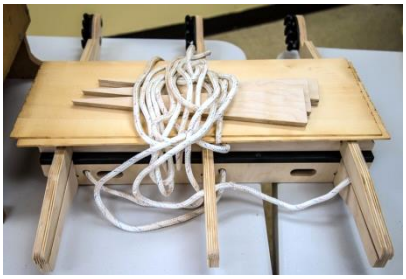
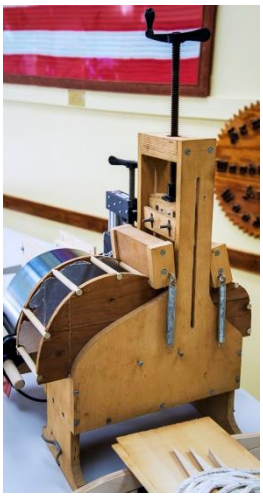
Sawdust & Woodchips Woodworking Association
Summary of Annual Jig Night – July 10, 2014

Written by Tony Baleno Photos by John Meloling

Having attended many *Jig Nights* since joining SWWA, it never ceases to amaze me the number and variety of "gizmos" we woodworkers design, build or buy to make our tasks a little easier. Additionally, I always come away with a little more knowledge that I can use in my shop projects. Here's what we saw in the 2014 line up:

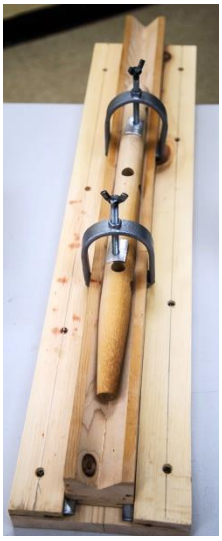
Bernd Krause started us with a ***plate glue up jig*** that he uses to glue up instrument backs. This commercial jig works great in edge gluing the thin stock used for instrument fronts and backs while keeping the pieces coplanar and tight together. The unit is made from Baltic birch plywood with non-stick surfaces in the glue areas to prevent sticking. Once the two pieces are fit into the jig, the top clamping cull is put in place and secured with stretchy nylon cords. Once the cords are tight and secured, large wedges are forced between the cords and the culls to provide additional clamping pressure to keep the pieces flat as well as to snug them tightly together. Neat idea!





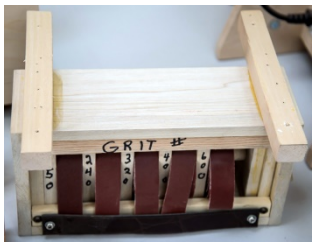
His next jig was a ***guitar side bender*****.** This shop-built jig is made of plywood with a removable inner form that is used to provide the desired bends in the side piece. The outer shell of the jig is also plywood and is fitted with 3 lamp-holders in the bottom and a top bridge piece which held the clamping screw that is used to force the inside bend into the side piece on the form. The bulb wattages are determined by trial and error and Bernd noted this could get quite hot… enough to start a fire. To bend the side, the wood is moistened and placed between thin metal top and bottom bending plates. It is carefully shaped over the form while the clamping screw is slowly tightened to push the sandwich into the curved form. Once shaped, the lamps are turned on and the piece is dried for around 10-15 minutes, depending on the wood and the lamp sizes. After the piece is dried, the opposite side is bent in the same manner.

Bernd's last jig is a commercially-built ***guitar side bender*** which he uses instead of his shop-built one. Very similar in design and function to the shop-built, it takes advantage of current technology, including a variety of inner bending forms which can be purchased to make sides in a variety of guitar styles. The unit also uses heat blankets that are inserted in with the metal/wood sandwich to provide a uniform controllable heat to dry the piece. The unit comes with a solid state temperature controller that has thermo-couples used to measure the temperature of the piece during the bending process. While this jig does exactly the same thing as the home brew jig, the process is far more controllable and replicable minimizing lost time and wasted material … especially if it is an expensive exotic wood.



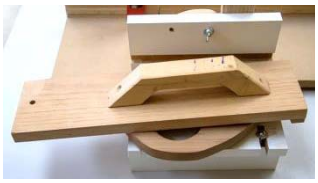
Bob Casey discussed his shop-built ***chair leg spindle hole drilling jig*** next. This jig makes it easy and simple to accurately drill spindle holes in a leg when building a Shaker-style chair. Constructed of wood and some metal pieces, the spindle holder consists of a movable leg holder that has a "v" groove cut into the center to hold the round leg. This piece has ¼" rabbits that run lengthwise on each side with a pair of u-shaped metal brackets riding in these grooves. A thumbscrew in the center of the bracket secures the leg to the movable cradle. The entire jig is clamped to the drill press table and the sliding cradle with the spindle is slid within its track to allow proper placement of the holes once it is set on the drill. Referencing marks on the jig allow for proper alignment of holes.

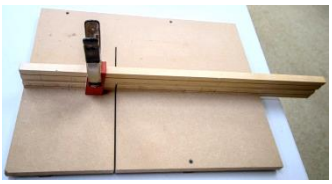
Bob Norton presented his ***router fluting (reeding) jig*** used in conjunction with a lathe. Bob wanted a method for creating flutes in a cylindrical section he was using for a Christmas ornament. He designed this jig to do this on his lathe using a router with the desired profile. The jig, made from plywood, is built to fit the bed of his lathe while also being able to provide a good fit for his router base to travel over between the lathe centers. Internal rails are set high enough to clear the turned section and allow finer height adjustment by the router. The turned section is set between centers passing through the jig and can be indexed through the lathes indexing collar to achieve the desired spacing of the flutes. Another benefit of the jig is that it can be used with a straight bit to create true cylinders between the centers.



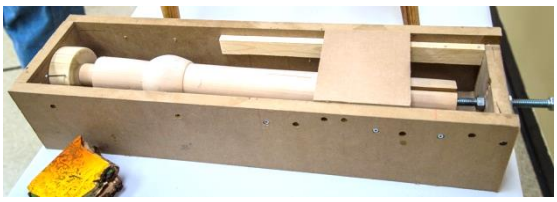
Dick Powers showed the group his ***sandpaper roll holder*** that he built from scraps to eliminate the need to purchase the cardboard one supplied by the abrasives company…and his *lasts and lasts*! The holder is made from small wooden scraps with ½" spacing dividers that are inserted between the rolls. A large diameter dowel goes through the center to pick up the holes in the rolls as well as the holes in the dividers. A couple of short wooden cleats are located on the top that allow the holder to be mounted to the underside of a shelf or cabinet.

Jim Yonkers showed his new acquisition, a **magnetic fence** that he uses when re-sawing thin stock. Jim purchased the fence for $79 on the internet and is very pleased with its ease of use and accuracy. Two switchable (on-off) magnets are mounted in the extruded aluminum fence to grip the saw's table. The fence has mounting holes to accept 2 additional magnets that can be purchased and added to the fence. You could also build your own fence and install the magnets to achieve the same effect.





Jerry Sweeney brought three different jigs, all designed to make table saw cuts safer and more accurate. He started by showing several ***push sticks*** designed to keep your fingers in the clear and minimize the potential for kickback. Some have replaceable components. He also showed a simple ***tenon cutting jig*** made from shop scraps. It allows cutting of accurate tenons for projects. Last, Jerry showed a ***cutting sled with an adjustable stop*** that he uses to cut the many pieces needed to build end grain cutting boards. The adjustable stop allows for quick and easy adjustment of the desired cutting length.



Ed Rantannen showed the jig he built to create the dovetails on the column of three-legged tables that accept sliding dovetail legs. The ***center column dovetail jig*** was made from plywood scraps that were spaced at a distance to allow free travel of Ed's router's base on the internally mounted rails. The column can be rotated to the desired positions within the jig to make the cuts. Ed uses a straight bit first to create a flat to seat the leg on and then uses the dovetail bit to cut the dovetail in the column.

Ron Frey explained the jig he uses to simplify construction of the backs on the George Nakashima benches he builds. This round ***tenon forming jig*** is made from shop scraps and allows the secure positioning of the square stock so that one end can be formed with a straight-on tenon and the other can be formed with a tenon set at a 7° angle to the stock. On one side, the jig holds the stock in a groove at a 90° angle and on the other side the groove sits at the 7° angle. Ron uses a ½" round tenon cutter bit in his drill press to make the tenons at both bends.

Greg Kubinyak brought in a several simple, but handy jigs. *[Sorry we are missing photos.]* His first one was ***router powered dowel maker***. This jig was made from a small block of hardwood that he attached to the base of a router. Two concentric holes are drill in the block. One hole has to be the exact diameter of the finished dowel, this is the "out-feed" hole. The other "in-feed" hole has to have a diameter equal to the diagonal length of the end cross section of the initial stock. The important thing is that these two holes are concentric

and they meet in the middle of the block. A third hole was drilled perpendicularly to the centerline of the "in-feed" and "out-feed" holes through the face of the block with a diameter to match the cutter bit you are going to use to form the dowel. The square stock is fed into the "in-feed" hole while being rotated with the router running. The cutter trims the excess stock from the stock and creates a rounded dowel that fits the "out-feed" hole and comes out the other side. Some adjustment of the router cutting height is necessary to get the correct size.

A ***measuring stick*** was next from Greg. This simple item was about 18" long, extending to about twice that length when opened, and had a base that had an inner sliding member that had a locking thumbscrew that could be used to lock the two pieces together. By sliding the inner section out and locking it in place, Greg could use it as a length gauge for pieces where a metal tape would not read accurately … simple, but very useful.

Greg recounted his making a simple *tic-tac-toe* marble game that involved a lot of drill press work. He showed a simple ***wooden positioning jig*** he devised that allowed him to do all his drilling on the pieces with a high degree of accuracy and repeatability. The jig worked well for mass production of multiple games.

Our last presenter, ***Charlie LaPrease*** described his recent experience changing out the tires on his bandsaw wheels. As we all know, "*necessity is the mother of invention"* and Charlie's need to install new tires on his bandsaw led to the construction of his ***bandsaw tire replacement jig***. He used a piece of scrap stock he had as a base and made an axle that he could mount the wheel on that he inserted in the base. While he could have just stretched the rubber tie onto the wheel, he also needed to be certain that the tension in the tire was uniform. He did this by inserting a stainless rod into the base and then sliding a plastic soda straw over the rod so that it could rotate on the rod. By slipping the wheel onto the axle and stretching the tire over the straw on the rod, he could equalize the tire tension by slowly rotating the wheel and allowing it to rotate on the straw. After several revolutions, the tire had reached a state of equilibrium on the wheel to allow the blade to run smoothly and true. Good thinking Charlie! 🛠