

Southwest Louisiana Woodworkers Club October 2020

Bill Fey, President

Officers and Directors

Barry Humphus, Editor, Eltee Thibodeaux

Patrick LaPoint Treasurer

Daren Hood, John Marcon, Robin Richard

Mentoring Program - If you have a project, a problem in any woodworking area, these members have volunteered to help. Give them a call. Frank Tartarmella 802-8989; John Marcon: 478-0646; Eltee Thibodeaux: 436-1997; Ray Kebodeaux: 583-2378. Each have years of experience and knowledge.

October Highlights

Not many highlights this month because we are still all recovering from Hurricane Laura. The good news for Barry is that as of last Saturday, we got at least a layer of felt on the damaged roof, 4 x 6 foot glass has been ordered for three picture windows, sheetrock cut up about three feet from the floor and all of the oak flooring is gone -- three or four months for repair. My office at SOWELA is about the same.

We hope you folks are doing better these days. We plan to move back to LC in a few weeks to our rental home which we have been invited by our 15 year renter to stay. It will be nice to have AC and a place to work while close to the reconstruction. Our home still does not have power because the electrical could be an issue. and needs to be inspected.

Work Benches

When it comes to building or buying a bench, most woodworkers get wrapped up in what form it should take. Should it be a continental bench popularized by Frank Klausz? A Shaker bench like the one at the Hancock community? How about a British version like Ian Kirby's?

That, is the seed of the problem with workbenches today. Many commercial workbenches are missing key functions that make work-holding easier. Many classic bench forms get built with modifications that make them frustrating in use. What's worse, the user might not even know that he or she is struggling. Woodworking is a solitary pursuit, and it's rare to use someone else's bench.

It doesn't really matter what sort of bench you have as long as it performs a set of core functions with ease. There are about 10 rules for building (or buying) a workbench. As long as your bench obeys these rules (or most of them), you will be able to hold almost any workpiece for any task with a minimum of fuss. This will add speed and enjoyment to your time in the shop and reduce the amount of time you fuss with setups.

It is fair to say that a lot of the best commercial woodworking today is done on benches that disregard many of these rules. In production shops, it's rare to find a traditional bench used in a traditional manner. More often, a commercial

woodworker will have something akin to a clamping table, or even a door on sawhorses. And they can turn out high-quality work that will blow you away.

The point is that a good bench won't make you a better woodworker, and a not-quite-a-bench won't doom you to failure. But a good bench will make many operations easier. It's simply a tool: the biggest clamp in the shop.

What is important here is that while you can build with the door-off-the-floor approach, there are many commercial woodworkers who still see the utility of a traditional workbench. Chairmaker and furniture maker Brian Boggs uses more newfangled routers and shop-made devices with aluminum extrusions than I have ever seen on the Internet. He still has two enormous traditional workbenches that see constant use. Before Kelly Mehler opened a woodworking school, we visited his commercial shop and got a chance to inspect his vintage bench, which saw daily use.

The point is that a good bench won't make you a better woodworker, and a not-quite-a-bench won't doom you to failure. But a good bench will make many operations easier. It's simply a tool: the biggest clamp in the shop.

Always overbuild your workbench by adding mass. There is a saying in boatbuilding: If it looks fair, it is fair. For workbenches, here's a maxim: If it looks stout, then make it doubly so. Everything about a workbench takes punishment that is akin to a kitchen chair in a house full of 8-year-old boys.

Early Roman workbenches were built like a Windsor chair. Stout legs were tenoned into a massive top and wedged in place. Traditional French workbenches had massive tops (6" thick), with legs that were big enough to be called tree trunks. Later workbenches relied more on engineering than mass. The classic continental-style workbench uses a trestle design and dovetails in the aprons and vises to create a bench for the ages. The 19th-century English workbench uses an early torsion-box design to create a stable place to work. A good-quality modern workbench uses threaded rods and bolts to tighten up a design that lacks mass.

Use stiff, inexpensive and common wood to build your bench. Showcase benches made from exotic materials are nice. Focus on the functions before the flash. I would

rather have a construction-lumber bench that followed all these rules than a beautiful European beech bench that skipped even one of this concept.

European cabinetmakers didn't choose beech because of some magic quality of *Fagus sylvatica*. They chose it because it was dense, stiff, plentiful and inexpensive. In the United States, beech is dense, stiff, hard to find and (sometimes) a bit spendy. You can, of course, use it to build a bench, but you will pay a pretty penny for the privilege. It will have no demonstrable advantage over a bench built from a cheaper species.

Many inexpensive commercial benches are ridiculously rickety. They sway and rack under hand pressure. You can push them across your shop by performing simple operations: routing, sawing, planing. If the bench looks delicate or its components are sized like a modern dining table, take a closer look before committing.

A big thick top and stout legs add mass that will help your work. Heavy cabinet saws with lots of cast iron tend to run smoother. The same goes with benches. Once your bench hits about 300 pounds, it won't move unless you want it to move.

If you followed rule No. 1, then rule No. 2 should be no problem. Your joints will be sized to fit the massive scale of your components. If you cannot rely on mass, then you should beef things up with superior joinery. While dovetails and through-tenons are overkill for a towel rack, they are good for a bench.

This is because you are applying racking force to the workbench with typical operations and your vises will do their best to tear apart your bench. All wooden vises need to be overbuilt or they will self-destruct when you cinch them down hard.

Make your tenons thick and your mortises deep. If you know how to drawbore a mortise-and-tenon joint, this is one good application. Have you ever been in a timber-framed barn? Did you look at the joints? They're massive and pegged. Imitate that for your bench.

Benches are a good place to practice your skills at cutting classic joints, but some woodworkers still resist. If that is you, you should investigate hardware to strengthen your bench. Threaded rods, bed bolts, Veritas bench bolts or even stove bolts can turn a spindly assembly into something rigid that can be snugged up if it loosens. The hardware would not give you mass, but it will strengthen a rickety assembly.

Other woodworkers, tacking toward the sensible, use hard or soft maple for their benches, rationalizing that it is like the beech of the New World. Indeed, the maples have all the qualities of a good species for a workbench.

Maple is stiff, resists denting and can span long distances without much of a support structure below it. But so can other species. In fact, if you went by the numbers from the wood technologists alone, you'd build your bench from shagbark hickory, despite its difficult nature. Once you look at the characteristics that make a good species for a workbench, you'll see that white oak, Southern yellow pine, fir or just about any species (excepting basswood and the soft white pines) will perform fine.

After you sketch out your workbench design but before you cut any wood, compare your design with historical designs of benches. If your bench appears to be a radical design or looks unlike anything built before, chances are your design is flawed.

There are workbenches with pneumatic face vises. Why? There are workbenches that had two twin-screw vises: One vise for the right end of the workbench that was matched to work with two long rows of dogs along the length of the benchtop; and a second twin-screw vise on the face of the bench that was matched to two more rows of dogs across the width of the bench.

There are a few woodworkers who would really need this arrangement – perhaps someone who has to work on a circular tabletop on one end of the bench and a Windsor chair seat at the other. But for most people who build cabinets and furniture, this setup is redundant and neglects some critical bench functions.

Your bench design cannot be too heavy or too long. But its top can easily be too wide or too tall. Your benchtop should be as long as possible. Find the wall where your workbench will go (hint: Pick the wall that has a window). Measure that space. Subtract four feet from that measurement and that's a good length for the top. Note: The benchtop must be at least 5' long unless you build only small-scale items. Furniture-sized parts typically range up to 48" long and you want to support these fully with a little room to spare.

It is difficult to make or imagine a workbench that is too long. The same goes for thickness. It is the thickness that allows the top to be that long. If you make the top really thick (4" or more), then it will offer unerring support and allow you to build your bench without any support system beneath. The top can perch on the legs and will not sag under its own weight.

The width is a different matter. You can have a bench that is too wide for a one-person shop.

For starters, if you park them against the wall you will have to stretch to reach the tools hanging on the wall. If you assemble projects on your bench, you will find yourself dancing around it a lot more than you should.

Work Benches Continues

Cabinetwork is sized in standard chunks. These sizes come from the human body; they are not arbitrary. A kitchen's base cabinet is generally 24" deep and 34½" high. This is important for a couple reasons. First: It means you do not really need a bench that's much more than 24" deep to build cabinets. With that 24" depth, you actually get some advantages, including the fact that you can clamp the cabinet to your bench from as many as three sides of your bench.

A deep bench allows you to clamp your cabinets to the bench on only two sides (with a couple exceptions). Here's the other thing to keep in mind: Kitchen cabinets are themselves a highly studied work surface. There's a good reason that kitchen cabinets are 24" deep. It is the same reason you don't want your workbench much deeper either.

Many bench builders worry about bench height and there are a wide variety of rules and advice. The bottom line is the bench must fit you and your work. In the end, there are no hard-and-fast rules. Some people like low benches; some like them high.

Consider the following as a good place to start. After taking in these theories, your next stop should be a friend's house or a woodworking supply store to use their benches and get a feel for what is right (it could be as simple as having a bad back that requires you to have a high bench, or a love for wooden handplanes that dictates a low bench).

Do you work with machinery? If so, a bench that's 34" from the floor – or a bit lower – can be good. The top of a table saw is typically 34" from the floor, so a workbench could be (at most) a great outfeed table or (at least) not in the way of your crosscutting and ripping.

Of course, everyone wants a ball-park idea for where to start. So here it is: Stand up straight and drop your arms against your sides in a relaxed manner. Measure from the floor to the place where your pinky joins your hand. That is the sweet spot.

All benches should be able to grip the wood so you can easily work on the faces, the ends and the edges. Many commercial benches fail on this point.

Submit your bench to what is called the Kitchen Cabinet Door Test. Imagine a typical kitchen door that is ¾" thick, 15" wide and 23" long. How would you affix that door flat on your bench to level its joints and then sand (or plane) it flat? How would you clamp the door so you could work on the ends to trim the top rail and tops of the stiles so the door will fit its opening? And how will you secure that door on edge so you can rout its hinge mortise and plane off the saw-blade marks without the door flopping around? Does

your bench pass this test? OK, now ask the same questions with a door that is ¾" x 15" x 38". Then try a board that is ¾" x 12" x 6'.

How you accomplish each of these three functions is up to you and your taste and budget. To work on the faces of boards, you can use a planing stop, a grippy sanding pad, a tail vise with dogs, clamps or hold-downs.

To work on the ends of boards, you can choose a shoulder vise (especially for dovetailing), a metal quick-release vise, a leg vise or a twin-screw vise. You can use all of these in conjunction with a clamp across your bench. The vise holds one corner of the work; the clamp holds the other corner.

Working the long edges of boards is tricky with most benches. In fact, most benches make it difficult to work the edges of long boards, doors or face frames. There are a couple ways to solve this. Older benches had the front edge of the bench-top flush with the front of the legs and stretchers so you could clamp your frames and long boards to the legs. And the older benches also would have a sliding dead-man (sometimes called a board jack). It would slide back and forth and had an adjustable peg to support the work from below. Another old form of bench, an English design, had a wide front apron that came down from the top that was bored with holes for a peg to support long work.

Place your vises so they work with your tools. Vises confuse many workbench builders. They are bewildering if you have never spent much time working at a bench to develop a taste for the peccadilloes of all the idiosyncratic forms. There are a lot of weird configurations in the world, from a table with no vises to the bench with a vise on every corner.

Classic workbenches have some sort of vise at the front left corner of the bench. This is called the face vise. Why is it at the left? When we work with hand tools, especially planes, right-handers work from right to left. So having the vise at the left end of the bench is handy because you will always be planing into the vise that is gripping your work, and the work can be braced against the screws of the vise. So if you are a lefty, placing your vise on the front right corner makes sense.

So with that left corner occupied by a vise, where are you going to put the a second vise that is designed to grip boards so you can work on their faces? (The classic vise for this is a tail vise.) Well the right side of the bench is free.

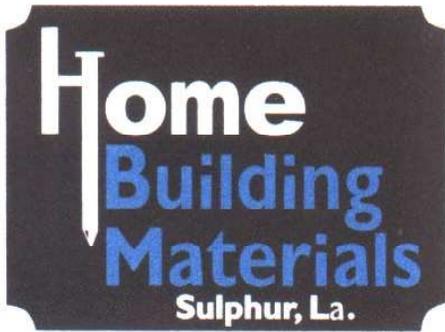
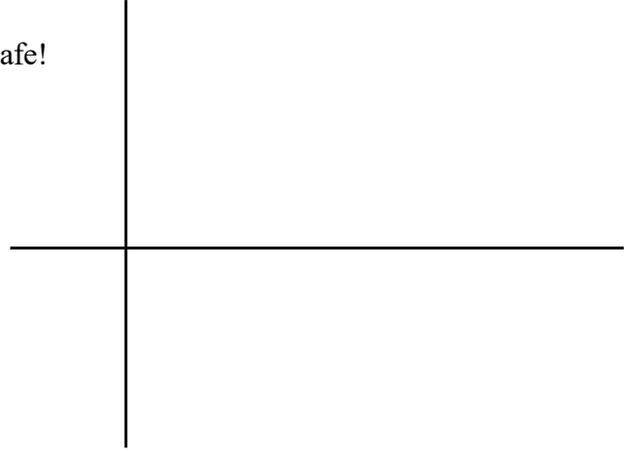
They said they liked it better for crosscutting with a handsaw. But when and if you start handplaning, that vise will be in the way because it would not be ideal for gripping long stock. It will be holding the tail end of the board and the plane will be trying to pull it out of the vise. Go for it!

October Meeting Location

We will not have a meeting this month because of Laura, Delta and COVI-19.

Sorry for the delay, as we hop to have a meeting in 2021.

Be safe!



October 2020