. Well great, I tell you not to remove the stripper too soon, but then tell you that if you wait too long it is also a problem. Yup, that’s right. Without the experience to know the optimum time to scrape the gunk off, just wait ten minutes and then scrape. After a couple of applications you will start to gain some of that experience.

To scrape the stripper off, start with your putty knife and make wide passes across flat surfaces and put the waste gunk unto your disposal container. An old coffee can works great for this. After the flat surface has most of the material removed, use your shaped scrapers.
and dental tools to get any gunk out of detail work. Use care to insure that you do not damage the underlying wood. Putty knives and scrapers should have rounded edges and eased corners. Plastic scrapers are also available and are less likely to cause damage. Use of a stiff brush with plastic bristles is also useful when dealing with detail areas. Depending on how stubborn the finish is, additional applications of stripper may be necessary.

**Application of the stripper and its removal with scrapers is the initial step in stripping.** After most of the finish has been removed, cleanup of the stripper and in particular removal of the remaining finish from detail areas is necessary. While the wood is still wet from the stripper, flood the surface with either lacquer thinner or alcohol. Use sufficient liquid to flood the surface but not enough to end up on the floor. Rub the surface wetted with the liquid with #2-3 steel wool. Use the steel wool as you would a sand paper – working with the grain. Working across the grain will produce scratching. Again, use the stiff bristle brush in the detail areas.

Both lacquer thinner and alcohol work well for this stage of stripping. Determination of which to use is dependant on what you are stripping. Definitely use alcohol for anything shellac based. Beyond shellac, alcohol is often useful in pulling many stains out of the wood. Sometimes alcohol doesn't cut it, literally, making lacquer thinner a better choice.

**An alternate method of stripping is used by Sue,** who strips professionally in my building. She performs the initial removal as I do, however, instead of using a solvent, she uses another coat of stripper with the steel wool. This is followed by ragging of the surface and using steel wool dry. Final cleanup and sanding is left to the refinisher.

After all of the finish is removed, clean up any remaining crud on the surface with your solvent on a rag. Leave the piece to dry and you’re done. Well, except for the final sanding, staining and refinishing that is now needed.

Always work in a well ventilated space, wear gloves, an apron, eye protection, and a carbon filter mask when stripping – and follow the directions on the container.
Complex crown molding around your ceiling or around the top of the most elegant bookcase adds incredible detail, beauty and sophistication to any project. They look impossibly complex. That may be the case in mass production, but in the home workshop, it's very easy to build a beautiful structure with a few simple router bits and a tablesaw.

There is a simple rule of proportion that makes most crowns fit a pretty normal industry standard. A line drawn up the face of the crown should be about thirty five degrees from vertical for best proportion. Also, filler blocks will likely be needed to give the molding enough body to work with if the finished molding is greater than about 4” tall.

So here are three simple profiles – cove, round-over and straight cuts. The dentil structure was made with a simple straight bit.

Make the three pieces of lumber shown, glue them together adding backing material as you glue up the layers. The best bet for your project unless you have a specific plan you are matching, is to make several pieces of different designs, perhaps a couple feet long. Cut an inch off of each piece. Then lay them flat on the table on the end grain and start moving them around like a puzzle. You will easily be able to see the profile and can settle in on one you like. You'll want to make sure that the pieces overlap each other as shown in the sample so that you can glue them in layers. Cut filler strips to build out the back side as you think necessary for stability. This sample is 100% full of wood – overkill in most situations. You only need enough backing to make the assembly rigid when it's glued up.

After you determine the profile you like, take the remaining foot of stock and glue them up to the final shape. You have a great sample then to hold up to your project to further qualify it. The glue up is easy if you use some CA epoxy and accelerator. Put a dab of epoxy near each end of one piece. Spray accelerator on the mating piece. Quickly position them and squeeze tightly together. A quick clamp is best to get a good airtight fit. The assembly bonds in seconds. And the area is small enough with just a dab of epoxy that you can split the assembly apart if you change your mind.

When you are satisfied, you're ready to run a hundred feet or so, depending of course on your need, and you're there. You can build beautiful cove structures, the limit being only in your own imagination. Four common router bits, – straight, beading (round over with an edge), cove and an ogee. Ogees come in simple and classic so you have a bit of variety. All of these bits come in a number of cutting diameters and radii. Some are just too small or too big
for the job. This is a problem to be solved by the artistic eye. But given those four bits and one cove piece cut on a tablesaw, the sky’s the limit.

So here is a typical crown molding:

- Dentil – ½” straight bit
- Round-over with edge – ½” roundover
- Cove – tablesaw

Note that the cove piece is first cut flat and then must be mitered on both edges. The miter is cut half way through the board on each side.

If you ever want to replicate your work, you must save the model you have built. On the 1” thick profile mockup, note the different bit sizes used. The cove especially needs to be documented. Note the jig angle, the saw fence spacing and the size of the rough stock you started with.

I recently acquired a great miter saw – a DeWalt 12” slider. What a saw, and what an education in doing compound miters on crown molding. Being around the right guys at the right time taught me the simple and beautiful essence of using this saw to do that difficult job. Technology and a little cash makes cutting crown molding so efficient. You might even think it was invented for that purpose.

You simply set the miter saw to forty-five degrees, insert the molding upside down, hold it at the installed angle and chop it off. Everything works out great. No more website calculations of angles, setting blade and gauge, making test cuts and making tiny adjustments to get the perfect compound miter. The old tablesaw method works. The new miter saw method works too – and easier. Of course there are still test cuts and trueing up your saw.

Well, then there’s the small problem of measuring to the wrong side, being confused about which direction is which, and cutting the corner piece four inches too short. This will take a lot more getting used to.

A word about holding the molding in the saw. It must sit accurately on the table, against the fence, and at the right angle. It must be repeatable for all subsequent cuts. And it must not move during the cut.

There is a Crown Molding Compound Miter Jig on the market, available at Rockler (www.rockler.com) that makes this job a breeze. It adjusts quickly to hold the molding at a stable and repeatable angle. Sandpaper surfaces keep the molding from slipping or sliding. It’s wonderful.

I recently found my dream bookcase in a twenty year old Wood Magazine. It is a barrister style that demands attention in it’s grace. I’ll be building two of them one of these years. And I’m really looking forward to the molding part now.
Annual Meeting

This year’s annual meeting was set at a traditional working farm called Sanborn Mills. A misty fog hung low over the ground with weather predictions promising early clearing and sunshine for the remainder of the day.

As you approach Sanborn Mills Farm, you begin to feel as though you have stepped back in time. The land is a combination of meadows and woods with buildings built long ago. The road narrows and turns to dirt as it rises and falls with the land.

As I drove in and out of the mist, I passed by a pond with an old sawmill set up for operation. Beyond the mill stood the Guild auction tent in front of a reproduction Cape home. Further on was a field of bright green clover, heavy with moisture, quickly filling up with cars and trucks.

The sounds you hear are the wind rustling the leaves, birds going about their day, and the voices of enthusiastic Guild members as they look over the auction items deciding what they’d like to bid on or just plain figuring out what something is. There are lots of smiles and hellos as the group comes together to hear the Guild news.

Our volunteer auctioneer, Jon Siegel, starts off with his entertaining quips letting everyone know what the simple rules are before he pulls buyers in with the first piece. There was enthusiastic bidding and joking all around as the rain picked up and the air cooled. Jon did a fabulous job making us laugh while moving items along. By the end of the auction, more money was made for the Guild’s scholarship fund, used tools and hardware were recycled to new workshops, and the meeting turned to Guild business.

Guild President, Dave Anderson, gave an update on Guild news and the current issues we face followed by some lively discussion. Meanwhile, everyone ate their lunch as the rain let up. Our host, Colin Cabot, spoke briefly about the unique features of the Farm. Everyone was most interested in seeing the water powered sawmill in action.

With the Guild business taken care of, Colin took the first group off to begin a tour of the two water powered mills. He began by taking us through the lower level of the sawmill where...
a massive system of belts and wheels work together to turn the flow of water into usable energy.

When he opened the flood gates, I stayed below to see it all in motion. I was amazed at the power, the torque, the mill produces. With the turbine submerged, the gears, wheels, and belts turning faster and with more force than it seems like they should, it is mind blowing to think that it is all driving a saw blade.

Watching it work, my thoughts were that nothing could stop it. And that it makes the 5hp tablesaw, the one I fear will take my fingers, look like a child’s toy.

On the upper deck Colin and an employee demonstrated “edging a board." With a plank clamped into the cart, Colin ratcheted the planks edge in line with the saw blade, then propelled the cart forward by pulling a lever. He then brought it back, flipped the plank, and repeated the process.

The Grist Mill peaked my interest because of its mystery. It was the first one I had been through. Colin talked about the mill’s working history, and went into detail about the two sets of grind stones. He explained that one set is New Hampshire granite, and the other is French Buhr. A third set, originally part of the mill, had been removed.

One stone from each set was recessed into the floor. The second was suspended from above. Wheat and corn funneled through wooden hoppers down through a central hole in the upper stone.

In the Grist mill, I found myself thinking about the use of wood as a material for mechanical parts. Nearly every exposed working part of the grist mill was made of wood, including gears, wheels and levers, as well as a crane/hoist used to move the massive grind stones.

At the sawmill, Colin explained that wooden gears were often preferred because they would shear before more expensive parts could break. Yet, in the grist mill, it seemed like wood was the material of choice for any number of reasons.

Though the grist mill was not up and running, Colin opened the flood gates and encouraged us to take a look around. As I did, I again appreciated how the sun had come out, and how natural the farm felt. Every breath of the crisp fall air brought the scent of old pine boards and flowing water. If Yankee made a candle, I'd buy one.
There are about 70 species of ash worldwide. Sixteen are native to North America. Seven of these extend into Mexico and one into Cuba. There are five others found in Central America. About 50 more are found throughout Europe and Asia.

Although the white ash is probably more familiar and commercially the most important of all the ashes, the black ash (Fraxinus nigra) has some interesting applications.

Black ash, also called brown ash, basket ash, swamp ash, hoop ash or water ash is considered a northern tree. It ranges from the maritime provinces of Canada down through New England into New York and Pennsylvania, and westward as far as Iowa and North Dakota. It is quite common in the Great Lakes area and is the only ash willing to grow in Newfoundland.

This ash likes water, and lots of it. Typically it grows in poorly drained swampy areas or along streams. Although it will survive in near stagnant conditions, it does best when the water is moving and its massive, shallow, fibrous roots are in mucky soil or fine sandy silt. In the north, it may be found from sea level into the higher elevations while in the southern areas of its range, it prefers only the higher elevations.

Black ash associates with an assortment of other water lovers; red maple, American elm, white cedar, balsam-fir, black spruce and tamarack. It is not a big tree and is a slow grower, reaching 50 to 70 feet and 10"-12" in 50 years. In appearance it might be considered the street urchin of the woods – slim and small with lots of elbows (like black locust), coarse, knobby stunted twigs and a narrow crown of upright branches.

Many organisms of rot, scale, rust, canker and leaf spot attack black ash, probably exacerbated by its wet habitat and, no doubt, contributing to the general unhealthy appearance of the tree. Life expectancy of black ash is only about 75 years. A record tree, reported in the National Register of Big Trees, was 32” in diameter and 155’ high.

Leaves of the black ash are 12"-14" long, compound with 7-11 thin, firm, dark green, finely toothed, stalkless leaflets that are usually 4” to 5” long and an inch or two wide. Leaves usually have a terminal leaflet that extends down the stalk. Leaf buds are covered with glossy black scales. Very small dark purple male and pink female flowers, usually on separate trees, appear in early spring, well before the leaves. In our area, these trees have leaves for only about four months a year. Fruit develops as a hanging cluster of single blade samaras or keys, each an inch to inch and a half long.

Twigs are stout and green becoming hairless as they change to orange then to gray over their first season. Bark is gray, corky, fissured and capped by soft scaly plates that are easily rubbed off. Typical of some of the other trees that are oxygen starved by their wet root habitat, black ash frequently forms burls with very desirable “curly ash” veneer figure.

 Sapwood of black ash is whitish to light brown; heartwood is gray-brown to brown, dull and without characteristic taste or odor. Wood has straight grain with a pleasing figure, coarse texture, medium weight and is soft with low strength. Specific gravity is 0.45 green and 0.49 at 12% M.C. Weight is 34 lb./cu. ft. at 12% M.C., just less than black cherry. Shrink from green to oven dry is rated moderate. The wood dries quickly with a narrow crown of upright branches. Leaves of the black ash are 12”-14” long, compound with 7-11 thin, firm, dark green, finely toothed, stalkless leaflets that are usually 4” to 5” long and an inch or two wide. Leaves usually have a terminal leaflet that extends down the stalk. Leaf buds are covered with glossy black scales. Very small dark purple male and pink female flowers, usually on separate trees, appear in early spring, well before the leaves. In our area, these trees have leaves for only about four months a year. Fruit develops as a hanging cluster of single blade samaras or keys, each an inch to inch and a half long.

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Black ash is ring-porous. Growth rings are distinct, variable in width but most often narrow. Earlywood pores are very large, clearly visible to the naked eye and usually in bands of 2-4, sometimes paired pores. Transition to the latewood is abrupt. Latewood pores, usually in small groups, are small and barely visible to the naked eye. Rays are indistinct and also just visible without a hand lens.

This wood works easily with hand or power tools providing crisp edges and smooth surfaces. It takes and holds fasteners well, glues nicely and produces good results with any finish, although because of its large pores, filling is recommended for fine surface finishes. It carves easily and is excellent for steam bending. The wood is very stable in service, is quite susceptible to powder post beetles and has little decay resistance.

There are frequent reports of dermatitis among those working with wood of the ashes. Dust precautions are well advised.

Ash leaves carried in one’s pocket or boots "proved" to be offensive to rattlesnakes and provided protection against them. Good advice for those preparing to enter the swamp in search of a black ash tree.

Black ash, especially large old growth timber, is used for furniture, interior trim and cabinet work. It is also used for canoe ribs, snowshoe frames, ornamental work and novelties requiring difficult bending and occasional use for caskets. Early Americans used it for barrel hoops and its bark for roof shingles, cut in three-foot lengths, soaked in water to soften it, then

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September 29th, 2007

Granite State Woodturners by Marcel Durette

at Peter Block's shop in New London, NH

There were lots of surprises at the last meeting of the Granite State Woodturners. Sixteen people came to hear a very well prepared presentation by Tchukki Andersen, ASCA, on chainsaw operations and safety. Ms. Andersen is a professional arborist working for the Tree Care Industry Association. Before becoming a desk jockey, she worked in her native woods of the great Northwest as well as Florida and cited many examples of her own experience with safe working habits particularly when fighting forest fires. The bar sheath on her chain saw is a section of fire hose! Tchukki remarked on how cute our little trees are here in New Hampshire.

Unfortunately, regrettable accidents - Hey, we've all had them. I looked around the room at the audience and wondered if everyone has had as many close calls as I have. Tchukki focused her comments on creating a sense of prevention from imminent dangers as a way to minimize accidents. Close attention was paid to safe practices even when servicing the saw, as well as operating the saw with control and awareness.

Personal Protective Equipment (PPE) is foremost on the list of safety consciousness. Helmet, eye protection, gloves, hearing protection, proper footwear and chaps were all displayed and explained to underline the importance of PPEs. Tchukki claimed to have worn her chaps even when working in the heat of the Florida woodlands attesting to her convictions. I thought back on how many times I have gone out to the back yard in shorts and sneakers to cut just one more hunk of wood so that I could continue turning in the shop. I never even thought twice about it. I think I will next time.

Proper maintenance of our PPEs is important as well. Shown were a pair of chaps whose nylon outer layer had been shredded by a saw. Although the inner padding appeared intact, we were told that this equipment had served its purpose and now needed replacing since the odds are very good that another hit may come to the same place and not protect as well.

And so, Tchukki volunteered to show us exactly how this equipment performs by cutting into the chaps with the chainsaw going at full throttle. Chaps were strapped to a small log and the saw was revved up and engaged to cut the material. The inner padding of Kevlar fibers snarled the chain and stalled the saw within a second. Close inspection of the inner lining showed no penetration whatsoever. Very impressive!

Questions and comments followed and some good ideas were shared on holding wood while cutting with a chainsaw. Jim Forbes described what sounded like a neat idea for holding chunks of wood while making bowl blanks from them. Scott Russwick managed to counter Tchukki's cute tree comment with the comeback that at least here, we have a greater variety of trees from which to choose! She nodded in agreement.

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Black Ash - continued

flattened, weighted and dried flat. Placed as shingles with 12° of exposure, the bark created a sound roof lasting many years.

Certainly the most unusual application of black ash is for the light, strong splint of the basket makers. Baskets were the bags, boxes and smaller containers of early America. Black ash was and is still used for a variety of decorative and utility baskets, pack baskets, Maine potato baskets, chair seat bottoms and backs and canoe seats.

Splint is obtained by pounding the surface of a fresh cut or water-soaked log along its length. Vigorous pounding crushes the large pores of the earlywood permitting strips of a single growth ring to be easily removed. Strips are then sliced into narrow splint of various widths and may be further split in thickness depending on the needs of the basket maker. A single tree would provide enough splint to keep the maker busy for the rest of the year. At the peak of demand for woven baskets, about mid-nineteenth century, waterwheel and steam driven trip-hammers were used to pound splint.

Supplies of black ash are good. In some areas black ash is even considered a trash tree. The lumber is of little commercial importance except occasionally in the Great Lakes area. The combination of white, green and black ash lumber, usually sold as “ash” amounts to over 98% of domestic ash sales. When separated, the color and figure of black ash does give it a moderate price advantage.

Prison Outreach - continued

Tim. The workmanship in the dovetails was impressive.

There was a moment of personal pride for me as a teacher to see not only the competence of the student’s skill, but of the student becoming the teacher and passing on the same skills that we had taught them.

Tom McLaughlin continues to do a great job of organizing a busy seminar schedule at the Concord prison, while I do the same at the Berlin facility. We are definitely hooked, and so is everyone that comes in to teach.
The Period Furniture Group kicked off the 2007-2008 season with an exceptional meeting featuring New Hampshire Furniture Master Jon Siegel who gave an intensive and comprehensive presentation on “Turning Period Furniture Parts.”

The meeting took place at my shop in Fremont and over 20 people attended. Jon’s attention to detail is such that he visited the shop the week before to insure everything, including the lathe, was in order.

Once the meeting began, I introduced Jon and mentioned he had complimented the cleanliness of my lathe bed. Members might have seen him snort. What I said was not entirely true. In fact, during his preparatory visit, Jon noticed the lathe bed was covered with stain and shellac and cleaned it off with steel wool. “Been turning pens, I see. Might want to put down some cardboard to keep your lathe bed clean.”

Jon demonstrated the difference between scraping and cutting using a scrap board that he has gouged across the grain. Scraping, he says, has no place in spindle turning.

Then Jon made a series of demonstration cuts using a firewood log. He showed the correct stance and hand position when using a roughing gouge. He showed a method for getting hundreds of practice cove cuts from a single piece, rather than the mere few that are possible using methods from most turning books. Old Saw readers will be familiar with the excellent ongoing series of turning articles that Jon has contributed and from which he indeed plans to create a turning book.

Besides being a master turner, Jon invents, makes, and sells tools through his company, Big Tree Tools (www.bigtreetools.com). The close up below shows his steady rest in action. Notice the steady rest is mounted on the tool rest that comes with the Jet lathe, whereas Jon has brought his own massive device for the actual tool rest.

He has rounded the center portion of the blank for the steady rest mouth to fit into. The wood-on-wood contact is lubricated with wax and does not mark or burn the workpiece. Steady rests become important when the diameter of the turning becomes less than a seventh of the length of the spindle. Without one, the spindle can vibrate like a stretched string.

In no time at all, Jon transformed a blank into the Queen Anne style leg. This involves both mastering the square-to-round transition cut (the part between Jon’s two hands) and also dual axis turning. He used a flip chart to show the calculations necessary to get the perfect transition you see between the leg and the foot, given the two axes.

We were fortunate to have a speaker of Jon’s caliber. In truth he seemed delighted to be there. “You’re my kind of people” he said. Apparently good, honest spindle turning has become something of a poor cousin in the wood turning world where it has become fashionable to use bowl turning techniques to create purely decorative objects.

The Period Furniture Group meets on the second Saturday of September, November, January, March, and May usually from 9:00 to noon, at locations all around the state. To join and receive meeting notifications, contact John Whiteside at johninfremont@comcast.net or 603-679-5443.
The new Guild Luthiers special interest group held its second meeting at Rick Miller’s large and well equipped shop in Eliot, Maine on Sunday, Sept. 16. Thirteen members attended. Master Luthier Alan Carruth gave an excellent presentation on the topic of plate tuning. This is the art of thinning the plates (tops and bottoms) of guitars, violins, or cellos so that they vibrate in a way that produces the most pleasing final sound.

The photograph below shows Alan using his tuning equipment. He supports the instrument on little foam pads and then holds a loudspeaker over it. The loud speaker is driven to specific frequencies by the tone generator, visible at the right of the photo. Christmas glitter is sprinkled on the plate and as the driving frequency is changed, the glitter dances about and forms patterns which indicates that the plate is vibrating in a particular way. By shaving minute amounts of wood from the back of the plate or from the braces, the patterns can be induced to change.

Two of our members, Ed Wall and Jim Robinson, are violin makers and for violins the physics for this procedure is better established than it is for guitars. For one thing, violin makers have a standard they are shooting for, the violins of Stradivarius, which have been researched in great detail. Ed Wall has a sound table large enough for cello plates and has offered anyone in the group the use of it. Jim is interested in adopting the method for his successful violin making business.

For guitars, though, the physics has not been as well researched and further, there is much more variability in the shapes and sounds of guitars than for violins. Alan is known as one of the leading guitar plate tuning researchers in the country, so we were indeed fortunate to hear his presentation.

The second photograph shows Jim Robinson, Brooks Tanner, and Terry Moore listening intently to Alan’s presentation. Indeed, a while back, the sound of one of Terry’s guitars did not please him so he brought it to Alan for testing. As a result, Terry took off the back, thinned some braces, and put it back together with much better sounding results. Terry brought that particular guitar to show the group.

In the group we play our instruments too. My wife Holly and I performed an arrangement of *Down by the Riverside*. At the end of the meeting we had quite a jam session so if you come, be sure to bring an instrument.

The next meeting will be at Jim Robinson’s violin making shop in Nottingham on Sunday, Nov. 18th. Builders of all skill levels are welcome. To get on the email list for times and directions, contact John Whiteside at johninfremont@comcast.net or call 603-679-5443.

John and his wife, Holly, performing *Down by the Riverside*
Second Annual Western Tool Supply Woodworking & Tool Show – Nov 9th-11th

The event will be held at the same venue as last year – The National Guard Armory at 1059 Canal St. Manchester, NH on Friday November 9th through Sunday November 11th. We have a special contractor’s evening from 5pm – 7 pm on Friday.

It is important that everyone be made aware that the entire door admission is being donated to the N.H. Food Bank. This is an excellent cause to help the needy during the Thanksgiving season. To help drive ticket sales, Tom Silva of This Old House will be on hand to meet and greet folks and sign autographs on Saturday the 10th from 10:30am – 4:30pm. WOKQ will have a live remote from our show floor mid-day Saturday with The Morning Waking Crew Mark Ericson and Danielle Carrier.

There will be how to demonstrations also.

- Lathe Turning
- Joinery with a Dovetail Machine
- Box Joints on a Router Table
- Dado Tips and Tricks
- Building Cabinet Doors with a Router
- Architectural Millwork
- Building Interior/Exterior Doors on a Router Table

Visitors will experience, first-hand the techniques and artistry of these accomplished artisans and can purchase distinctive handmade fine craft that have lasting value. This is a great opportunity to learn how a beautiful piece of handcrafted pottery, jewelry, or wood furniture is made.

The studios, which are located throughout New Hampshire and within ten miles of the New Hampshire border in Maine, Massachusetts, and Vermont, will be open from 10am to 5pm. The League’s seven retail galleries will also be open during the self-guided Tour. Many will showcase craftmaking demonstrations by League-juried members.

The Open Studio Tour Directory, with tour details, directions, and maps, is available at www.nhcrafts.org.

Volunteers Needed for Woodworking & Tool Show

Several volunteers to demonstrate turning are needed for the show. These are one hour presentations each over the three day period – Nov 9th-11th. Please contact Marcel Durette directly for particulars.
Marcel Durette: 603-669-2995 or marceldurette@aol.com

Third Annual League of NH Craftsmen Open Studio Tour – Nov 9th-11th

This Veterans’ Day Weekend, more than 60 juried members of the League of NH Craftsmen will open their studios and shops to the general public during the League’s Open Studio Tour on November 9-11, 2007. Many will showcase craftmaking demonstrations by League-juried members.

Last Chance – Woodworking Books at Wholesale Prices

The November Guild Meeting is the deadline to place your orders for our annual book sale. Discounts averaging 40% off of list price are available through Guild group purchases from Taunton Press and Fox Chapel. I will have catalogs and take orders at Guild meetings, or you can view titles on the publishers’ web sites (www.taunton.com and www.foxchapelpublishing.com) and email your order to me.

If you email your order, please include the following in addition to your name and telephone number:

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

Books should be available in early December for pick up at my home in Mont Vernon, NH, or at a future guild meeting. Note that we do not mail books to member homes.

All email orders will be acknowledged within one week. So if you do not get a response, please call me – I have vigorous anti-spam software.

I’ll email you with the net cost when the books arrive. Payment is due immediately and the books are not returnable. This gives us a premium discount. Happy hunting for some really good woodworking books.

Discounted magazine subscriptions, also an annual event, takes place in the February time frame. Watch the January Old Saw for details.

Tony Immorlica - Book Coordinator
603-673-9629 (evenings) or aaijr@comcast.net (new address)

Beginner & Intermediate Group

BIG, the Beginner and Intermediate Group, meets the first Saturday of the even numbered months from October to June. Dec. 1st at 9:30am is the next meeting. This is a demonstration session and there is no hands on.

I will continue to make the apple wall hung cabinet in the Dec. meeting. Starting in April, I will begin a series on drawer construction and hanging drawers. We will explore a number of ways to build and hang drawers. This will take place over a year or so.

This year will be a little
different. BIG will be meeting at Steve Colello’s shop at 119 Flynn Road, Sanbornville, NH for the short term.

Directions – Flynn Rd. is in North Wakefield off of route 16. It is 6.0 miles north of the intersection of route 16 and 109 and 5.7 miles south of the intersection of route 16 and route 28. Going north, it is a right hand turn and going south, it is a left hand turn.

Once on Flynn Rd, go 0.25 mile and the shop is on the right. The name and number are on the board.

Please contact me if you plan to attend.
Bob LaCivita: 603-942-1240 or rlacivita@metrocast.net

Granite State Woodturners
The next meeting of the Granite State Woodturners will be Nov. 24th from 9am to noon. The location and topic is TBA. Contact DJ Delorie to be added to the e-mail notification list.
DJ Delorie: dj@delorie.com

Granite State Woodcarvers
This small group of dedicated woodcarvers meets Thursday nights at Rundlett Middle School in Concord, NH. Meetings are 6-9 pm during the school year. For info or directions contact…
Lou Barchey: 603-753-2708 or barchey@comcast.net

Luthiers
The next luthiers meeting will be on Sunday, November 18th, from 1pm to 4pm at Jim Robinson’s shop in Nottingham. Jim is a master violin maker and his shop and showroom are fascinating to see as anyone who attended last year’s all-Guild meeting there knows.

We will focus on differences and similarities between violin and guitar making, hopefully educating one another in the process. As always, part of the meeting will be devoted to music, so please bring your instruments. Now that the ice is broken, its time to start work on some simple tunes that we can play as a group.

To sign up for the meeting and receive directions, contact:
John Whiteside: 603-679-5443 or johninfremont@comcast.net

Wood Question

Q Early Americans used many different wood species for fence posts. What treatment did they use to improve the durability of their posts?
A After fence posts were split and pointed, the ground end of the posts was charred in a fire pit. This process vaporized the moisture and sealed the surface with a protective barrier against insects and fungi.
– Ron DeWitt

Ask This Old Saw – continued

Q Glue Spots – What is the best way to deal with glue spots after the finish is applied?
– Gretchen Gordon

Al Breed replies: Next time try using hide glue and cleaning up with warm water. I’ve done this for thirty years and glue spots have only been a problem when a big drip was overlooked.

Q Bookcase Molding – I’m building a bookcase 14’ wide and 7’4” tall. How do I figure what size molding to put on the top to make it look in proportion?
– Wyman Ordway

Marty Milkovits replies: Whatever size looks good to you, or more importantly whose ever bookcases they are going to be. Its largely a matter of taste as opposed to what is supposed to be “correct.”

April 19th, 2008

Finishing Symposium

We will run a day long symposium at Pinkerton Academy on Saturday, April 19th. There will be a host of presenters in many rotations similar to the turning symposium. There will also be a trade show.

There will be no admission charged, and other regional guilds will be invited. As with all Guild events, we need your input to make this day meet your needs. Please contact me with your suggestions for topics and presenters!
Peter Breu: peterbreu@comcast.net or 603-647-2327
For Sale

Power Tools...
Craftsman 10” Table Saw — $195. 4” Jointer on cabinet — $50. 12” Bandsaw with blades and cabinet $75. Ryobi 10” Planer — $40. Shopsmith Mark V — $750. All in excellent shape. Make offer.
Tony Immonoica: 603-673-9629 evenings

Sharpening System...
Woodcraft Mark II sharpening system. Very good condition — $500 OBO
Steve Schultz, Thetford Academy, VT
steve.schultz@thet.net or 802-785-4805 x222

Planer...
Oliver 199 planer, ca. 1927, serial #34443, 24” wide, with sectional feed, three knife gibbed cutterhead. New bearings in the cutterhead and motor. This is a belt drive machine with a 10hp 3ph open frame motor. It comes with a dust hood and 7” blast gate. There are two sets of knives with it. Includes magnetic starter and start/stop station. $2500 negotiable.
Bill Thomas, Rindge, NH: 603-899-3249 or wmthomascabinet@monad.net

Bandsaw...
Walker Turner 16” cast iron bandsaw, 1 1/2 HP 110/220V motor, new bearings, very good condition. With 3 like-new saw blades — $400
Jack Minassian in Hollis, NH: semajack@aol.com or 603-465-9066

Supplier Discounts
Each supplier offers a minimum 10% discount to current GNHW members — some restrictions may apply. This is a direct benefit to your Guild membership. Please support these advertisers when you can.

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The Guild of New Hampshire Woodworkers
Another year is behind us as the Annual Meeting was held at Sanborn Mills Farm. The morning weather was a little on the chilly side but Jon Siegel did not let that bother the auction as he kept things going at a warming pace as he put 73 items across the block. The largest bid was for a nice large router going for $170 with second place going to a power visor at $160, the buys for the day were four items going at $2 each. So when you total it all up, the Guild made $1851 surpassing last year by 23%. This is a great help to the Scholarship Fund.

Many, many thanks to both those who brought items for the auction and those who took items home.

Reports were given by the various groups. The best news was given by Peter James, Treasurer, stating that the Guild is in a solid financial state.

Election of officers took place. For the coming year, Dave Anderson will be our President; Dave Frechette, Vice President; Caleb Dietrich, Secretary; and Peter James, Treasurer.

Jim Seroskie made his annual plea for questions to be used in the Ask This Old Saw column. About 35 questions were submitted with a door prize (tablesaw hold-down donated by Woodcraft) won by Peter James (lucky guy).

Following lunch, we broke into groups and were treated to viewing Sanborn Mills Farm. The highlight was a demonstration of the water powered saw mill in action. With the sun breaking out and so much history surrounding us, one could not help but think “Boy, am I glad I did not miss this one!” See page 30 for more on the afternoon tour.