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FEBRUARY HIGHLIGHTS

We had a post-Mardi Gras meeting this month hosted by Dr. Theresa Wilfret, Dr. Linda Brannon and Barry Humphus in the Burton Business Center on the McNeese campus.

The purpose of this meeting was to show members some of the extensive information on the Internet about woodworking. We began with some of the terms and navigation tools of the Internet. Theresa demonstrated Internet Explorer while Linda and Barry assisted those new to the Internet. By the way, the word internet is always capitalized when referring to the actual Internet.

Some of the web sites we visted included our own at **woodworkers.lightwire.net**. On this site, there are many links to other websites that provide useful woodworking information as well as information about our own organization.

One of the features of our web site is the Members Page. Here your projects, jigs and great ideas in woodworking are presented. Photos of work from many members are presented along with a brief description of the the work, the material and the woodworkers name.

We also explored some of the web links on the links page. There you can find about fourty links to woodworking publications, tool manufactures, suppliers of tools and materials, woodworking groups and organizations and others. This is a great resource for finding information about woodworking, tools, ideas and more as a lot of links are right in one place without having to search for yourself.

But searching for things yourself on the Internet can be interesting. When the first form of the Internet was created (then called ARPANET), most information found there were simply text files -- articles and lists of information. This was because the network was mostly used by researchers and scientists. An excellent article by Vinton Cerf, one of the founders of the Internet as we know it today, on the history of the Internet can be found at <http://www.webmastercourse.com/articles/internet/history>

To search for stuff on the Internet, you use a Browser (the program that allows you to navigate from place to place) and a so-called Search Engine. While there are several browser programs around, most people use one of two: Netscape Communicator or Internet Explorer. Both of these are free and come pre-loaded on the computer you have. At last my last count, there were about 1,100 search engines available, but less than ten that are designed for general searches.

Some of the ones we used in our meeting are: Overture, Google, Dogpile and AltaVista. You can go directly to these search engines but many Internet Service Providers have links on their main pages to the engines. For example, at Lightwire (www.lightwire.net), we use the Overture engine. The reason for this one is that we've found that it is one of the best (and the group discovered this in our session as Overture searches came back with the most consistent woodworking sites).

For example, searching for "scroll saws" came back with a few thousand listings for suppliers, manufactures and advise. But you may not want a few thousand becuase that is alot of places to look through. You can refine your search by using logic: the words "and", "or", "nor" and so on. Most search engines use these to limit the search. That way, you don't get 300,000 "hits" when you do a search.

The way these work is that web pages often contain so-called "meta-keys". These are words and phases built into the web sites that are used by the search engines to classify the web site for easy seraching. Our own Woodworkers Club website has such meta-key words.

Without search engines, you would have to already know where to go. They make it easy and quick to find almost anything you need.

Coming Up ...

Saturday, March 16, 9:00 a.m. — Tom Simms of Harrison Paint will show us the latest in finishing products.

TURNING TOOL SHARPENING

Turning tools are quickly blunted by the amount of wood that they remove so turning tools need sharpening a lot more often than most other hand tools. The difficulty is achieving a single-faceted bevel with the appropriate angle without bluing or changing the temper of the steel.

Sharpening a turning tool is always tricky — the curved surfaces of the bevel of a gouge, for example, make them especially difficult. You can purchase several types of specialty jigs that attach to a high-speed bench grinder. The bench grinder is designed to remove material very quickly and this can cause several problems. In general, far more metal is removed than is actually necessary to keep the tool sharp and because turning tools need sharpening regularly, the tool will have a short lifespan. Also, because the metal is removed very rapidly, a lot of heat can be generated, especially at the edge, where it is thin and very sensitive to heat.

When bench grinding a carbon-steel tool, it needs to be quenched in water frequently to prevent it from getting too hot and turning blue. The blue color indicates that the steel is losing or has lost its temper (i.e., its wear resistance) and means that the tool will no longer hold an edge. The tool then has to be reground back to good steel without overheating again. High-speed steel (HSS) tools are not affected in the same way. The bluing only affects the look of the tool. HSS must not be quenched, as it contracts very quickly and quenching can cause fine cracks that could fracture under the stress of use.

Some of these problems can be reduced by use of a grinding jig. These jigs have an adjustable arm with a cup at the end and mounted directly under the grinding wheel. When set up correctly, they allow you to pass the tool quickly over the wheel before too much heat is generated. If the tool needs to be quenched, it can be placed back on the wheel in the same position and continue to grind the same facet every time.

Another method is wet stone grinding. This is a slow process but it largely eliminates the risk of overheating carbon-steel tools. The slow-running wheels are made of very fine materials which can produce a superior edge compared to bench grinders — even those with white stone disks. Like the bench grinding jigs, several special jigs are available for wet grinders along with attachments that give you control over what ever tool you are sharpening.

One of the neat things about a lathe is that you can use it to sharpen your lathe tools. Very few power tools can do this and what's more, you can make the jigs used to sharpen on the lathe itself. The method I first used was similar to using a bench grinder. What I did was to use a belt sander with a fine grit and simply eye-balled the angle. This did an OK job but wasted a lot of metal and the facets were never what they should have been. Another problem was that using even a fine belt did not result in a polished bevel face. And polishing the face means easier turning and cutting the wood.

So I found a simpler method — use the lathe to do the sharpening. The great thing about this method of sharpening is that your line of sight is parallel with the grinding face. This allows you to grind accurate and repeatable facets on your turn-

ing tools with little or no setup or special skill. Because modern turning tools are produced with a flat bevel, the facet can be easily maintained or duplicated with this method.

First, cut two disks of about 5-1/2 to 6 inches in diameter and 1/4 to 1 inch thick out of medium density fiberboard or solid wood — a scrap of clear pine works well — but avoid plywood as it can separate when turning. The thickness of the disk is not critical or important. Cut these out using a bandsaw, router or any other method you want. Bore a hole through the center appropriate for your screw chuck. Mount each disk on the headstock of your lathe using the screw chuck and turn them round.

Then, buy some self-adhesive abrasive disks like you use for a circular sander (they come in 5-1/2 inch and other diameters) in three different grits — 80, 150 and 320 (wet-dry) or even 400 grit. You can make your own sanding disks by using the round disk as a template to cut up square sheets into circles. Use spray-on adhesive or contact cement to mount these on the disks. You'll also need a scrap of leather cut to the same diameter as the disks. Put the 80 grit sanding disks on one face and the 150 grit on the other face of the same disk. Attach the 320/400 grit sanding disk and the leather on opposite faces of the other wooden disk.

To sharpen your gouges, position your tool rest 90 degrees to the face of a sanding disk mounted on your lathe's headstock. Move the rest as low as possible. What you are trying to achieve is positioning the tool to be sharpened such that the spinning disk is moving away from the tool. This is the opposite of what you do when turning wood. With some lathes, you won't be able to move the tool rest low enough. The only way to get the tool low enough is to remove the tool rest and support the turning tool on the tool rest banjo.

Be sure the tool and tool rest are clear of the disk and turn on the lathe and set to a medium speed. Lay the tool to be sharpened, e.g., a 3/4 inch gouge, on the rest at an angle so that the bevel is parallel to the face of the disk. Try to use the bottom of the disk so that the direction of rotation is away from you. Keep the angle of the tool the same as you slowly rotate it to sharpen the whole face of the bevel. Use a light, even pressure as this is all that is needed to keep the bevel in contact with the abrasive.

One of the trickiest tools to sharpen with one of the bench or wet-grinding jigs, is the skew chisel. The disk method makes it very easy. You simply line up one face parallel to the disk, grind a bit and then flip the tool to its other face.

To keep your parting tools square across their ends, you can maintain them horizontally on the tool rest at the correct angle. Both oval and standard section skews can be radiused quickly by putting the bevel at the correct angle and rolling the



handle slightly away from perpendicular to produce a radius.

Unless your turning tools are in rough shape or you need to restore a bevel angle lost to other forms of grinding, you may never need to use the 80 grit abrasive. The 150 grit leaves a very good finish on the cutting facet of the tools. But you probably want to finish your sharpening with the 320 or even 400 grit to get a good final polished finish. You can also produce an even keener edge and polished bevel on a skew or gouge by honing them.

Honing, and thus giving a mirror-like polish to the faces of your skewers and gouges, are what the leather disk does best. Polishing the bevel will cause the tool to cut cleanly through the wood and make the edge last longer. Load the surface of the leather with honing compound — just about any will do a good job and they are inexpensive. Honing will remove the burr thrown up by the abrasive and polish the bevel to a mirror. Like grinding, honing should always be done away from the edge and with the rotation of the disk away from you. As a tool loses its edge, it can be honed several times before it needs to be reground.

The downside to all of this that you may want to hone a tool in the middle of a turning session. What I did was to make a disk that fits the headstock mount. My Delta lathe (and many others) uses a 1-8 TPI hollow screw for the headstock to mount. Just epoxy a 1-8 TPI nut in the center of a disk with the sanding surface on the outside of the disk, spin off your holding chuck and spin on the appropriate sanding disk. I have four of them — one for each grit — so they are quickly mounted and easy to use. With the separate disks, I can quickly exchange them with my mounting chuck to get the needed honing touch-up or sharpening.

Next month, we'll show you still another system built by member George Kuffel that uses your drill press as a sharpening engine. This one also works with plane irons and other items. *Barry Humphus.*

PORTER-CABLE'S NEW PLATE JOINER

Porter-Cable has packed a boatload of features into their new Model 557 biscuit joiner and still managed to keep it priced within \$10 of the DeWalt version (\$199.95, including case, dust bag and two cutters). The best part of this machine is that you finally get a biscuit joiner that doesn't feel like you're using an angle grinder. You also get a much-improved 3 3/8" x 5 1/4" fence that will adjust to about every angle you could ever need, a micro-adjust feature to raise and lower the fence in small increments, and a rear handle that you can actually get your hand around.

But perhaps the biggest step forward Porter-Cable has made is with the machine's front handle. It's mounted to the fence instead of the body, allowing you to hold the fence steady with one hand as you push the cutter forward with the other (*This is not a new design as my old Skil uses the same feature — Ed.*). Another great feature is that you can insert a second (provided) smaller cutter so that in addition to the standard #0, #10 and #20 biscuits, you can use smaller face-frame biscuits. However, changing the blade isn't as easy on the Porter-Cable



as it is on some competitors' biscuit joiners. Two small improvements could be made to this otherwise fine machine: The fence's angle settings should be marked in at least 5-degree increments, instead of 10-degree increments, and we wish the motor's fan didn't blow in your face during every cut.

Since *Popular Woodworking* published this review, Porter-Cable has changed the 557 so the motor's fan does not blow in your face. New models should not have this problem, so it might be wise to try the tool in the store before you purchase it -- if they'll let you.

DELTA'S MITER SLED MITER GAUGE

We all know that the miter gauge that comes with a table saw should be replaced or upgraded. As a result, some companies have been selling new precision miter gauges that use a fence and stop system so you can cut lots of parts to identical size. It's a great feature. They also are a lot more accurate when it comes to miter cuts.

Delta's new miter sled (the 36-205), which is just a few dollars more than the high-end gauges (\$180 or less), outperforms them in two important areas. First, you can cross-cut really long pieces, up to 60" long. In comparison, Osborne's new miter gauge is limited to pieces 27" long; Inca's handles work up to 24-1/2" long. If you make small boxes, that's OK. But when you want to trim four table legs to size, you're going to want at least 30". Second, when you crosscut panels to size, Delta's large sled and the T-slot retaining washers on the miter bar allow you to cut panels up to 27" wide, something that's more difficult to do with any miter gauge.

There are a few things that could be improved. I wish the sled came with a tape measure on the fence, though that's inexpensive to add yourself. Second, adjusting the fence to 90 degrees to the blade is a fussy procedure that took several attempts to get just right. Finally, it's no fun getting the sled to work on Jet or Powermatic table saws. But if you own a Delta table saw and can't afford a sliding crosscut table, look no further. From *Popular Woodworking*.

GLUE SHELF-LIFE

Yellow and White glues have a shelf life of about 8-12 months after which they should be thrown away. Freezing also damages the bonding power of these glues.

