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Counterboring Tools
By Hank Allen

What is a counterbore? It's a circular recess with a flat bottom drilled concentric to a smaller bore. Its purpose is to form a recess for the head of a machine or lag bolt, usually so a wood plug can be placed in the counterbore to cover the head. Counterbores were probably first used in shipbuilding to recess and plug spike heads to prevent corrosion. Until 1869 two steps were needed; the first step was drilling the bore for the bolt or spike and the second step was drilling the counterbore with a larger bit. In that year a bit to perform the operation in one step was patented. Tools for second-step drilling and for one-step drilling have come to be called counterboring tools, although I could not find that term in early patents or catalogs.

Photo 1

The tools for recessing the heads of wood screws, whether flush or recessed and plugged, have always been called countersinks. I found more early patents for recessing and plugging wood screws than for counterboring bolts. This article does not cover countersinks, but some interesting early patents for these tools are referenced at the end.

For some time I've had two early, T-handled, second-stage, counterboring tools. They are shown in Photo 1. Photo 2 shows close-ups of the working ends. The end on the top of Photo 2 is tapered to be inserted into a 1 ¼" bore. It has a winged cutter to make a 2" counterbore. I tried the tool in a 1¼" bore, but because there is no nicker the wood around the bore shattered. This was not unexpected. The end on the bottom of Photo 2 fits into a 5/8" bore. There is a nicker on one side and a cutter on the other. It cuts a perfect 2" counterbore. But there is an unusual feature. You'll notice there are threads below the cutter so the tool starts threads in the bore before the cutting begins. The threads were a mystery until I used the tool. It turns out this is a pretty clever idea, because the threads pull the cutter into the counterbore as the T-handle is

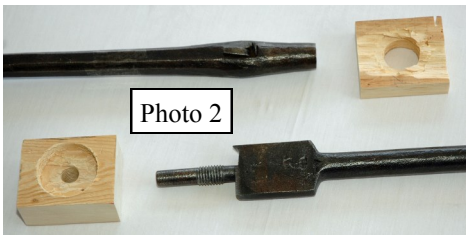

Photo 2

(Continued on pg. 3)

June Issue Contents

Counterboring Tools - Hank Allen ……...…….…...1, 3-4
President's Corner. ...…….…….…….…….....2
John Porrit, Tool Restoration - Dave Nowicki..……....5-6
One Good Bead Reveals Another - Joe Hauck……..……...…7
Ethan Feinsod, Marquetry and Veneering - Dave Nowicki……..8-9
Haslam & Francis -Jim Fox……....10
Lowentraut Combination Brace? - By Geoff Emms……..11
Tool Events ……...……12
Want Ads..…….…….……...…….…….……12

June 2, 2013 - CRAFTS Meeting
HOST Masonic Lodge - Highbridge, NJ

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of New Jersey

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Membership in CRAFTS is open to anyone who shares the above interests. Annual dues per person or couple are fifteen dollars for the membership year of July 1 through June 30. Membership fees may be sent to: Hank Allen, 524 Harristown Road, Glen Rock, NJ 07452 (write check payable to CRAFTS of New Jersey).

CRAFTS of NJ meetings are held at the HOST Masonic Lodge in High Bridge, NJ. Take I-78 to Route 31 exit at Clinton. Go north on Rte. 31 two miles to second traffic light at the High Bridge exit. Turn right and go about half a mile to Dennis Ave. Turn left, then straight to the Masonic Lodge (on the left). Tailgate sales in the parking lot begin at 10 A.M., meeting starts at 1 P.M.

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CRAFTS WEBSITE
www.craftsofnj.org

Containing general information about CRAFTS and its activities including: meeting schedules, Tool Shed articles, etc.

NEW MEMBERS

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President's Corner

The spring fever is about over and summer is on its way. By "spring fever" I refer to all the antique tool events happening in the past two months. Locally in April we had the Brown Auction starting off the month with the CRAFTS meeting the next day. The following weekend was the CRAFTS Auction. A great event with a full parking lot of tailgating early in the day. The auction started with standing room only and even by the end of the auction we had a full crowd. The next weekend I headed up to Nashua, NH for the Donnelly Auction. I spent two days selling in the parking lot but managed to win some excellent tools with absentee bidding. The parking lot is always fun and this time even more so, as I spent my efforts selling and meeting people instead of battling with the other dealers picking tools. I was particularly happy to meet and discuss woodworking with the many students and teachers from the Boston, North Bennet Street School. I know many left my booth with outstanding tools at a bargain price. Of course EAIA just held their annual meeting at Hyannis, Mass. and I have heard fine reviews of this event. If you are like me you could not attend all of these and other events. I hope you had a chance to enjoy some in your schedule. Now comes the summer events—OH YEA!

I was very impressed on how smooth our CRAFTS auction ran this year. Of course this is due to many fine members efforts. Earlier in the year auction managers Greg Welsh and Steve Zluky worked many hours getting everything prepared for the event. James Travis readied and set up the computer system, as Hank Allen, Annette Vliet, and Dave Nowicki took care of business at the desk. The lots were organized Friday night with many members led by Pat Ryan. Of course I thank the many CRAFTS members who helped with running tools on Saturday. Events like this could not be so successful without all the help and assistance of these and many other CRAFTS members. I thank you all!

Recently I found this photo of the early logging days of Herb Kean on the west coast. Just kidding Herb! Look at the size of that 2-man saw!

(Continued from pg.1)

turned. No downward pressure is necessary. My attempts at counterbores with both tools are also shown in Photo 2.

Long before I knew of the term counterbore I actually cut a few using a short piece of dowel the size of a bore and then screwing the tip of a larger

Photo 3

bit into the center of the dowel. See Photo 3. Putting the dowel into the bore guides the bit to cut a properly concentric counterbore. To my surprise William Dobson patented this idea on October 22, 1889 (#413,316). He chose a soft brass dowel that would not damage the screw tip of the bit. Sets of 12 Dobson's "auger guides" (1 1/4" to 5/16") were listed in the 1898 Orr and Lockett and 1896 Hammacher Schlemmer catalogs. Other sizes could be ordered.

Photo 4

Pictured in Photo 4 is an unusual bit-stock tool that I'll call a counter molding bit. It cuts a 4 5/8" ogee recess around a 2 7/8" bore. I think it was used to recess a plate in a ship's deck for mounting railings or similar fittings. With a tang it's made for a bit brace. Lacking a 2 7/8" bit I did not try it.

Originally I was thinking of writing a short article about only the four tools above, but some research and a timely purchase of two counterboring bits on eBay have expanded the article. I had never seen a counterboring bit before in 25 years of collecting! Following that purchase I mentioned my interest to John Harper, a new Crafts member selling on eBay as WV Tools, and he found several more bits in his inventory, which I purchased. Photo 5 shows three large counterboring bits. These bits drill a bore and a counterbore in one step, a great savings in labor. All are straight-shank bits, 15" long, and unmarked. The top one has a ½" bore and a 1 ¼" counterbore. The others are larger.

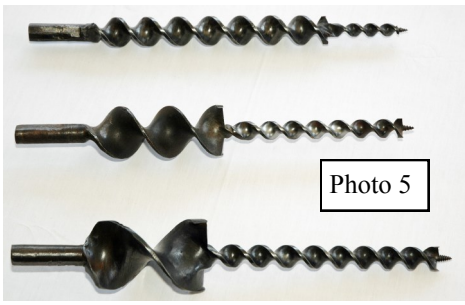

Photo 5

The counterboring bit, or compound boring tool or double bit as it was called early on, was the idea of Calvin Wardwell who patented it on April 20, 1869 (#89,097). Actually, Wardwell did not mention bolts in his patent, rather envisioning the bits would be used for spikes in shipbuilding. The bits in Photo 5 are faithful to Wardwell's patent drawing. I searched all my early catalogs but could find this bit in only two; the 1897 Strelinger catalog where it was listed under special bits as a countersink and in the Wm. Walter's 1888 catalog where it was listed as Pugh's counter sink bit. Job T. Pugh was a Philadelphia manufacturer. Walter was also located there. No bit sizes were listed in either catalog; rather the bits were made to order for specified bore and counterbore sizes.

Photo 6

Photo 6 shows three smaller counterboring tools, 5" to 6" in length. Two are straight-shank bits and one is a tang bit. The one on the left is probably the oldest as it has a shell bit for the bore. The bit on the right is marked Forest City Bit and Tool Co., which was founded in 1890 in Rockford, Illinois, moved to North Carolina in 1957, is now owned by Whiteside Machine, and is still producing quality boring tools. You can view them at forestcitytool.com (select counter bores and counter sinks).

I couldn't find another patent for a one-step counterboring bit. I guess Wardwell couldn't be topped! However, there are other patents for counterboring attachments to bits. Photo 7 is taken from Frank Palmer's February 28, 1871 patent (#112,176) drawing for a "countersinking and reaming attachment." Today I would call it a combination countersinking and counterboring at-

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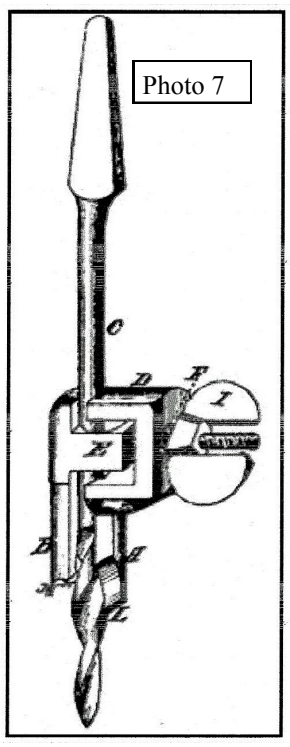


Photo 7

tachment. Palmer's attachment has two cutters, which are bolted to opposite sides of a bit. A concave cutter (on the right side in the drawing) will cut a countersink around a bore for either a flush or a recessed screw. A horizontal cutter on the opposite side of the bit will cut a counterbore for a bolt. The horizontal cutter can be moved up or down in the frame on the opposite side, so either cutter may be used by adjusting it to a lower position on the bit, Photo 8 is taken from Samuel Elliot Holbrook Jr.'s May 24, 1870 patent (#103,461) drawing for a "countersinking or reaming attachment." Actually there are two separate attachments, which are shown mounted one above the other on a bit in the patent drawing. The attachment for countersinking flush screws (but not for recessing them) is shown on the bit in its working position. The counterboring attachment is shown in the drawing mounted upside down on the bit. For counterboring it would be removed from the bit, reversed and put back on the bit in its working position. Holbrook called the countersinking attachment a reamer and the counterboring attachment a countersink. It's tough reading these old patents. I did not look at any patents issued after 1880. You might not think attachments would be made today, but they are. If, for example, you always drill 5/16" bores, but need different counterbores, one standard bit and the attachments you would use would be economical. Forest City has them.

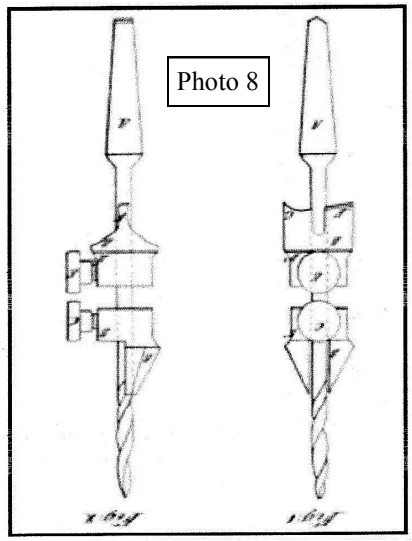


Photo 8

The one-step counterboring tools were preceded by second-step tools that formed counterbores around an existing bore. They were called dowel bits, plug bits, center plug bits, deck dowelling bits, and counterbore bits. Photo 9 shows three different early types. All are tang bits and all have a leading plug to center the cutter around the bore,

Photo 9

assuring that the bore and counterbore would be concentric. Two of the three shown are center bits and the third is a flat bit similar to a modern spade bit. I thought this one might shatter the wood around the bore; it did not when I used it

There are numerous patents for countersinking and plugging screws. If you're interested look up the Henry Moody patent (#55,144) of May 20, 1866, the Melvin Jincks patent (#63,392) of April 2, 1867 , and the Christian Monson patent (#104,335) of June 14, 1879. I've never seen any of these countersinks, but would like find them some day.

Jim Price's Sourcebook for bitstock tools provided valuable information for this article and I thank Jim for making his knowledge available to collectors. I thank John Harper for searching out counterboring tools for me, and I thank Charlie Flynn for the photos.

CRAFTS Meeting - February 3, 2013
John Porrit, Wood Plane Restoration

John Porrit is a furniture maker and antique restorer located in Spencertown, New York. Originally from England, John came to the US about 5 years ago and has been self employed, making furniture and restoring antiques since 1975.

The restoration project that John was going to demonstrate for us was to age two brand new wedges, one made from beech, and the other from yellow birch for a Cesar Chelor plane. This seemed to me to be a fairly simple task which would be a quick and easy how-to demonstration. Boy was I mistaken! John's presentation turned out to be anything but simple or quick but was a fascinating look at the actual workings of a restoration expert. According to John, "One thing that people who work with old wooden items don't see is the texture of the wood." The cutting and planing of the wedges, from recycled wood, was done back in his workshop earlier. The first thing to do, for making these brand new wedges acceptable for the antique planes they were to go into, is to create some texture and movement on the surface of the new wood blanks. An example of this surface movement is where you would see the hard grain stand up and the soft grain fall down with repeated use. John created that texture on the wedges with an electric drill and a grit impregnated nylon wire wheel that is commonly used to strip moldings. This operation looks and sounds awful but is a necessary beginning to create an abraded surface that will look used. Because the wedge is beech and a light color John then selected the nastiest substance he had in his arsenal of formulas and chemicals, nitric acid. "It's positively evil", he said. The nitric acid he used, in a 17 percent solution, "will smoke and burn the wood, pull some color out and give it an aged appearance". Safety precautions are a necessity with this stuff and John recommends that you not use it at all unless you are quite confident that you know what you're doing. The Pennsylvania long rifle makers used it, called Aqua Fortis in the 18th century, along with an iron bar to "chase down the color" and stain the wood.

John showing the ageing process on a wedge.

When replacing a piece of rosewood for example, the new wood will always be darker than the old so you need to pull some of that color out to try and match it. The intention is to bleach or lighten the color, simulating age. John then demonstrated what the acid does to a piece of freshly planed, very dark rosewood. He brushed on a liberal coat, quickly washing the brush in water so that it didn't get eaten by the acid. After wiping it with a cloth you could see the color being pulled out of the rosewood. The process creates a base for the operations that follow. A hydrogen peroxide solution, the kind used in hair bleach, is applied and then quickly dried with a hair dryer. This demonstration created a flurry of questions regarding the how's and whys of the chemical reactions. John explained that he's not a chemist but that his knowledge comes from reading everything he could find on furniture restoration, talking to others who were actually doing it and then trying to apply it. "Prepared stains are opaque and don't let the color of the wood come through", he said. "They actually mask the wood."

Some of the "chemicals" John uses in restoration work.

(Continued on pg. 6)

(Continued from pg.5)

Chemicals, on the other hand, work within the wood and let the wood dictate what colors come through. Matching the color of a new piece of wood to the antique is what restoration should be about and not coloring the entire piece to match the repair.

There are many ways to treat wood beyond just using chemicals. You can apply a stain or glaze, shellac, wax, apply dust and dirt (wood ash), etc. in order to build layers and add age to the antique. Additional use of a wood, bone or metal burnisher, some sandpaper and maybe moving a set of keys over the surface will put in random marks that serve to move your eyes around the piece and not allow them to focus on one particular spot. John then rubbed down the piece with what he called a chain armor burnisher, made around WWI that was used to scrub pots and pans. John's burnisher is an antique that's not commonly found in the US, entirely made up of a pattern of interlocking rings forming a square of about four or five inches on each side, and is also known as chain-mail. It smoothes the wood and, with the addition of a little pigment added to the French polish and maybe some dust, will age the piece well. "It takes a great deal of effort to use but the results are worth it" says John.

Tools for restoration work. At bottom is two burnishing pads of light chain material formally used to scrub pots & pans.

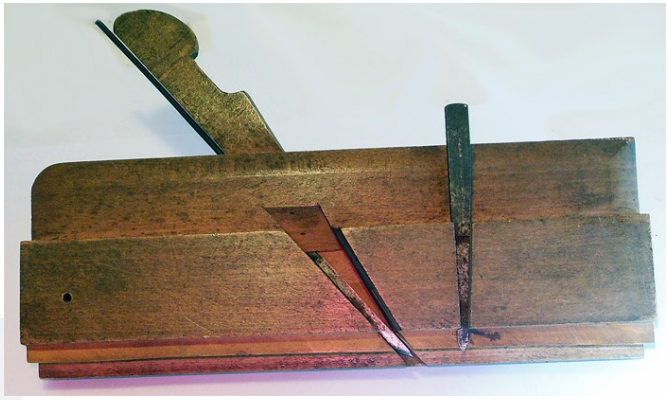
On the yellow birch wedge, for the Chelor plane, John used potassium dichromate to "yellow out" or remove some of the color from the wood. Nitric acid was next, followed by hydrogen peroxide to get the white out. A little oxalic acid mixed with water is brushed in to also lighten the overall color. To get a wedge to match a plane it needs distressing and for some pieces the distressing must be considerable to make it look like it belongs. Without that the piece just won't look right. The art of refinishing is in working in layers, adding subtle nuances as you move along and not trying to get there all at once. To add a little color to the wedge, John uses a very thin brown oil stain that is further thinned with alcohol. That layer is then sealed with French polish before the next layer goes on. The object is to match the color of the new piece to the old, even though in the case of plane wedges, many do not appear to be the same shade. All throughout the process John continually works and manipulates the surface of the piece with various pieces of bone, metal and wood. French polishing seals in the layers but also adds sheen to the surface. To tone it down a little, wood ash can be rubbed into the grain. Soot, from a candle or lamp, is another substance that is often employed to soften the surface. According to John, some of the best restorers use great imagination when it comes to creating a matching repair. Additional color effects can be added by rubbing dry pigments into the grain. Some, like iron and grime, are found in uncommon places like his sharpening station. Rust comes from an old encrusted leaf spring and is ground into a fine powder. "You are looking for an uneven evenness in this application", he said. Van Dyke Crystals are made from black walnut husks and when mixed with water into a thin paste can be used between layers of French polish to build color, especially on mahogany where you want to get the rich brown color of Cuban mahogany. It must be applied very evenly but it gives a color like no other product. When mixed into a thick paste it can be rubbed into corners and crevices to imitate a build-up of dust and wax. Back in his shop, John will often work on several planes at the same time due to the amount of time and of the number of steps required. "Finally, when you're satisfied with what you've done, take another look to be sure that you have evened out the surface refraction and it's not too glossy or too dull", he said. There was so much more that could have been discussed but the time went all too quickly. Maybe it was only me but listening to John's British accent, and watching him employing his methodology for matching the wedges to the planes, all had the effect of being in a classroom at Hogwarts School of Witchcraft and Wizardry and watching an instructor, working through his spells and potions, transform something common into something special. I can assure you that the results of John's efforts today were something to see, almost magical.

Newly restored wedges on these planes.

One Good Bead Reveals Another
By Joe Hauck

I've been a member of CRAFTS for around 35 years and from my early years I was enlisted to help set up the auction. I always try to buy one thing I really like even if I have to pay a price that others may consider too high. As an example at the 2012 sale I purchased a large Lignum horse collar mallet that looked like a big lollipop for $200. However this Tool Tale is about a bead plane I acquired at the 2009 CRAFTS auction. Actually it is a Tale of Two Beads.

The auction is set up on Friday night the evening before the sale. There is plenty to do, the tables need to be set up, the tools all need to be transported to the auction location and then set up in lot number order. How many lots per table and how many tables? Which way should they be arranged? Who brought the scissors, to cut the paper that goes on top of the tables? After these difficult decisions are dealt with all the lots need to be placed in order on the tables. Once the lots are placed each lot must be verified against the auction list to insure that all lots are in their proper place and that they are correctly described. While all this was going on I took a quick peek at a lot of five NY planes and spied a very clean ½ inch double bladed gothic bead and follow by Baldwin, one of my favorite NY makers. During the course of the set up work I snuck two more peeks at the Baldwin plane and decided that this was the lot I wanted to win the next day. I suspected that the plane might go for around $2
ly sought after of late. After all the work was done and right before I left I decided to look at the other planes in the lot to see what I might be able to recover by selling them off. As I perused them I noticed that one had a nicker, but the plane was not a dado or fillester but rather a bead! Now I know there are others who have seen a lot more planes than I, but the only beads with nickers that I could recall were part of a run of five made by Josiah King, that I had bought a good 15 years ago. That run had knickers on the three largest sizes. I picked up the plane it was marked ¾ on the heel and I was surprised and relieved to see that it was in fact also made by King; which confirmed to me that King was still possibly the only maker of this configuration. I also saw that there were two owners' stamps and they seemed to jog my memory. Although it seemed a long shot I wrote them on a piece of scrap paper and headed home. Once home I quickly checked my King beads and sure enough my largest size was 5/8ths and the owners' marks J.H.Bowers and W.H. Ker were identical! Suddenly this was a lot that I had to win. Fortunately the competition was focused on the gothic bead as the other three planes were quite ordinary and the King bead was probably



ismissed as well. I won the lot for $200 and the ¾ ead is now on a shelf with its smaller siblings. And ow there are six, how they were separated is anyone's uess.

he planes all have the D mark as illustrated in AWP nd therefore date from the second half of the 19th century. This small company consisting of Josiah N. King nd his two sons produced above average quality products and some unusual configurations. The set of beads may have been a special order.

CRAFTS Meeting – April, 2013
Ethan Feinsod – Marquetry and Veneering

Ethan's educational background is in fine arts and he spent most of his adult life in the photography and electronics industries. Woodworking as a craft began early in his childhood and continues to this day. He has been teaching photography, full time for the last 15 years, at Summit High School in Summit, NJ where, much to his surprise and delight, they have two fully equipped darkrooms.

Ethan using a saw to cut veneer for a Marquetry.

His involvement in marquetry came about when a student came to him with an electric motor and asked if something for the photography studio could be made from it. When asked where he got it, the student told him that it came from the dumpster. What had happened was that someone had taken apart two complete scroll saws, removing every nut and bolt, and thrown all of it away. Ethan gave him a two day pass to spend in the dumpster to try and retrieve all of the parts. Out of the remaining pieces he and the student were able to make one complete saw. That started his students on the path to make cutout photographs and jigsaw puzzles and from there into marquetry. "In each semester", Ethan says, "There will be two or three students who have demonstrated the patience to use photographs and wood to make marquetry pictures". For the marquetry projects, his students are encouraged to use photographs that have a special meaning to them. Ethan himself is an avid sailboat racer and showed us a photograph of a sailboat with which he was going to demonstrate the methods he uses to turn it into a marquetry picture.

The first step is to create a pattern from which all of your cutting and measuring will take place. To do this you place a piece of tracing paper over the photo and tape it to a light box. If you don't have access to a light box, simply tape it to a window and then trace the major and important lines to create a pattern. Once completed, you'll make index marks at the four corners of the pattern to insure an exact alignment for all of the copies that will be made. An easy way to do that is to use a simple hole punch. You will need a copy of the pattern for each piece of veneer you'll be using. As you move along in the process a book is constructed that will consist of copies of your pattern and the pieces of veneer for your project. The importance of the indexing cannot be overstated and the reason will become obvious once you begin cutting. When selecting the veneers for your project you should focus on the color as well as the grain direction for each piece. Shading and texture help make the picture come alive. Start with the background first then complete the various layers with your selection of veneers. You'll be adding the foreground features last. Before cutting any veneer, each piece of must be reinforced with blue painters tape. Ethan specified the low tack tape because it all must be removed later on in the process. You can leave it on for a while but not more than a few days as it will become more difficult to remove the longer it's on the wood. Strips are applied directly to the back of each piece, covering it completely. This is reinforcement as the thin veneer is very fragile and can easily be broken during cutting and handling, especially along the grain. You'll also be using this tape to hold everything together until the final gluing stage.

As for the tools to use for cutting the veneer, the aforementioned scroll saw can be used but is usually reserved for cutting the larger pieces. Ethan's kit of tools included a deep throat fret saw equipped with a very fine saw blade along with a simple wooden platform that can be clamped to a table. The fret saw is perfect for the intricate cuts that marquetry can require and the plat-

A hummingbird by one of Ethan's students.

One of Ethan's passions is fly fishing and this marquetry of a jumping trout reflects his attention to detail.

form, with its V-shaped cut also known as a birds-mouth, makes a good work surface for sawing as it supports the veneer and allows clamping to a table. Similar fixtures have been used by jewelers and other artisans when cutting very thin metals such as gold, silver and copper, or other material like ivory and shell for hundreds, if not thousands of years. This set-up doesn't require any electricity so it's ideal to use wherever you are. Knives are also used to cut veneer. An X-Acto knife with a no. 11 blade works well and the pointed blade is especially effective when cutting and placing the really small pieces of veneer.

Once you have cut all of the veneer for your pattern you can begin to assemble your picture. The backs of each piece are joined together with the blue painters' tape, after which a special veneer tape, with a water soluble adhesive, is applied to the top surface of each piece to be joined and allowed to dry. Once you've assured that veneer tape is holding together well, the blue tape is removed and the picture is ready to be mounted on a backer board which is a thin piece of plywood or medium density fiberboard (MDF). After the glue is applied there are a number of ways to clamp the veneer while the glue dries. If it's small enough, something like a mechanical book press could be used. For larger pictures, two pieces of plywood, separated with wax paper so the glue won't stick to them, and lots of clamps can work well. But, according to Ethan, the best method is to use a vacuum press. While this is the most expensive way to attach the veneer, due primarily to the cost of the compressor, it is also the easiest and most successful method for veneer application. The vacuum press system consists of a heavy plastic bag, much like a big zip lock sandwich bag, and a breathable mesh that is placed over the surface of the project allowing the air to be drawn off with a vacuum compressor.

Ethan discussed his homemade vacuum system and the fact that many of the parts can be purchased from Lowe's or Home Depot. If that's not an option for you, a complete kit of parts can be purchased from several online vendors. All things considered, he said it was relatively easy to assemble and barring a few initial leaks, worked very well. Finally, Ethan demonstrated how the vacuum bag works. When everything was sealed up tight the compressor was turned on and after just a few minutes every square inch of the picture was held tightly to the plywood. It's a neat system and I can see why it's the preferred method for gluing up veneer and especially when working with the complex features of marquetry pictures. *For anyone interested in building their own vacuum system, or veneering in general, a good place to start is: www.joewoodworker/veneering/welcome.htm.*

Sailboats are a favorite topic of many students. This student's work is spectacular.

In addition to his own work, Ethan is especially proud of his students work and he brought some of it to show how good they were. I thought one picture in particular, which depicted a hummingbird in flight, was beautiful and extremely well done.

This was an enjoyable afternoon and I came away with a great deal of knowledge about a craft that I have always admired but knew very little about.

Haslam & Francis
By Jim Fox

I am a tool collector. Recently I've been collecting American marking gauges. You know how exciting it is to find a tool with a maker mark you've not heard of before. Well, recently I found such a tool. It is a rosewood mortise gauge made by the partnership of Haslam & Francis, Newark, NJ. Who were these guys

Many of you probably know that John Haslam was a maker of carpenter tools in Newark from 1845 until 1851 according one of his historic advertisements. His

tools are scarce but can still be found. I saw two of his spirit levels last year on eBay. Francis is a bit tougher to identify. He partnered with Daniel M. Lyon in Newark for about one year c.1847. Alexander Farnham, author of the book, *Search For Early New Jersey Toolmakers*, believes this is Elias Francis the plane maker. Milt Bacheller, author of, *American Marking Gauges*, believes that he is Silas, Elias' younger brother, an edge tool man. I like Silas for the partner since Elias was working with Abraham Mockridge at the time. Until further evidence is unearthed this is all simply conjecture.

Surprisingly, there is no historical record of the Haslam & Francis partnership. It would seem that it was also short lived. Possibly lasting a year or two.

I have three rosewood mortise gauges that tell a story. The three are an early D. M. Lyon, a Lyon & Francis and a Haslam & Francis. The common denominator in all of these is Francis. If you look at the photos you will see that these are all nearly identical. This suggests several things to us. First, one man influenced the other two. It would appear that this man very well could have been Daniel M. Lyon. It also suggests that these men had a close relationship with one another having lived and worked in the same city through their common years of 1845 to 1850. Could there have been some apprenticing involved in the group? Did they

purchase brass castings from a common source? Was there some unknown business association between these men other than the ones we have here?

Another interesting observation of the Haslam & Francis maker stamp is the curved and punctuated line that underscores the names. This is a long standing feature of another Newark tool manufacturer, William Johnson. Is there a connection there? We will probably never know! One thing is for sure, these mortise gauges could have been made by any one of these men as the features and styles are almost exactly the same. So our quest for answers continues. That's part of the fun of collecting.

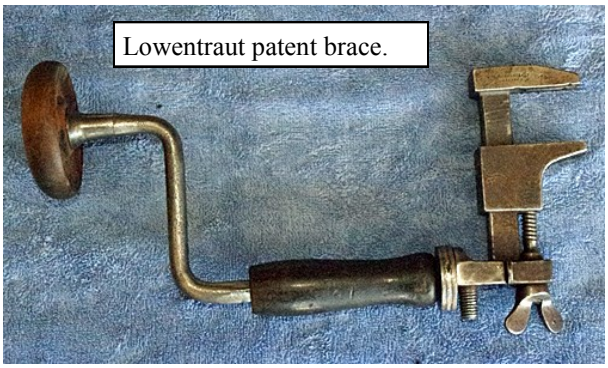
Do you have a Haslam & Francis tool in your hoard, collection or pile? If so, I would love to hear from you about it. Happy hunting!

WANTED – Member's email addresses. If you have not been receiving email notices from Stew May or dues acknowledgements from Hank Allen, please send your email address to hankallen@verizon.net.

What Number Is Your Lowentraut Combination Brace?

By Geoff Emms

Regarding the combination tool patented by S J Johnston of Leesburg Virginia (Pat No 530419, Dec. 4, 1894) and manufactured by P. Lowentraut at Newark New Jersey. There is a number stamped on the face of the tool where the handle screws on when used as a bit brace and a corresponding number on the base of the handle. The number on my example is 78. What does this number mean, is it a production run number to ensure the two parts stay together? Or is it a match number used to ensure the two pieces go together correctly and also to ensure compatibility of the crank. I am unable to see a number on the crank and am not prepared to attempt the removal of the wooden head to see if there is a number hidden there.



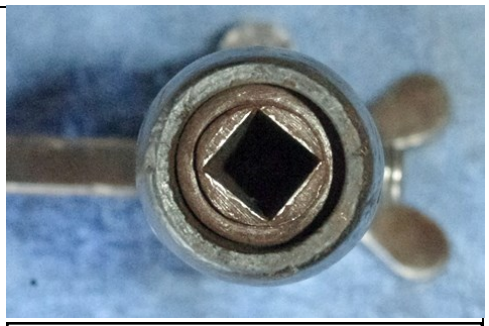
Lowentraut patent brace.

When I purchased the tool the crank entered the handle at 45 degrees to the line of the wrench, it looked wrong and had me scratching my head. I found an old post on a tool collectors site warning that various oriented handles were craftsman made. I realised then that I probably had the wrong crank with my tool. A few weeks ago a handle came up on eBay, and after careful scrutiny I decided it was possibly more suited to my tool so I purchased it. It is a good match and now my Lowentraut looks a lot more correct.

How did the manufacturing process work? My theory.

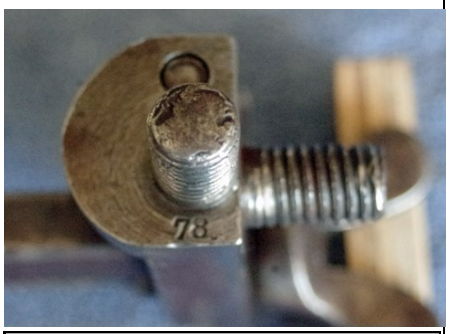
At some stage in the making of this tool a thread had to be cut on the stud that holds the handle and in the base of the handle. There are two of these studs but we are only concerned here with the one used in the bit brace position as the wrench position orientation is irrelevant. The thread is cut in the handle and on the stud. The two parts are then screwed together and a centre punch inserted in the lock pin hole so that the base of the handle can be marked. The two parts are then dismantled and the locking pin hole is bored in the base where it was marked. Alternatively the two parts could have been assembled and the locking pin hole drilled through both parts in one action. A suitable jig would hold the tool in position to ensure the hole was placed correctly each time. Note: the hole in the tool where the locking pin is located is stepped to retain the locking pin spring.

Above: Base of handle showing 78 with locking pin hole visible on right.



Above: Handle locked on tool showing orientation slightly off 90 deg' could it be 78 Degrees?

After the locking pin was fitted to the tool the two parts could be reassembled and the orientation of the crank socket could be determined. Because the socket is square it will be seen that it could vary anywhere within 90 degrees. This is where the number 78 on my tool comes in to play. 90 degrees can be divided into 8 increments of 11.25 - degrees, 90 minus 11.25 is 78.75. I'm stretching a bit here, I know, but looking at the end of the handle if 90 degrees has the corners of the square running directly in line with the axis of the wrench then I'm saying mine is roughly 78 degrees.



Above: Face of tool showing locking pin and No 78.

So my queries are:

1. What is the number on your Lowentraut?

2. Do you think your number reflects the degrees of the orientation?

3. Do you know the REAL story behind the numbers?

4. Do you have a theory of your own?

Geoff Emms - *geoff.emms@hotmail.com*

The TOOL SHED

CRAFTS of New Jersey
15 N. River Styx Rd.
Hopatcong, NJ 07843

TOOL EVENTS

June 2 - CRAFTS meeting - High Bridge, NJ - 1 p.m. For information check the CRAFTS website at http://craftsofnj.org.

June 26 - Long Island Tool Collectors, Frank Brush Barn, Smithtown Historical Society, Smithtown, Long Island, NY. Chris Bender, (631)821-1675 tooltiques@aol.com

June 29 - MWTCA - Area P Meet. Black Angus, Adamstown, PA. Don Stark, Starkcd@aol.com; (717)367-5207.

July 11-14 - EAIA Historic Trades Sampler at Eastfield Village, Nassau, NY. Includes blacksmithing, printing, tinsmithing, carving, decorative painting & other crafts.

Aug 25 - MWTCA AREA P MEET, Adamstown, PA. Don Stark, (717)367–5207 starked@aol.com

July 14 - PATINA monthly meeting, American Legion, POST 270, 1355 Balls Hill Rd., McLean, VA.

July 25-27 - Donnelly Antique Tools, Annual Open House and Antique Tool Auction 5223 County Route 8, Avoca , NY

September 8 - CRAFTS annual picnic. Brady Camp, NJ. For information check craftsofnj.org - Tailgating for members free. Displays, contests and prizes.

WANT ADS

WANTED – Member's email addresses. If you have not been receiving email notices from Stew May or dues acknowledgements from Hank Allen, please send your email address to hankallen@verizon.net.

HELP WITH TOOL COLLECTIONS – As a retired shop teacher I can assist you with any size tool collection or shop. Putting them in an auction or finding buyers for your tools. Call Bob Garay (973) 398-5875 or email- takeadip@optonline.net.

VINTAGE TOOLS for woodworking, machining, leather working and more. See us at New England area tool meets, the CRAFTS Auction and Picnic, online at www.TimelessToolsand Treasures.com or email jane@janebutler.com.

NEED HELP disposing of your tools or home items? Entire or partial house clean-outs available. Call Steve Zluky at 908-534-2710.

JIMBODETOOLS.COM – The largest antique tool website on earth buying and selling fine antique tools. Call Jim at 518-537-8665 or email jim@jimbodetools.com.

WANTED – Molding planes made of apple wood. Also, better molding planes from Hudson River valley makers. Joe Hauck 908-236-2072.

THE TOOL EXCHANGE –Australia's home of fine old tools for sale. Our website has over 18,000 photos of tools. We ship to over 30 countries. www.toolexchange.com.au or Stuart@toolexchange.com.au.

WVTOOLS: CRAFTS member and eBay seller concentrating on bitstock tools and more.

CHECK OUT – Tom Lamond's yesteryearstools.com, an internet magazine on hand tools, their makers and their markings.