Lake Charles Woodworkers Club, Inc. March 2005

Bubba Cheramie, President
Dick Hopes, Sec. / Treasurer

Officers and Directors

Barry Humphus, Editor, Brent Evans
George Kuffel, John Marcon, Chuck Middleton

FEBRUARY MEETING HIGHLIGHTS

George Kuffel's nice warm shop was our meeting place this month where we had almost too many people to fit. And almost too many new Show and Tell items to fit on the available tables.

Show and Tell brought some new carvings by Jimbo Everett: a natural cane with the most interesting faces — almost like a character from Lord of the Rings. Jimbo also has just finished a couple of carved guns: a revolver and a buffalo rifle, each from a single peice of stock. Jimbo said that they are to be donated to the Calcasieu Sheriff's department for display.

Ed Blessing's children's rockers are always a hit. This one is for Allyson. He uses birch plywood for the construction and three to four coats of poly to protect the wood. He gets the decorative carvings at T-Miller and Sons. Gary Rock is getting ready for Christmas early by turning more of his tree orniments plus a couple of small segmented bowls. John Leonard Fontenot's knees are bothering him but at least he gets to sit while doing scroll work. The religous peice was a stylized picture of Jesus (but it may have resembled JLF a bit).

Pie Sonnier is also having a bit of knee problems but he continues to turn out wonderful wooden vehicle models. This month's attraction was a Mack tracktor made of walnut, oak, maple, purpleheart, cherry and ebony. He said it took him about three weeks to do this one and he had not yet put on the polyurethane finish.

Jeff Cormier is building some baby changing tables (no, not for him!) of a unique design. He correctly assessed the fact that the mothers will not need a changing table after some period of time so Jeff made them into a convertable, i.e., the table's top can be removed and replaced with a hutch and it becomes a china cabinet.

Our Mr. Thibodeaux keeps busy with scroll work and engraving. This month's selections included two engraved award placks that he did for some bowling collegues. Eltee also brought a great jointing jig for a table saw. Even if you have a jointer, handling a long board through one can be a chore. When George Kuffle and I did this a couple of years ago for a long table, we ended up doing the jointing with a hand plane. Had we had or thought of this jig while we were in this project, it would have saved us a lot of time. You can see the plan for the jig at www.woodworkingtips.com/etips/2005/01/28/wb.

Lee Frazier continues to do wonderful scroll work. As some of you know, Lee has visual problems and despite this, he continues to turn out fantastic outdoor furniture and great scroll work. With some struggle with this great looking classic truck design, Lee impressed everyone with his skill for a solid walnut item.

We had three guests this month, two of whom brought Show and Tell items. Kenneth Ballard said that he has done woodworking for some time but what he showed was really impressive. He has an interest in flint napping and brought an arrow head he had recently done. The best way to learn how to make stone tools is by doing your homework on platforms, angles, bifaces, notches, flakes and shockwaves, and maybe we can get Ken to show us a few techniques sometime.

Another guest, Gary Smith (G Smitty Custom Knives) of Sulphur showed off examples of his knife making craft. He brought a photo collection of the many knives he has made over the past several years. The knife he brought was a commissioned work, hand forged and polished to a mirrow finish and weighed several pounds. Gary also engraves most of his knives and this one was beatifully done. I'm not a collector of knives, but I could tell that this peice was for show and not necessarily for work as the wonderfully carved handle and base would likely be proudly mounted as a trophy. We hope to get Gary to do a demonstration of his craft soon at his shop in Sulphur.

Steve McCorkadale will be hosting our meeting at his saw mill in April. We hope you realize that a saw mill is where you get the best wood products for your work. Steve does general and custom saw mill work and we hope you can see the mill in action.

Coming Up . . . G Smitty Custom Knives (Gary Smith) will host & demonstrate the art of knife making, engraving, forging and carving at his shop. Saturday, 9:00 a.m. 12 March.

FINISHING DISASTER!

My dear friend Mary Richardson (of McNeese Banners Series fame) called me a few weeks ago to ask what had gone wrong while applying Watco to her dinning room table.

When I originally refinished this table more than two years ago, I asked about it's typical use and ended up recommending Watco Danish Finishing Oil as the best for this application. The table is a trestle design with a mahogany top. I had prepared it by sanding down to 15 micron 3-M with a random orbital sander then applied two coats of Watco according to the directions on the can.

The result was a durable glass-smooth satin finish that she found perfect. I told her that she should apply a coat of Watco about once a year for maintenance. When you do an oil finish, there is an old adage that goes: once a day for a week; once a week for a month; once a month for a year; and, once a year forever.

That is a lot of work and most folks are not interested in maintaining a schedule like that. What you want to do is wipe it on and forget it. But even with Watco, you have to (or should) do a reapplication periodically. Mary decided that a quiet weekend was the time to do the annual application.

But what started out as a quiet weekend for me turned into a chemistry lesson. Mary reported by phone that she had gotten tiny bubbles, an uneven finish and that the baby-behind smooth finish was now rough and uneven in places. My thought was to try to find out what was in the can of Watco (applied over Watco) that would cause this finishing disaster. What is it made of?

Of course, the objective of any oil finish is to do three basic things: seal the wood, fill the open pores and grain and make the surface lustrous without a noticeable surface film.

The problem with many finishes are the instructions. Manufactures are going for the most general use of their products and so you should always experiment on test stock to see what happens before you apply what seems to be the best finish for the job. I had done this with her table originally and so I was totally confused as to why the reapplication had failed.

Unfortunately, Watco Danish Finishing Oil is a proprietary finishing product and the company (Fletco, a division of Rust-Oleum) does not tell you much about it's composition. But by examining the MSDS, I knew that Watco did not contain anything strange. It is composed of tung oil, boiled linseed oil, polyurethane, mineral spirits (paint thinner) and dryers (zirconium) and is a standard composition. In fact, you can make it yourself by mixing equal quantities of the three principle ingredients (boiled linseed oil, paint thinner and polyurethane plus a few drops of Japan dryer per quart). So what went wrong?

When I arrived I asked Mary for the can of Watco that she had used. What I saw was Watco Outdoor Teak Oil. In other words, this was a product that was designed to finish wood that was going to sit in your yard, not inside your home. My investigation was that this product contained a large amount of polyurethane. I knew that I could remove this, if freshly applied, with paint thinner. What I ended up doing was make it softer (finger nail scratch). Unfortunately, this did not work. What I then realized is that Watco Teak Finish Oil was mostly polyurethane and I had to quickly remove the polyurethane with a paint stripper before it cured and thus become very hard to remove.

On Monday, Mary and I applied a paint stripper to the surface and edges of the table. Paint stripper will remove polyurethane but you must be careful when applying as it contains an acid (phosphoric—the same as in Coca Cola!) that will harm your flesh. So always wear protective gloves when you use this stuff. In fact, I found that standard latex gloves will dissolve during contact so I had to change and discard them as I did the work to avoid being burned. Non-latex gloves will work without a problem. My lesson with paint remover is that if you need to use this product, is to use non-latex gloves (available at most pharmacies).

After an application of paint remover, we wiped down the table top with paint thinner. I had Mary apply a coat of water to the table prior to coming over with my chemistry set (more paint thinner and Watco). The idea here was to raise the grain of the wood. Once you apply water to wood and raise the grain, it will not raise again. This means that you can sand off the raised grain and achieve a very fine finish before your final application of finish.

I used a 100 micron 3-M sand paper followed by a 15 micron 3-M sand paper on the surface of the table with a random orbital sander, wiping down with paint thinner between sandings. Then we coated the table with Watco Danish Oil Finish. An hour later, we wiped it down with a clean cloth. Then we applied another coat of Watco Danish Oil, waited 15 minutes and wiped the table down with a clean cloth. I recommended to Mary that she wait at least 24 hours to polish the surface of the table with Watco Natural Finish Wax to provide a final lustrous finish.

Here was the problem. Mary's husband Joe had purchased a can of Watco Teak Oil Finish. Watco Danish Oil Finish and the Watco Teak Oil Finish (to finish an outside teak table) are not compatible. Also not compatible is Watco's wipe-on polyurethane. The Teak Oil Finish was what she used to renew the original coat of Danish Oil Finish. Watco makes at least three Danish Oil products that are not compatible. In other words, if you coat with Watco Danish Oil Finish, you should not over coat that with the Teak Oil finish or their wipe-on poly unless you do so with great care.

Another issue is the disposal of the rags (old T-Shirts in this case) that contain any of these products (including the paint remover). The best practice is to submerse the rags in water as recommended by the manufacturer. But then what do you do with the bucket of water with the oily rags? The next best practice is simply to let them dry thoroughly (they'll get stiff after a week or so). Never put any oily rags in a container in your shop, otherwise, you will have a fire (ever see Mr. Wizard demonstrate this?). What I do is to take the rags and drape them somewhere near the work. When they are stiff, they are dried enough to be safe from spontaneous combustion. Lesson learned. *Barry Humphus.*

Want to continue this Newsletter? Pay your dues! Mail your check to Dick Hopes, 1139 Green Rd., Lake Charles, LA 70611.

COMPOUND CRANK AND FLYWHEEL

Today we have the electric motor that turns our power tools. But it was not until 1834 that Thomas Davenport, a blacksmith, figured out how to get rotarty motion using electromagnetism. He and Dr. Orange Smalley along with a Professor Turner of Middlebury College in Vermont published the article "Invention of an Electro-Magetic Machine." Prior to that, we had only cranks and flywheels powered by muscle and water.

No device in the history of modern tools was more useful than the idea of the compound crank and the flywheel. The long dormant idea of the compound crank was 're-discovered' in about 1420 by Flemish artisans. Cranks had been used in Europe for a hundred years earlier by carpenters as wood boring augers. But it was the compound crank that revolutionized modern tool design. By 1431, the compound crank had been transfered from the carpenter's brace to machine design of a sort without precedent. The first improvement was the connecting-rod. This was a mechanical substitute for the human arm found in writings in Italy by Mariano Taccola in 1441.

The idea of the double compound crank was to transfer reciprocating motions to rotary motions and the double compound crank represents that change in the 1450's. The crank and the flywheel occurs in many drawings in this period but apparently these ideas were not put together. In working out the problem of continuos rotary motion, early tool technicians found that the flywheel and other forms of mechcanical governors were needed to smooth out irregulatities of impulse and get over 'dead-spots.'

By the second quarter of the 14th century, Englishman John Buridan suggested that the rotary grindstone stores power via impetus. The idea he had was that the grindstone continues to turn long after the hand is removed. Despite his idea, Giuseppe Ceredi in 1567 wrote that the idea was mechanically useless. Little did he know.

Closely connected with the crank and flywheel was another device: the treadle. By the later 13th century, lathes were operated by treadles with double compound cranks. Note that in 16th century America, a sapling-spring was still used to operate a lathe in most applications. At the time, America was very far behind Europe in mechancial design. In fact, a few years ago, I saw such a reproduction lathe in North Carolina. I could never get just the right cutting motion when I tried it. This obviously takes a lot of practice. Maybe that is why using an early lathe was a 'mysterious craft' according to 16th century writtings.

In earlier designs, the lathe was operated by a bow, held in the left hand, the bow-cord was wrapped around the lathe's spindle and pulled back and forth.

The spinning wheel is mechanically interesting because it is the first instance of a belt transmission of power. It focased attention upon the problem of producing and controlling various rates of speed in differnet parts of the same machine. One turn of the larger wheel sent the spindle twirling many times.

By 1480, craftsmen had developed a U-shaped flyer rotating around the spindle that permits the operation of both spinning and winding. To accomplish this, the spindle and flyer had to rotate at differnt speeds, each driven by a larger wheel and this revolved at a third speed. By 1524, the double compound crank, connecting-rod, treadle and flywheel had been combined to produce a modern tool: the lathe. All of this was added together in the later 1880's America with the electric motor.

This was quickly followed by electric motor application to the water power table saw, band saw and many more electrically powered tools. The only difference between what woodworkers use today and what they used 400 hundred years ago is the means of turning the tool.
Barry Humphus.

WOOD PUTTY

My name is Barry and I have used wood putty. Opps, this is the wrong meeting. Seriously, we all use wood putty, at least some of us (probably all of us but we haven't admitted to it). Wood putty is a great product and consists of at least three basic components. Most wood putty products can be softened if they harden in the container by using a solvent.

Nitrocellulose based wood putty cures very fast. It consists of acetone, toleune and wood flour and is the most common. When it hardens in the container, you can renew it by using Famowood Wood Filler Solvent (Stines). Brands include ZAR, DAP, Wood Dough and others.

Acrylic-based wood putty cleans up with water until it is dry and then cannot be re-disolved after it has dried. Brands include Elmer's Carpenter Wood Filer, Fil N' Finish, ZAR, Just Like Wood and several others.

Gypsum-based wood putty is sold as a powder that you must mix with water. It cleans up with water until it is dry and cured and then cannot be re-desolved after drying. Brands include Durham's Water putty and other brands.

You should probably use a 'reversable' wood putty/filer such as a nitrocellulose-based product. That way, if you really screw up, you can get it off or at least soften it by using Famowood Solvent.
Barry Humphus.