

John Griffith, President
Patrick LaPoint Treasurer

Officers and Directors

Barry Humphus, Editor, Eltee Thibodeaux
Daren Hood, John Marcon, Rob Richard

Mentoring Program - If you have a project, a problem in any woodworking area, these members have volunteered to help. Give them a call. Darren Hood 478-0312; Patrick LaPoint 563-8339; Sonny LeBleu 478-1701. Each have years of experience and knowledge.

March Meeting Highlights

LCWW President Jogh Griffith said that he could not attend the April or May meetings so Patrick LaPoint and Barry Humphus will organize the two meeting. John also said that he wants to pass on to someone else the position of club president. He has been our president for almost three years and he believes we may need someone new. Should you have an interest in being club president, please let John, Patrick or Barry know.

Jack Stegall reminded member about the Expo at Burton on the 26th of this month and several members indicated that they would attend and display their work. We hope that all went well.

Ray Kebodeaux brought us a very nice ash side table for Show and Tell that he will place beside his easy chair, Ray used floating tendons to attach the top to the legs and



also included a neat drop down box under the top to hold the TV controller (or his favorite fire arm). The finish was wipe-on poly in a natural color.

Patrick LaPoint built a really clever one cup drip coffee maker from cocobolo wood and mahogany highlights. However, I don;t think I'm going to replace the one cup Keurig in my office at work. Patrick used spray-on lacquer as the finish.

Travis McManemin did a really good sand paper

bank with twelve slide out shelves arranged by grit.

Sonny LeBleu brought us a neat device that ensures that your picture frames are hung properly. No, not a simple bubble level but a low cost dowel with a dry wall screw run through on one end plus measuring marks. The dry wall screw will make a tiny detent in your wall so you know precisely where the hanger will go. You still need a bubble level, but this device makes the entire process accurate every time. I wonder if this simple device could be patented and Sonny could sell a million or two of them? Just incorporate a small bubble level into a small plastic rod with a small nails at the end and one inch (or centimeter) marks along the rod and Sonny has a unique and possibly patentable product. They could even be printable with a 3D printer. Great idea.



We hope that someone in our club will step up and be our leader. It is not difficult or demanding and like many of our past presidents, you really do not need to come up with a theme or presentation each meeting. Legally, we do need to have someone in charge as the Lake Charles Woodworkers Club, Inc. is actually incorporated as a non-profit corporation in Louisiana. We file annual IRS reports (which Barry does) as well as Louisiana reports (which Patrick does) each year and that is the extent of the job. Please reach out to John Griffith, Patrick LaPoint or Barry Humphus should you have any interest in this position as we really need someone to fill it.

Up Next . . . Saturday, April 13, 2019 at the wonderful Stines meeting room.

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The Face on the Wall

If you happen to be in North America at the moment, chances are pretty good that there's at least one little face staring at you. Look around and you'll spy it. It is probably about 15 inches up from the floor on a nearby wall. It's the ubiquitous wall outlet, with three holes arranged in a way that can't help but stimulate the facial recognition firmware of your mammalian brain.

No matter where you go (at least in the U.S.A.) you'll find those outlets and similar ones, all engineered for specific tasks. But why do they look the way they do? And what's going on electrically and mechanically behind that familiar plastic face? Now it's time to take a look inside the common North American wall socket, and how it got that way.

Consider the problems faced by engineers and designers in the early days of the electrical age. They were literally inventing an industry from the ground up, with very little to go on in terms of prior art. Not

only did they have to invent the means of producing electricity, they had to come up with absolutely every component that would connect together to create useful circuits for paying customers, preferably without killing them.

One thing customers, particularly residential customers, would need would be a means to temporarily attach

electrical devices to the mains supply, without requiring a visit from an electrician to connect them to the fixed wiring of a house or office, which was typically dedicated to sockets for light bulbs. The requirements were simple: provide two contacts, one for the line conductor and one for the neutral, that could remain firmly connected but easily interrupted at need.

Imaginative minds worked on this and similar problems in the late 19th and early 20th centuries, and various solutions were adopted. But it wasn't until 1903 that Harvey Hubbell, an inventor from

Bridgeport, Connecticut, patented his "Separable Attachment Plug," a device that we'd recognize as a plug and socket. Hubbell's first pass at a design used round conductors that looked a bit like the plugs used in manual telephone exchanges to make connections, and might have been inspired by them. The detents at the tip of the pins were retained by the spring action of the contacts inside the socket.

The device worked well, but the manufacturer and businessman in Harvey saw problems. Foremost was the cost behind those round pins, which would have required machining to achieve the tip and detent. Harvey would have known that parts stamped from sheet metal would be cheaper and easier to manufacture, and so he scrapped the round pins in favor of flat metal blades in 1904. Like the round prongs, the flat blades had a detent for retention, and were arranged in a line. Catalogs from the time list dozens of variants of the "Hubbell Attachment Plug," and the prices shown for each device suggest that Hubbell's company fared well in the early 20th century.

For reasons unknown, though, Hubbell altered his design in 1912. The two blades were no longer in a line; each blade was twisted 90° to form the familiar parallel arrangement we see to this day. Hubbell continued to sell both styles of plugs and sockets, and by 1915 had sold something like 15 million units, enough to ensure that Hubbell's design would be adopted as a standard, even without the millions of units also sold by Hubbell's imitators.

The specifications for the standard wall outlet we know and love today, in North America are determined by the National Electrical Manufacturers Association (NEMA). NEMA standards cover a bewildering range of electrical products. The standard 120-volt, 15-amp outlet is a NEMA 5-15. The third conductor, the ground pin that completes the outlet's face, is a round or U-shaped prong. It was added to some outlets as early as the 1920s as a safety feature and is now required for all outlets by the National Electrical Code. There is a variation on this standard, which is the 20-amp version, which I have wired in my shop and you should do as well.

The ground connection is interesting. You'll notice that on three-wire plugs, the ground pin extends further out from the insulated cord body by



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Face on the Wall Continues . . . about 1/8". The idea here is that the ground circuit will be completed before the line and neutral connections are made when plugging the cord into an outlet, and perhaps more importantly, will be disconnected last when unplugging. That ensures that there's a path to ground any time a circuit is plugged into the outlet.

Note too that the NEMA standard says the ground pin is actually located *above* the slots for the line and neutral pins, turning that frowning face upside down. There's some logic to that — if something conductive should drape across a partially unplugged cord, it's safer to have the line and neutral blades physically blocked by the ground pin. In practice, though, most outlets in residential and business settings are installed with the ground plug down. However, look around the next time you're in a hospital or some businesses; chances are, the outlets there are all installed the correct way.

For example, in our beach house in Galveston, they are installed correctly according to the NEMA 5-15 standard, but not in my home in Lake Charles and not likely in your home as well. They are easy to turn around using a screw driver and a littel time in your home.

The internals of a NEMA 5-15 outlet vary by manufacturer, of course, and even within a brand, there are different grades of outlet. They are similar in that both the line and the neutral connections are formed brass bus bars, with screw connections on the outside for connection into a building's wiring, and springy contacts to grip and retain the mating plug.

The industrial-grade outlet has thicker bus bars, better contacts, and stouter plastic in the body. Should you rewire your shop or home, always use the industrial-grade outlets. The cost is difference is very small. You'll notice as well that both grades have the ground pin directly connected to the metal frame of the outlet, which would also be in contact with a metal wall box, if it were mounted in one.

Considering how much else has changed in the last century, it's pretty remarkable that Harvey Hubbell's original plug and socket designs have remained pretty much unchanged. They've been tweaked, for sure, and the original idea has been extended to a panoply of configurations for every

connection imaginable. There's no doubt that the design has some deficiencies, but in the end, Harvey's ideas seem to have won the day by addressing the basic needs.

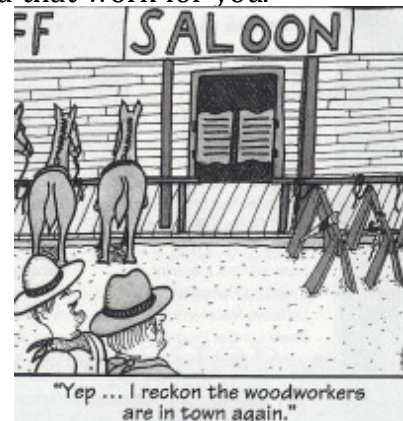
Europe's electrical system is different from ours in two ways: the voltage of the current and the shape of the plug. American appliances mains run on 110 volts, while European appliances are 220 volts. If you see a range of voltages printed on charger or its plug (such as "110-220"), you're OK in Europe.

The official voltage for the UK and Ireland (and the rest of Europe) is 230 volts mains with most electrical goods operating at around the 220 - 240 volt mark. All of Europe operates on the same 2 round pronged outlets except for the UK and Ireland that operates on its own unique 3 flat rectangle pronged outlets.

So what do you need for Europe? Choose the plug adapters you'll need in those specific countries. Most DSLR cameras will handle any voltage from 100 to 240 at 50/60 Hz. They are designed to work just about anywhere in the world, and the U.S. version will work in Europe by using a plug adapter. However, you may want to bring a converter just in case.

Alternative Meeting Location

I ran into my good freind Dennis Stine at the Nelson Road store last week and we caught up on old times. I told him that the club truly appreciates Stine's continued support of the LCWW. Dennis said that they were very pleased to do this for us and other non-profits in the Lake Area. He also suggested that the Stine store in Sulphur would be pleased to host one or more of our future meetings at that location. I said I would check with the membership but this seems like a good idea as several members live west of the Calcasieu river. Give this a thought and let folks know should that work for you.

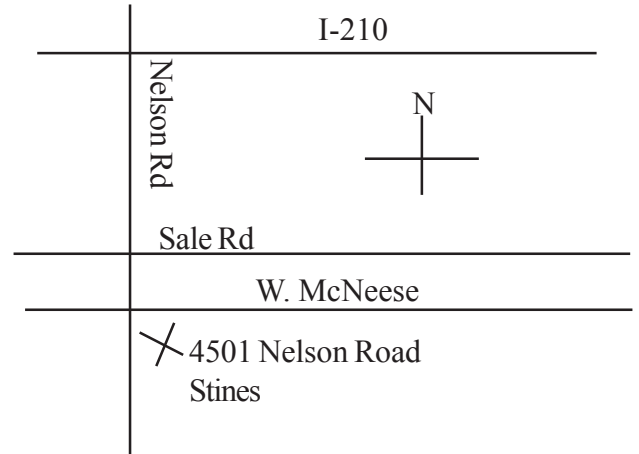


April Meeting Location

We have the wonderful opportunity to meet at the Stines Lake Charles location at 4501 Nelson Road. Please enter the store and go to the back left in the store to the meeting room.

To get there go South on Nelson Road in Lake Charles going from I-10 or I-210 and turn into the parking lot. Go to the back of the main entrance to the very back to the meeting room to find us.

Please take an opportunity to explore Stines before you leave to find the items for your shop or home that you may need. As always, thank the folks at Stines as you check out.



April 2019