

Chuck Middleton, President
Dick Hopes, Sec/Treasure

Officers and Directors

John Marcon, Barry Humphus,
Brent Evans, Camile Vincent, George Kuffel

MARCH MEETING HIGHLIGHTS

Gene Young was both our host and presenter at the March meeting. Gene is a machinist by trade and applies his skills in the machine shop to wood working. Gene has produced numerous precision wood working jigs and tools with his latest creation being a 60+ inch wood lathe. He also constructed his own gouges



and skewers. Each tool has a changable cutting tip made of HSS. The lathe itself has 14 speeds and a 20 inch swing. Gene is looking into a variable speed motor to replace the series of pulleys he fabri-

cated using his backyard furnace and metal lathe. He added a chain driven duplicator and spiral cutter made of a router that can be moved along the bed. It took Gene about four months to construct the lathe and not counting labor, cost approximately \$400.00. He estimated that the entire unit weighs about 1,200 - 1,400 lbs.

Our real purpose today was a demonstration of precision saw setup using the tools of a machinist such as a dial indicator. To determine blade truing, clamp a small dial indicator to the miter such that the head of the indicator just touches the nearside of the blade. Zero the indicator and then move the miter to the far side of the blade. If the indicator indicates essentially zero deflection, the blade is true. Try rotating the blade 90 degrees and measure again to get an over-all reading. The same can be done to check the fence to blade relationship. The same techniques can be applied to radial-arm and miter saws. These measurements can also be done with a venier caliper but the measurements are more difficult to read.

Gene uses a standard precision square to check the pitch of the blade relative to the table. These are inexpensive and usually very accurate but he said you get what you pay for with measuring tools.

His Craftsman table saw feed has been extended to include a shaper and router table. Gene also demonstrated the use of a dial indicator to adjust planer and joinerfeed tables in relation to the cutters. The principle is exactly the same as the table saw demonstration.

Eltee Thibodeau brought a jeweler's lathe to Show & Tell. You could turn your own eye-glasses screws with this one! Ron Nunally showed us a "stone" finishing material he has used on a Celtic cross he recently made. He also does desk signs for \$2-\$3 per letter using a wonderful Gothic font. Barry Humphus showed a small jig he made from a cap screw to install deeply recessed brass inserts.

QUARTERLY BOARD MEETING

The Lake Charles Woodworkers Club held the quarterly board meeting at the shop of Brent Evans on March 2nd at 7:00 p.m. Present were Brent Evans, Barry Humphus, George Kuffel, John Marcon and Chuck Middleton. Reading of the minutes from the last meeting were waved. There was no old business. In new business, the board nominated and unannouncedly approved Chuck Middleton as President for the remainder of this year and next year. The board approved a change in our schedule moving the LeGrues from April to May because of a scheduling conflict. Several future meetings for the club were reviewed including having two vendor presentations, a plywood factory tour and a lumber mill tour, wood turning class/demonstration and possibly getting one or more of the instructors from Home Depot to provide a demonstration. There being no further business, the meeting was adjourned at 8:00 p.m.

PRESIDENT'S MESSAGE

As those of you who attended last the meeting know, *Brent Evans* has completed his "extended" term as president. At the last board of directors meeting, I was elected to succeed Brent. I would like to take this time to thank Brent for his hard work. He has done a great job and deserves a round of applause. Brent will stay on as a member of the board and has graciously volunteered to coordinate the annual BBQ for this year, look for updates on this in future newsletters.

I also thank the other board members: *George Kuffel, John Marcon, Camille Vincent, Barry Humphus* and *Dick Hopes* for their continuing support. I want to especially thank Barry and Dick for their work as editor and secretary/treasurer. Those of you "online" need to check out the great web site Barry has developed for our club, it can be reached at <http://org.laol.net/woodworker> — check it out it's a great site and it's your club! Dick Hopes has probably the most thankless job, he gets to deal with all the IRS issues and solicit everyone for money every year. Thanks, Barry and Dick, the club couldn't go on as it is without your hard work.

If you have any meeting requests let me or one of the board members know. We have a tentative schedule of ideas lined up for this year, and we welcome any and all suggestions. Anyone want to show off their shop? Let us know if you would be willing to host a meeting. We'll provide the refreshments! Also if there are any individuals or businesses that you are

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COMING UP . . .

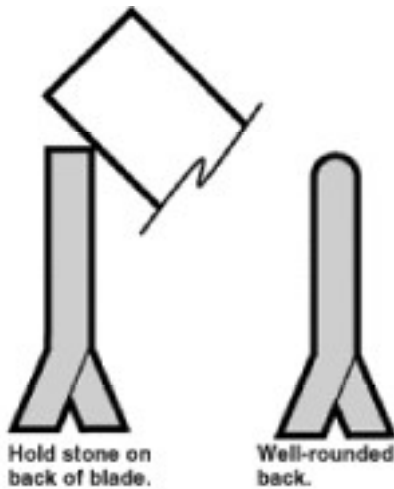
April 8th, Saturday, Home Depot Presentation

May 13th, Saturday, Steve & Terry LeGrue from

The Cutting Edge, Houston, Texas

June 10th, Saturday — TBA

ROUNDING THE BACK OF BANDSAW BLADES



In curved cutting, the back edges of the bandsaw blade tend to catch in tight curves, resulting in a jerky motion. Any kerf cutting will be much smoother if you carefully round the back corners of a blade while the bandsaw is running. This is easily done by holding a medium silicon carbide or aluminum oxide stone against one back corner of the blade and

then the other. Obviously, care should be taken in this process and the blade guard should only be open the amount necessary to get effective action from the stone. (Lee Valley Tools)

DUST CATCHER

If keeping airborne dust to a minimum is the key to maintaining air quality in the shop, then trapping dust particles at the source is ideal. A box fan, duct tape and a standard furnace filter, together, create an effective means for trapping dust as it is produced. The fan attracts the dust and the furnace filter traps the dust, while the duct tape secures the filter to the box fan. The closer the fan is to your



dust source, the better. When the filter is littered with debris, it need not be replaced with another. It can be removed, shaken outdoors and retaped to the box fan. (Lee Valley Tools)

FINISHING WITH TUNG OIL

Some law of woodworking undoubtedly dictates that the difficulty of a project and the amount of labor involved are directly proportional to the chances of messing up at the finishing stage. In retrospect, even the most complicated construction looks easy when you're faced with a bewildering selection of primers, stains, fillers, and finishes. How do you determine, with reasonable success, the properties of various types of finishing materials and their compatibility with the other products you plan to use? Read a lot. Leave the wood unfinished. Or use tung oil.

Tung oil is dead easy to use, builds well, dries quickly, and produces a durable, clear finish with contrast and depth. The oil is extracted from the nut of the tung tree, native to China but also grown in South America. In a pure form, the oil is an amber color, and has the approximate consistency of glycerine. Polymerized oil usually has thinners in it, normally of a purplish cast, which maintain the wood's natural color.

Unless you are finishing a food-contact item like a salad bowl or spoon, your choice should be polymerized tung (such as Watco). Not only does it dry much faster, but you can use it to create finishes that range from nearly matte to high luster. Tung oil cures by polymerization (molecules combining to form long chains) and oxidation (combining with oxygen from the air). Polymerized tung oil has been heated to complete the polymerization half of the process. Polymerized tung cures by oil oxidation and evaporation of thinners after application, so the curing (drying) process is faster than that of pure tung.

Pure tung will give you a matte finish because it expands as it polymerizes, creating a fine-textured surface, which, under a microscope, looks somewhat like the surface of the brain. With polymerized tung oil, you get a smooth finish because the expansion has taken place before application.

Both forms of tung oil are easy to apply. They are wipe-on, wipe-off finishes. Both penetrate well, sealing the pores of the wood. And both pure and polymerized tung oil build quite quickly. A sealer coat, plus one or two top coats, is usually all you need for a smooth and durable finish.

Pure Tung: For non-food contact use, always thin with 50% mineral spirits for the first coat. Subsequent coats can be full strength, but must be wiped down after 15 minutes. Always allow ample drying time (48 hours+).

Tung Oil Sealer: Sealer is 20% poly tung and 80% driers. It penetrates well and dries quickly.

High Luster Polymerized Tung Oil: Wipe on, then wipe off after five minutes. Gives a hard, tough finish with a hand-rubbed appearance.

Medium and Low Luster Finishes: For a medium luster finish, add one part Sealer to two parts High Luster. For a low luster finish, add two parts Sealer to one part High Luster. (Lee Valley Tools)

EXTENSION CORD SAFETY

Overloaded electrical conductors may heat up and, in severe cases, melt their insulation or even cause fires. Fortunately, our building codes and inspection regulations ensure this won't happen. However, when you use an extension cord, you are, in effect, extending the wiring system of your house and, in so doing, you must abide by the building codes. When choosing an extension cord, it is imperative to follow the selection guidelines carefully.

If you plug a power tool directly into a receptacle socket, the equipment and its attached connection cord are all in compliance with the code; however, when you add an extension cord (or more than one extension cord in series), the situ-

The electric motor in your power tool is designed for a more or less specific electric current range. More important, it is designed for a specific voltage, which is the driving force for electric current. The voltage in this case is your common household voltage of 120 at the receptacle.

If you select an extension cord that is smaller (higher gauge number) than recommended, the flow of electricity may be crowded, causing the wire to heat up. This will also cause the voltage to drop progressively along the cords. The end result will mean that the voltage at the motor in your power tool may be less than design requirements. Because the circuit breaker or fuse back in your switch box may not get the message to shut off the circuit, an electric motor will overload much sooner, slow down or even overheat as the result of using the wrong size of extension cord. Use the following chart as a guide, but always follow the manufacturer's instructions. (Lee Valley)

Average Amp Ratings of Common Tools

Circular Saw	13 to 15 Amps
Drill, 1/2"	5.5 to 7.5 Amps
Drill, 3/8"	3.3 to 5.4 Amps
Hand Sander	1.7 to 2 Amps
Jigsaw	4.5 to 5.8 Amps
Router, 1-1/2 HP	8 to 11 Amps
Router, 2+ HP	11 to 15 Amps

ALLOYING PROPERTIES: WHAT TOOLS NEED WHAT?



Chisels, Plane Blades and Carving Tools. Because the cutting edges of these tools often form acute angles (15 degrees to 30 degrees), they must possess a high degree of toughness. These tools must be able to hold an edge over long use, but the edge must

also resist fracturing under wide ranging loads. High carbon steel is the minimum requirement for these tools. Chromium or vanadium are used most often to increase toughness. Increased toughness is necessary in low-angle plane blades (as they have less material supporting the cutting edge), and on higher-angled mortise chisels. The addition of molybdenum increases toughness even further.

Molybdenum is most often found in automotive tools under such names as "Molychrome". High-speed steels (and other tool steels) are the best for tools of this category, as they can be hardened to Rc 60-64 (Rockwell C scale), and still possess exceptional toughness.

Saws and Cabinet Scrapers: These tools must possess a high degree of hardness, as well as ductility, and so are made almost exclusively of medium to high-carbon steel (or "spring steel"). Any alloying elements other than carbon reduce ductility to the point where the blade may snap if bowed (intentionally, as a cabinet scraper is, or inadvertently, as can happen when a western push-stroke saw is forced). In general, for these

types of tools, the harder the steel, the better.

Because western saws cut on the push stroke, the teeth must possess both hardness and ductility, so the blade will not snap when inadvertently bowed. Traditional Japanese saws cut on the pull stroke; if binding occurs, it will be while the blade is in tension,



eliminating the possibility of bending. Thus, Japanese pull-stroke saws usually have harder teeth than western saws.

Western-style saw manufacturers now offer induction or impulse-hardened teeth. During the induction process, only the teeth are hardened to a very high degree. The tempered steel comprising the rest of the saw blade provided the toughness. Such blades exhibit a tell-tale gray or black line running the length of the blade, from the tip of the teeth to just behind the gullets.

Drill Bits and Power Saw Blades: High-carbon steel drill bits and circular saw blades do not hold up very well to the high impact forces and temperatures. If you use a bit or blade only once or twice (when an odd drill size is needed, or a saw-tooth pattern to cut a rarely used material), the added cost of high-speed steel or carbide may not be justified. If you are going to buy a drill bit or



power saw blade of high-carbon steel, ones that have chromium, vanadium, molybdenum or tungsten are the most practical purchase.

High-speed steel bits and blades have superior toughness and red hardness, which a power tool bit or blade needs. Although not as long lasting as carbide, high-speed steel is less expensive, and can be sharpened by traditional means (e.g., aluminum oxide grinding stones). Carbide can be sharpened only with silicon carbide or diamond stones.

Carbide bits and blades last the longest. Besides their higher cost, they are susceptible to chipping; as hardness increases, toughness is reduced, and the steel becomes more brittle. If a carbide tip hits a nail, that tooth is likely to be damaged beyond repair. A high-speed bit, however, usually escapes with a small fracture, which can be easily reground.

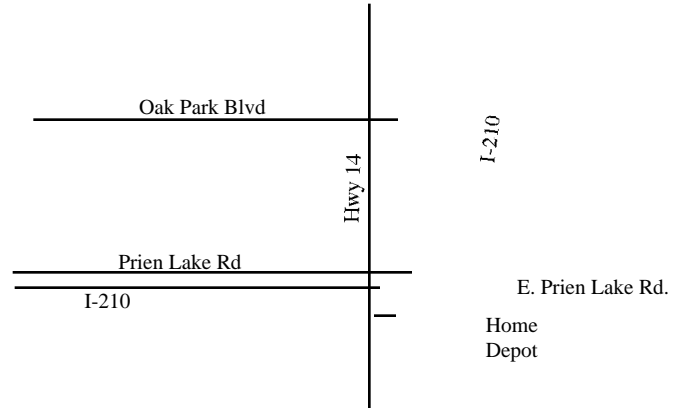
Turning Tools: High-speed steel turning tools are favored over high-carbon steel turning tools because the work hitting the cutting edge of turning tools is moving at speeds equivalent to those of circular saw blades. Carbide-tipped wood turning tools are not very common, although carbide-tipped tools are used almost exclusively in the metal turning industry.

At 20,000 to 50,000 rpm, the forces and heat generated would burn a carbon steel bit in an instant. High-speed steel that has sufficient tungsten has improved red hardness, but will not remain sharp as long as carbide will. However, for odd-shaped bits that are used only occasionally (or even once), a high-speed steel router bit may do. (Lee Valley Tools)

Message: familiar with that you think would host or speak at a meeting — let us know. On that note — we are trying to build our membership ranks back up, last count we had some 50 members. We would like this to be in the mid-fifties, so if you know of any prospects let Barry know and he will send them a membership package.

We'll miss all of you at our April meeting as Charlene and I are going to Branson and Springfield, Missouri. We plan on going to Silver Dollar City to the new Grizzly warehouse/showroom in Springfield. We'll give a full report at the next meeting. I look forward to serving as your president, feel free to contact me any time — Chuck Middleton

3200 E. Prien Lake Rd. is the place to be on Saturday, April 8th at 9:00 a.m. for our presentation by the Home Depot folks.



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% Barry Humphus
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