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### MAY MEETING HIGHLIGHTS

Dick Truth was both our host and presenter this month at his shop in Sulphur. There was lots of Show and Tell from the members. While Dick didn't fix everyone breakfast or let us go swimming in his pool, he did provide the standard donuts and coffee, without which some members wouldn't show!

For Show and Tell, Jimmy Everett brought some new canes including an African themed one, an eagle head headed and an alligator headed cane. Jimmy has also been busy doing non-cane carving with a fish sculpture of walnut and poplar.

Pie Sonnier, our host this month, brought a Harley-Davidson "soft tail" motor cycle plus a great looking 1932 Chevy with a rumble seat.

J. D. Anderson brought a lovely pine box he built plus some of his antique collection of old tools. The tools included a wooden body smoothing plane plus several molding planes from his collection.

Our host, Dick Truth presented a 4x sized version of the LCWW name tag. Dick reminded us that if you want one of the standard size wood name tags (with your name on it instead of Dick's), just give him a call at 337-583-2683 and he'll put you on the list. He has to have at least six names to make the production of the name tags economical. By the way, the folks at Classic Doors in Iowa produce these name tags at a reduced rate for us. They have a great machine that can cut images into almost any thing using a laser engraver system. If you want an image cut into glass, metal, wood or just about anything else, go by their shop and bring your image. Their web site can be found on our Links page.

Dick Hopes brought some scrollwork in the form of a great image celebrating the Land of the Free while Roy Lee LeBlanc showed off a turned mallet he did for the 'Bring It Back' item this month. Steve Macquoradale brought a sample slab of some Southern Catalpa wood (*Catalpa bignonioides*) that was very beautiful. See the article on this wood later in this issue.

Mitch Frazier showed some African Mahogany with which he has built a bedroom suit. The

wood was included in a batch he purchased and didn't realize that it was included.

Following the Show and Tell, there was a discussion about various dove tail jigs on the market. The consensus was that the Leigh, Porter-Cable and Boch are some of the best. But each has it's advantages and disadvantages.

Steve Macquoradale discussed the hardness and usability of wood for flooring. There is a rating system which addresses flooring use for various woods. Steve mentioned the Janka test which measures the force required to embed a .444 inch steel ball to half its diameter in wood. This is one of the best measures of the ability of a wood species to withstand denting and wear. It is also a good indicator of how hard a species is to saw or nail. Steve mentioned that Brazilion Walnut, Bolivian Cherry, Brazilion Teak and Brazilion Rosewood were some of the hardest woods and great flooring materials. White and red oak, which many of us have on our floors, were about one-third of the hardness of these exotic woods. Of course, these oaks are also a third of the cost of the exotics.

Correction to the mystery balsa puzzle. We mentioned that it was from George Giltner but in fact was from J. W. Anderson. The solution was that what you do it soak the wood in boiling water. It becomes so plyable that you can crush it in a vise, insert the nail and let it expand in more hot water. Neat trick with wood.

There was a mention of Montie Leddbetter in Sulphur who does timber frame building materials in our area. He specializes in timber frame building materials and if you are interested, just look in the local phone book.

Dick Truth did a demonstration of a dedicated mortiser. You have all seen these on various TV programs including New Yankee Workshop. They are great machines, especially if you have many mortises to do.

Coming Up . . . Saturday, June 9th at 9:00 a.m. at the Shop of Pie Sonnier in Sulphur.

## CATALPA WOOD

The catalpa tree grows to about 50—120 feet tall and up to 3 feet in diameter. It has a rounded crown of spreading branches and large heart shaped leaves.

The leaves grow in pairs of three which are whorled and opposite at the node. The leaves are 6-12" long and 4-8" wide. They are characterized by a dull green above, and a paler green and fuzzy underside. It has brownish-gray scaly bark. The flowers are 2-2 1/4" long with a bell-shaped corolla of 5 unequal rounded, fringed lobes. The flowers are white with two orange stripes and purple spots and lines inside (and smell nice, at least the ones that I have at my rental house). These can be seen in late spring.

The fruit is 8-18" in length, cylindrical and very narrow. The fruit is green and turns to a dark brown when they mature in autumn. The fruit contains many flat light brown seeds with two papery wings.

The Catalpa tree is native to the rich bottomlands of the central Mississippi River basin and has been widely planted in the eastern United States. It is found mostly in moist valley soils and streams, and naturalized in open areas such as roadsides and clearings.

Catalpa wood is soft, weak and brittle, with a very good decap resistance and dimensional stability. It is excellent for working with hand tools and is almost on par with white pine. The wood is mainly used for fenceposts, rails, beams, and crating. Other uses of the wood include millwork, framing, forms, furniture, drawer sides, and general purpose construction including turning into bowls.

Catalpa is also used in landscaping for its winter characteristics, lawn trees, park trees, and for its flowering effect.

The Catalpa tree is also home to *Catalpa Sphinx*, which is a common hawk or sphinx moth. The caterpillars are commonly called catalpa worms or "catawba" worms and they feed on the leaves on the catalpa, and can strip the trees of foliage. Although the catalpa worm is a tree pest, it is known for its attractiveness to fish. These caterpillars have been valued for fish bait. References to their collection by fishermen date back to the 1870's.

The genus name, Catalpa is the Cherokee, American Indian name for wood. The species name *speciosa* is given for its large, showy flowers. The catalpa tree is also known as Indian-bean, Indian-cigar, Smoking-bean, and Cigar-tree, since the large fruits resemble thin cigars.

The closely related Southern Catalpa which grows well in Southwest Louisiana, *Catalpa bignonioides*, has some medicinal uses. The seeds contain a bitter *glycoside catalpin*, which is reported to be used for asthmatic, cardiac and antispasmodic purposes. Large doses of the seed are said to produce a weak pulse and nausea. Some people develop a skin allergy when handling the beautiful flowers. Northern Catalpa has no known medicinal uses, and is mainly used for ornamental purposes.

We have a 60 foot tall Catalpa at our rental house and I look forward to some day harvesting this wood for turning.  
*Barry Humphus.*

## HOLLOW CHISEL MORTISING MACHINES

Hollow chisel mortisers have become very popular in home-based woodworking shops. It is an old technology and I have found references to these in my copy of *Millwork and Cabinet Making* as far back as the 19th century. Though relatively simple to use, there are setup and maintenance procedures that preserve their accuracy and maintain trouble-free operation. As always, follow manufacturer recommendations and instructions supplied with your machine. Pay particular attention to instructions related to the safe operation of your machinery.

Contamination of moving parts by sawdust and other debris must be controlled for the machine to operate properly. For maximum benefit, clean and lubricate the mortiser before making adjustments. Don't forget to clean the teeth of the gears that move the head up and down.

The power head of mortising machines travel up and down on some form of slide, keyway or a post, all designed to keep the bit traveling straight up and down accurately. Contamination of those sliding surfaces affects ease of use, accuracy and eventually, the life of the machine.

Your mortiser is likely to have some kind of geared drive system that moves the power head up and down in response to the motion of the handle. Cleaning sawdust and debris from the teeth will help keep the machine operating smoothly. I use a cheap nylon cleaning brush with a wooden handle to dislodge the dust.

In most cases, moving parts can be cleaned with a rag or an old paintbrush. Stubborn contamination may require some kind of solvent, but make sure the material used is paint and plastic safe. In no case should caustic materials be used. After cleaning, dry the area completely.

While nearly any type of grease or clinging oil will lubricate these moving parts, consider dry graphite or Teflon-based products that dry after application. Dry lubricants do not attract or hold dust and may extend the periods between necessary cleanings. If you don't have graphite, a light, acid-free oil, such as Automatic Transmission Fluid, will work very well.

The owner's manual should provide instructions on what parts need lubrication, what parts do not and may even suggest acceptable lubricants.

Adjusting the slides is one of the critical parts of setting this machine up for accurate operation.

The sliding mechanism on which the power head moves is usually adjustable so you can compensate for normal wear. Though set up at the factory, you should always go over these adjustments on new machines to insure they are set as best as can be.

Following the recommendations of the manufacturer on adjustment procedures and the allowable tolerance is mandatory. The engineers who designed the machine consider the properties of the materials used to make these parts when calculating adjustment tolerances. This is not a good time to try to out-think the manufacturer. Stay within the guidelines to insure the best performance and longest life of the tool.

Checking the slider adjustment occasionally should

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be part of the machines maintenance, the frequency is dependent on how much use the machine sees.

On mortisers with an attached table surface, checking its alignment to the chisel is also important. If the table is not square to the chisel, the mortises cut will be at an angle, transmitting that misalignment to the project.

Install one of the larger chisels in the head, aligning its flat sides with the front-to-back and side-to-side axis and then lower the chisel so it is close to the table surface. Place a 90-degree square on the table surface; one leg flat on the table and the other leg against the flat chisel side. Look for gaps between the square and the chisel. Check this alignment on the left and right sides as well as the front. If there is a gap between the chisel and square, shim the table accordingly to bring the table into alignment with the chisel.

On my mortiser (a Delta jig that attaches to my Delta drill press), I found a very slight gap at the top of the square when it was placed on the right side of the chisel. I confirmed the out-of-square condition by moving the square to the left side of the chisel and noting that the gap was now at the lower portion of the chisel. I also placed the square against the front surface of the chisel and found the chisel and table were square to each other on that axis.

I loosened the table mounting and inserted a 2"-wide strip of common notebook paper (folded to double the thickness) between the table and the mounting surface next to the left side mounting running front to back. The shim runs the full width beneath the table to avoid throwing the table out of square along the front to rear axis. After tightening all of the table mounting, I used a square to recheck the table and found that the gap was gone.

The combination of a square chisel preceded by a round drill requires a specific gap between the two for proper operation. Because chips are evacuated through a slot in the chisel housing, there must be sufficient space between the drill bit and the tip of the chisel for the chips to be carried up to the slot by the specially designed flutes on the drill.

Most manufacturers give a range of bit to chisel clearances, sometimes indicating the range of settings are meant to accommodate different woods. Unfortunately, they seldom describe what setting is for what type of wood.

The logical interpretation is that the greater bit to chisel clearance is for softer woods that produce larger chips and shavings. Hardwoods, which normally generate much finer chips when drilled, can use the smaller end of the tolerance range. While researching this story I cut mortises in every species of wood I could find and this bit to chisel concept seems to hold up.

In reality, most woodworkers use a bit to chisel setting in the middle of the range for all of their work. This one-setting-fits-all approach usually works, but remember this setting in case you encounter a problem with chip extraction in the future as it might be the cure.

There are two schools of thought regarding the expected life span of mortising chisels and bits. Some consider these pieces to be consumables, meant to be replaced when

they become too dull for effective use. Others sharpen the chisels with specially designed stones (available from Lee Valley) that touch up the inner bevels, restoring their cutting edge.

The drill bits do not seem to lose their boring ability to any appreciable degree. The feed rate for cutting mortises is relatively slow which limits the wear and tear on the bits.

Whatever your choice, keeping the chisels in good condition is important to the performance of the mortising machine. Oddly, softer woods like pine will reveal dull chisels before most hardwoods. The softer wood tends to crush and bend when a dull chisel is pressed into it.

The inside of a mortise will not win any finish awards, but does make a very strong joint when all those little ridges dry into the glue.

Using a relatively small, square chisel usually leaves small ridges on the sides of the mortise. If the chisel is parallel to the fence, these ridges are usually very small. In addition, most woodworkers make a second pass through the mortise to "clean up" the bottom and make sure all of the material has been removed. This process cleans up the ridges as well.

Leaving these small ridges in the mortise has no affect on the strength of an otherwise properly fit mortise and tenon joint. Some even believe the ridges prevent scraping too much glue from the sides of the tenons and actually increases the strength of that bond.

Good woodworking equipment costs lots of money. Taking the time to set up and care for machines properly does not take a lot of time but can save piles of money in the long run.

Lift the bit all the way up and secure it in the chuck. Remove the coin and seat the chisel up against the boss and the bit-to-chisel spacing is set.

While manufacturers sometimes provide instructions on how to attain this bit to chisel setting, they are often more complicated than need be. Enterprising woodworkers discovered that American coinage provided an alternative that simplifies the set up task.

Locate the recommended bit to chisel clearance in the instructions that came with your mortiser, and then find a coin with a thickness that most closely matches that number.

Insert the chisel into its bushing and raise it up to the bushing face trapping the appropriate coin between the bushing and chisel face (see photos) before tightening the setscrew to secure the chisel. Insert the drill bit through the chisel and into the chuck, holding the tip of the bit fully up against the end of the chisel. Tighten the chuck to secure the bit. Loosen the chisel set screw, remove the coin and slide the chisel up, butting it against the bushing. Make sure the chip port in the chisel faces to the right or left, not front or back, before tightening the setscrew to secure the chisel housing.

You should now have the proper bit to chisel clearance for your machine. Depth of cut depends entirely on your mortise intensions. Go no more than 3/4 of the way through the piece, however, check with Dick Trough if you need specific instructions. *Barry Humphus.*