



Contains January 2010 Minutes

February 2010

At the January 16 meeting of the Buckeye Club (BWWT) **Phil Brower & Ben Fix** shared the podium for a two part session on tool making. While Phil concentrated on forming the business end of the tool, Ben handled the other end. (*Go Ahead, Groan*)



Phil Brower gave a talk on the procurement of HSS metal bars for making tools. He indicated that he purchases the HSS bars from suppliers around the country and is able to offer them through the club treasurer, Bill Seabolt, for purchase at \$5 per steel bar. He is offering round stock of 1/4" and 3/8" diameter and 8 inches long as well as 1/4 x 1/4 x 8" long square stock. These are used for making and oval skew design with both

round dimensions as well as a 3/8" flat bottom round nosed scraper, and a three point tool. Phil also stated that one can make for following tools from the 1/4" square stock: round nose scraper, square bedan scraper or hollowing tool, skew, small detail gouge, and a dovetail scraper. Phil mentioned that these should be driven into a tool handle that has a tenon on one end to accept a ferrule and the rest of the handle constructed to fit ones hand. He stated that the ferrule can be made from 3/4" pipe or 3/4" copper connector. Typically the copper connector is cut in two to make two ferrules. This will give a 7/8" ferrule to fit over the tenon and provide a greater support for the tool steel. One can cut the pipe on the band saw but one should use a large dowel rod to insert into the connector for safe gripping while the cutting is taking place. One should also use a V-block to hold the round stock safely while going through the cutting process. The V-block will prevent the copper pipe or connector from spinning out of control while the bandsaw blade is entering the exterior part of the pipe. Phil stated that these ferrules are also very good for using on the turned screwdriver handles that so many woodturners like to make for gifts to friends and neighbors. Instead of copper, one can also use brass pipe or compression fittings of the same size. Since these metals are soft, they may be re-cut on the lathe to form fit them to the tenon on the tool handles. They may be cut at slow speed and using HSS cutting tools.

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Light delicate cuts are needed to round over the metal ferrules.

Phil took time out to show the members some of the tools that his grandfather used on the first lathe that his family owned in the early 1920's. Those hand tools were used to make hand turned spokes for wheels in "motor cars" during that era. The "motor cars" were described as the forerunner to the commercial or industrial motorized trucks that later came into existence. Phil stressed that the tools that you can make today maybe handed down to future generations to use in woodturning.

Phil said that some tools can be made as an offset tool with part of the tip bent off to the side. This can be done by heating the portion of the tool that needs to be bent and then while hot, one may use a pliers to make the bend. A welders torch should be used rather than propane, since it gets much hotter and it is easier to heat up the tool steel. If a small crack appears near the bending point, one may use silver solder and Mapp gas to fill up the cavity. Silver solder and silver flux can be purchased from Akron Welding and Spring on Main St. in North Akron, at very low prices.

The three point tool is made by grinding three facets on the end of a 1/4" round HSS metal rod. Phil usually draws a ring around the end of the tool about 110% of the diameter of the tool. This ring is the distance that he tries to bring the grind to when he is making each facet. This will give him the three even sided facets on the tool end. He will also use a centering point in a drill chuck with the round stock held in a scroll chuck with small no. 1 jaws. This is to find a centering spot for the tip of the grind where the three facets come together to make a point. This tool is used to make very even cuts between beads on spindle turning.

The oval tool is made with a grind on one

side or corner of the round steel stock. The grind is approximately at 45 degrees to grind away the edge and toward the opposite side of the round stock. When finished, it can be dressed up to show a flat appearance on the end of the tool. The toe of the tool will be very sharp on the point and the heel will be back about a half inch on the opposite side. This tool is used for making some nice beads on spindle turning.

The round nose scraper is made from round stock in the following manner. A flat area is ground on one side of the tool and about 1/3 the thickness of the tool diameter. Then when it has been flattened back about 1 inch from the end of the tool steel, the tip is ground round on the end. This grinding is done by starting in the middle of the end of the tool and swing the tool to the right, grinding away the corner edge. Then starting in the middle of the tool again, swing the tool to the left and grind away the left corner. The burrs that remain will do a very nice job of cutting or smoothing away any ripples in the bottom of a hollow vessel or shallow enclosed vessel or bowl.

The round nose scraper made from 1/4" square stock is made by simply holding the tool flat on the grinding tool rest and swing both ways until a rounded edge is accomplished.

The bedan or square nosed scraper or hollowing tool is ground by simply holding the 1/4" stock flat on the tool rest of the grinder until a 60 degree bevel is formed from the top point. Some turners like to grind away the bottom corner of the tool so that it does not catch on the interior of vessels or globes. Be sure on this grind to keep the upper corner of the tool intact. The upper corner of the bedan must not be disturbed by the grinding wheel since this is the part of the tool that really does the actual cutting.

The 1/4" skew is made from 1/4" stock.

Grind a skewed angle of about 50 degrees from the toe to the heel of the tool. Then when the angle has been achieved, one can grind a sharp edge on the top and the bottom of the 50 degree angle. This will provide a very sharp cutting edge that can be used to get into very tight places.

A small detail gouge can be made by grinding a groove down the 1/4" square stock about 2 inches back from the edge. This is done on the corner of the grinding wheel or using a very small metal grinding disc to cut that groove. When the groove has been achieved, then one may grind away the front corners on the left and right sides to get a rounded but swept back design like a round spindle gouge. The rounded underside is ground back in a swept back shape to provide access into very tight spots, like between beads.

A dovetail gouge is made from 1/4" square stock and ground very similar to the bedan. Once a grind of about 50 degrees is accomplished at the underside of the front of the tool tip, then one corner of the front of the tool can be ground back approximately 5 or 10 degrees. This will give one a cut that is not straight but canted off to the side to represent a dovetail feature.

At the conclusion of the demonstration there was a show and tell of home made tools that people brought to the meeting. Approximately 8 to 10 turners brought their tools forward to show what can be accomplished by a little turning and ingenuity. Tools that were shown were parting tools made from commercial hack saw blades, scrapers, hollowing tools, Hunter tools, and skews. We would like to thank all those people who took the time to gather up their tools from their shops and bring them to the meeting so that others may get ideas from them.

Respectfully submitted
Jerry Schaible, Sec.



Above Phil is showing several of the hollowing tools he made by heating and bending High Speed Steel as described in the article.

Below A selection of home made tools and or tool handles was brought in by club members to show.



Tool Handles - Ben Fix**Jan. 16, 2010**

Ben Fix gave the demo on turning tool handles to make your own woodturning tools. Before beginning this project, one should have purchased his HSS tool bars so that he knows the correct diameter drill bit to use in the end of the handle. Ben recommends that you should select a wood blank that is slightly longer than the handle that you want to complete. This is done so that you can have room to insert the tool handle in the scroll chuck or have room for the tool to be mounted between centers. The excess wood on the end will be turned away or removed at the final completion of the tool. Ben suggested that one can use straight grained wood that has been dried for the best results. He also suggested that one can use limb wood if the branch is fairly straight without a lot of bark inclusions. The wood should be about 2x2 square material or slightly smaller, with the predetermined length. He suggests that you place the blank between a four pronged drive center in the head stock and a ball bearing center in the tailstock and round off the corners of the blank until the corners are gone but some flat surfaces remain on the sides of the blank. Now cut a tenon to fit the scroll chuck and make sure that there is a square face [90 de-

grees] for the jaws of the scroll chuck to rest on. Use the tailstock ball bearing center in the indent hole to make sure that everything is aligned correctly.

A ferrule needs to be attached to the tool handle where it will surround the wood band and metal tool steel. This is needed so that the wood will not crack or split when it is in use. There are several pieces of metal that can be used for a ferrule. The most common is a very short length of copper pipe. The most common size is to use 3/4" copper pipe, but if one would like to purchase a 3/4" copper pipe connector, it will actually have a 7/8" ID and provide a larger tenon to hold the tool steel. Most of the connectors are too long and so they can be easily cut in half with a small pipe cutter or a band saw. Since the copper is soft, it should not damage the teeth of the bandsaw blade, so we have been told. One should use a 7/8" dowel rod to insert into the copper connector so that you have something to hold the pipe and stabilize the cut. Another way to hold the copper connector would be to turn a 7/8" mandrel with a shoulder for the scroll chuck and another one to fit into the tailstock and hold the connector with friction while rotating the pipe cutter by hand power. Any burrs or rough edges on the pipe edge should be removed with a file or ground away on the grinder. Other sources of ferrules would be brass pipe or even a brass compression fitting with threads. The latter can be threaded onto the wood tenon with ease and provide a unique ferrule. The hex head compression fitting can be turned round with any HSS tool after it has been mounted on the tenon. All metal ferrules can be polished by using 0000 steel wool as a final procedure.

The tenon for the ferrule is cut into the tailstock end of the wood blank. This procedure is done so that one can easily remove the head stock and check for a final fit with the ferrule. To begin, use a calipers and measure the inside of the pipe connector and lock

in the sized measurement. Size the length of the ferrule on the blank and make a pencil mark for turning reference. One can also use a standard wrench of comparable size [7/8"] for a measuring device. Cut the tenon with a parting tool to the proper size. One should check often with the pipe connector to make sure that there is a snug fit of metal to wood. This process is technically called "sneaking up" on the correct size. Once that has been achieved, one can drive on the ferrule into place with another piece of scrap pipe or a bushing and a hammer. This should seat the ferrule into the shoulder provided at the end of the tenon. If there is excess wood protruding out the end of the ferrule, this can easily be removed after it has been placed back on the lathe. If there are any rough edges of the ferrule still remaining, one can remove these now by using a bedan or square HSS scraper to round over the edge of the ferrule to make it smooth. This should be done in light passes so small shavings result.

Remount the turning stock back on the lathe and begin to turn the rest of the handle to the desired shape that fits ones hand. Smaller hands generally prefer smaller sized handles while larger hands prefer a larger size handle. If the tool is going to have a lot of torque while it is presented to the wood project, then one should have longer handles and a larger diameter. One can create a tool handle shape that is close to the commercial handles or create ones own unique design. Personal preference reigns in these decisions.

To drill the hole for the tool steel, reduce the speed of the lathe to its lowest speed. This speed reduction is necessary so as not to overheat the drill bit. Using the scroll chuck in the headstock, remount the tool blank in position. Place the drill chuck with the appropriate drill size in the tailstock. You should drill the size hole that matches the diameter of the tool steel. If one is using square stock,

then one should measure the distance across the corners and then select a drill bit that is slightly smaller. Most tool steel is held in place by the use of epoxy cement and then left to dry overnight so that it can set or dry appropriately. If you have turned the handle between centers, then reverse the blank so that the tenon is facing the headstock. Place the drill chuck in the headstock and bring up the tailstock to align the indent in the tenon end to match the drill bit. One can use the flat sides of the square blank pushed up against the tool rest to prevent the tool handle from rotating. It is assumed that if using this method, one should not have finished the complete shape of the handle contours, but to shape the handle after the drilling has taken place.

Some woodturners prefer to leave the handle a natural finish because they can get a better grip on the tool handle. Others have chosen to finish their handles with a mineral oil / wax combination. Others have chosen to use a polyurethane finish. Still others have used a Tung oil for their choice of finish.

When finished, show off the tool to a friend.

Respectfully submitted,
Jerry Schaible, Sec.

Below Ben puts the copper ferrule on what will be a tool handle.



BUCKEYE WOODWORKERS
AND WOODTURNERS
Jan. 16, 2009

The regular meeting of BWWT was called to order by Pres. Bill Stone. He welcomed all the members to the Jan. meeting. There were a total of 77 members present at the meeting. Two new members were added to the membership rolls during the meeting. Bill also read a thank you card from the Camp Y Noah administration. It stated that they were very appreciative of our contributions to their Christmas online auction that was held in the early part of December. They had made a total of \$3400 in the auction, of which \$400 was acquired from the 7 turned pieces that our club contributed.

It was reported that the former camp director, Nathan, had left around the early part of December and Mike Ohl was designated as the interim director. It is known that sometime during the middle of Jan. he will be installed as the permanent director of Camp Y Noah. It will be a pleasure to work with Mike in the coming years as the camp and our turning program goes forward.

Bill made mention that Doll Lumber has requested that BWWT make some turned items for the Ohio Forestry Auction that is held in March of each year. Members are asked to produce some larger items and bring them to the Feb. meeting so that they can be shipped to Columbus by the time the March meeting is held. The proceeds will go to a children's charity in Ohio.

Bill stated that there will be an online auction through EBay for the turned box that Cindy Drozda made at our demonstration in Sept. This is one of her fabulous boxes with a long finial and inset rhinestone in the lid. This EBay presentation is created by Joe Brinkman for the benefit of the club. There are two other pieces that were created by Cindy and they will be raffled off today for one of the pieces and next month for the second piece. All proceeds from the EBay auction and the two raffles will be placed in the club treasury.

The next regular meetings for BWWT will be on Feb. 20th and the topic for the demo will be Jigs and Fixtures used by our members. All members have jigs and helpful ideas that they use in their shops to make woodturning a lot easier. Members are to bring these to the next meeting and share them with the rest of the membership.

It was mentioned that all members are invited to check out books, DVD, magazine and articles from our library. They are also requested to return each of these items at the next months meeting. We do have

several people that have not returned books and items for many months and those need to get placed back into the library for other members to use.

Our purchase of video equipment has been put on hold for the time being until we can get verification of our grant. We have applied for a grant from the AAW to purchase this equipment for club use during our meetings. The deadline for this application was in Jan. 2010 for this year. AAW will notify us of the results of the grant by March 1, 2010.

BWWT has decided to purchase a heater for the storage area of our equipment room. The reason for this purchase is that there is a lot of rusting of tools and equipment during the colder climates of the winter season. It is also known that a cold storage area is not very good on electronic equipment, such as TV's, video equipment, and microphone and amplifying systems. Dale, the Y Noah maintenance man, has secured a price of \$300 for the gas heater and another \$100 for shipping and sundry pipe materials and accessory fittings. The total will come to less than \$400 for this purchase. Hoby Horn made a motion that we should purchase this equipment. A vote was taken with unanimous approval for this purchase. Bill will get in touch with Dale to start the ordering process.

Don Karr mentioned that members should make use of the publications in the library.

Bill Seabolt, the Treasurer, stated that this is the last month for dues and all members should be paid up by this time. He indicated that he sent out a mailing in Oct. 2009 for the dues to be paid and he also sent out an email to those that seemed to have forgotten. Bill also mentioned that all members are to pay for the donuts and coffee at 50 cents per item in order to cover the expenses of the original purchase. Bill also gave a treasury report for the members.

The special raffle for the first Drozda turned box was held at the conclusion of the regular meeting. Also our monthly raffle was held for the all items on the raffle table. Some of the donations came from the Hartville Hardware.

Respectfully submitted
Jerry Schaible, Sec.

Calendar of Events

The February meeting will be at Camp Y-Noah on Saturday the 20th

The February meeting will be a Show and Tell session centered around shop made jigs and fixtures. Members are being asked to bring in their unique tools and jigs that they use for woodworking of any kind. Any hints that individuals can offer should also be mentioned at this meeting. It is these little things that make woodturning easier and we should share our information with fellow members.

Doll Lumber has requested that BWWT make some turned items for the Ohio Forestry Auction that is held in March of each year. Members are asked to produce some larger items and bring them to the Feb. meeting so that they can be shipped to Columbus by the time the March meeting is held. The proceeds will go to a children's charity in Ohio. (Copied from meeting minutes)s

Up-coming Demonstrations

In March we intend to visit the professional bat maker in Canal Fulton to see him wood turn bats. He is able to make a bat in 4 minutes. This should be a very interesting demonstration

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