

Chuck Middleton, President
Dick Hopes, Secretary/Treasure

Officers and Directors

John Marcon, Barry Humphus Editor,
Bubba Cheramie, Brent Evans, George Kuffel

JUNE MEETING HIGHLIGHTS

Classic Doors in Iowa was our host this month and their Quality Control person and master woodworker, Robert Inman was our presenter. Classic Doors produces and average of 100 cabinet doors a day in their shop. The equipment they use can only be described as industrial. They use the latest hardware and systems for production but also use more traditional cabinet making techniques.



Classic buys thousands of feet of clear oak, poplar, mahogany, walnut, birch, HDF and other woods that get turned into first class products for their customers. Their customers range from individuals refurbishing a kitchen to major housing contractors and developers ordering thousands of cabinet doors. The typical production is between 1,000 to 2,500 doors and drawer fronts per month. They also produce fire-

place mantels and other specialty products. Classic can also provide all of the attachment hardware for the doors they produce.

One of the advantages of using Classic is that customers can select and specify their own wood from Classic's stockpile or have it customer ordered. While Classic makes industry standard doors, they can also produce doors and drawers on a custom basis.

Robert took us through the basic steps of door manufacturing. First they dimension the style and rail parts using a "smart" cutoff saw. The dimensions and type of rail and style are entered into the saw's computer. The saw then measures the stock and determines the optimal number of peices that can be had from the stock. This process substantially reduces waste. For the jointery of the doors, Classic uses a



Unique 2700 system (about \$100,000). This machine has all of the standard doors entered into the system. It then cuts the ends of the rails and styles. The old method used a series templates but this machine replaced four others and saves Classic a tremendous amount of time.

Next comes the glue up station where two operators use air jacks to assemble the parts of each door. After this, a 36" wide sander with two sanding grits smooths the assembled doors. The final production step is where each door gets its final dimension and check for quality control.

Panel construction is also automated. A panel glue up machine is used to do hundreds of panels at a time. Again, the optimizing saw is used to maximize usable stock and the peices

assembled using air jacks in a rotating rack mechanism. Before Classic acquired this unit, panels were assembled using biscuits and bar clamps. This system allows them to assemble an entire day's production run in just a few hours. The panels are dried over night prior to use.

After the panels are dry, they are taken to another Unique Systems unit to cut and sand the profile needed for the doors. Basically, this is an automated four head sander that handles several panels at a time.



Classic Doors also sells hardwood and cabinet grade plywood to contractors and individuals. They keep a large supply of the most common materials on hand in a separate warehouse.

Classic can also supply door hinges. They prefer and specialize in the European style hinge which is both easy to install and very sturdy. They have a special boring tool that accurately cuts the mounting holes for these hinges.

Once again, we thank owner Jerry Miller and foreman Robert Inman for a wonderful presentation at their business. By the way, you can get lots of cutoffs from their shop for use in the Annual Toy program. Just give Robert Inman a call at 1-888-881-6948 and he'll put some aside for you. Please visit their web site at www.classicdoors.com.



Rod Nunally and Eltee Thibodeau each brought some great scroll work to show us this month. Eltee modified his Dale Ernhart to include Eanrharts # 3 car. Rod showed off a Marilyn Monroe peice that was outstanding.

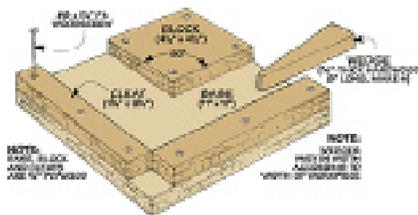


COMING UP.....

July 11, Wednesday, Starting 4:30 p.m. — Annual BBQ at the PPG Pavillion w/ food by Brent Evans. \$5.00 per personal at the door. See map and menu.

GLUING MITER JOINTS

It's a challenge gluing miter joints. There just isn't an easy way to clamp them together. The store-bought clamps don't always pull the joint together. So here's a shop-built corner clamp that uses wedges to push (or press) the mitered pieces together.



Looking at the photo and drawing, you can see that this corner clamp uses a piece of plywood for a base. Then a square block and two cleats are glued and screwed on top. What's important here is that the

inside corner of the square block is exactly 90°. Then align the inside edge of each cleat parallel with the inside edges of the block. A pair of wedges sized to fit between the workpiece and the cleat do all the work.

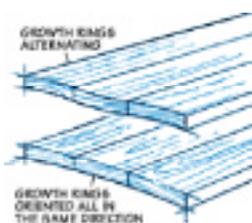
The wedges apply pressure in two directions at the same time. When the inside wedge (the one contacting the mitered piece) is tapped forward, it pushes the joint tighter together and firmly holds the piece in place while the glue dries. From *ShopNotes*.



GLUING PANELS

QUESTION: I'm getting ready to build a table. A woodworker friend told me when I glue up the top, I should alternate the orientation of the boards. Another told me it doesn't matter which way I place the boards. Who's right? Kevin Michaelson, Lawrence, KS.

ANSWER: Actually, neither of your friends is wrong. They're talking about orienting the boards so the growth rings visible in the end grain arc up on one board and down on the next, or all arc consistently in the same direction.



If you alternate the boards, your panel should remain flat across its overall width, as each board cups in the opposite direction. But the panel surface may feel wavy.

On the other hand, if you glue-up the boards with the growth rings all oriented in the same direction, the whole panel may cup in one direction. The surface remains smooth to the touch, but the entire panel may take on an arched shape.

Pay attention to the growth ring patterns, and try to alternate every other board. But pay more attention to each board's face grain appearance. If you have to, orient adjacent boards with the growth rings pointing the same way in order to get the best looking panel.

Also, make sure you apply an equal number of finish coats on both sides of the table top. This helps keep any moisture absorption or loss equal on both sides, further reducing the likelihood of warping or cupping. From *ShopNotes*.

CONTACT ADHESIVE

Contact adhesive will never replace regular yellow wood glue in the shop. But it does have its advantages. For gluing up two large surfaces it's quick and easy to use without having to worry about clamps or messy glue squeeze-out.

To apply contact adhesive, a regular paint brush is all that's needed. You can "paint" a uniform layer on one face of both pieces, see top photo. Then let it dry and apply another coat. The key is to let the second coat dry completely. If the adhesive is shiny, it's too wet.

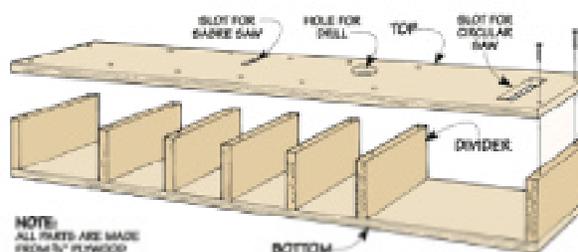
Once the surfaces are dry, the pieces can be joined together. But since the adhesive grips on contact, you'll want to use spacers between the pieces so that the workpiece can be adjusted as needed. You can lay dowels between the pieces to start with, see the photo to the right.

Then after the workpiece is where you want it, start removing the dowels from one end. Rolling the laminate down as you go will help create a good bond. From *ShopNotes*.



TOOL SHELF

Keeping power tools organized and within easy reach in your shop can be a hassle. They sometimes can be scattered around the shop or in a messy pile on your bench. To solve these problems, you can build a handy shelf. Besides providing storage, this tool shelf solves another nagging problem as well — it keeps the power cords from getting tangled up like spaghetti.



Each power cord fits in a separate compartment directly below the tool, as you can see in the photo at right. The compartments are formed by a number of dividers that are sandwiched between a top and bottom, as shown in the drawing above. The location of the dividers is determined by the amount of space each tool requires.



One last thing — not all tools will rest flat on the shelf. You can modify the top as needed by cutting slots or drilling holes for some of the tools. From *ShopNotes*.

OVERHEAD STORAGE SHELF

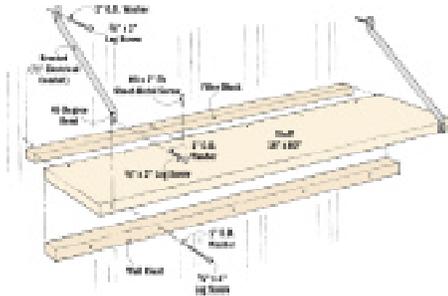
Finding extra storage space is always a problem. In the latest issue of *Workbench* magazine, you'll find five quick storage projects to help you get your entire garage in order in a single weekend. Here's one of them — a wide, lightweight overhead shelf. Besides providing plenty of storage space, the shelf below makes good use of wall space that usually goes to waste.



The shelf is made by cutting a standard hollow-core interior door in half. You can make two shelves out of one door. If you don't have a spare door lying around, you can buy one for about \$20.

To support the veneer skin of the door along the cut edge, you screw a filler block along the inside edge of the door, as shown in the drawing below. To hang the shelf, simply attach it to a cleat that's lag screwed to the wall (see detail a).

One last thing. You'll need to support the front edge of the shelf, too. Use a pair of brackets made out of 1/2" electrical conduit for this. You can crimp the ends in a vise, then screw one end to the shelf and attach the other end to a wall stud. From *WorkBench*.

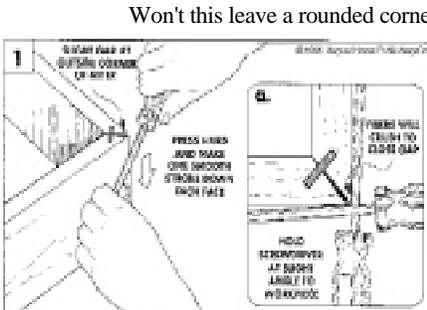


CLOSING THE GAP
No matter how many times you measure, sometimes you end up with a slight gap in an outside miter.

To close it, use this neat little trick for closing outside miters on base moldings in houses. You just "burnish" the corners to close the gap.

When the gap on an outside miter is 1/16" or less, you can roll both sides over to fill the gap. What you're really doing is crushing the wood fibers slightly. Once the fibers are pushed together, they usually stay that way.

To burnish the miter the on the base, we used a screwdriver. (A nail set with a tapered point works better on intricate moldings.) Hold the screwdriver at a slight angle to the workpiece, see Fig. 1a. Then press down hard to bend the fibers slightly as you stroke down the joint.



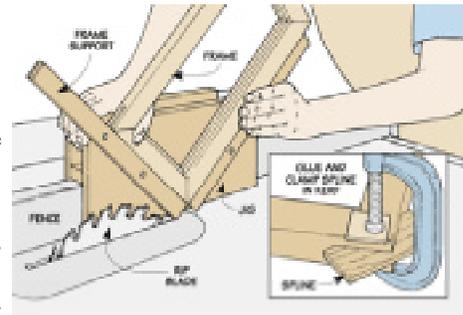
Won't this leave a rounded corner? Yes, but that's okay in most situations. Mitered corners usually end up slightly rounded after they're sanded. And, a sharp corner on a base is the first part that gets dinged up anyway. From *Woodsmith*.

SPLINED MITER JOINT

When you are gluing up a picture frame, you can "beef up" the mitered corners of the frame. To do this, you can use an open spline. This is just a thin piece of wood that's glued into a saw kerf in the mitered corner of the frame. As you can see in the photo, using a contrasting wood provides an opportunity to highlight the joint. Or you can make it nearly invisible by using the same type of wood. Either way, the spline adds a lot of glue surface that really strengthens the joint.



To cut the kerf for the spline, use a shop-made jig that straddles the rip fence on the table saw, as shown in the drawing right.



Screwing two supports to the face of the jig at a 45° angle to the blade forms a "cradle" that holds the glued-up frame securely in place. All you need to do to cut the kerf is set the frame in place and make a pass across the saw blade (use a rip blade to cut a flat-bottomed kerf).

Once the kerf is cut, you can glue in the spline. After gluing and clamping the joint (see detail), remove the excess material with a handsaw and then sand the spline flush. From *Workbench*.

SILICON BRONZE SCREWS

For many years, woodworkers have relied on solid brass woodscrews for exterior applications. They look good in the wood, but the best thing they have going for them is that they don't rust. The down side is that solid brass screws are relatively soft. So they can strip out or easily break, especially when being driven into hardwoods. Pre-drilling is required.

An alternative to common plated steelwood screws is stainless steel. Stainless steel is a chromium-alloy steel, and while not as strong as an "ordinary" steel screw, they're much stronger than solid brass.

For maximum rust resistance, there's a woodscrew preferred by boat builders — silicon bronze. These screws are made from an alloy of copper with silicon included in the mixture for additional corrosion resistance.

Silicon bronze screws are stronger than solid brass, but they're not quite as strong as common steel coated screws. However, they're plenty strong for any home outdoor project. And, they won't stain the surrounding wood over time. They are available at some hardware dealers and at any marine supply dealer. They look great with most woods.