Woodworkers Guild

of

Southwestern Michigan – http://www.woodguild.org **February 2015**

Next Meeting

Location

February 10th, 2015 7:00pm

Al Collison's Shop at
10292 Douglas Ave.

Take Douglas North to Cooper, it is 2 ½ miles North of Cooper, on the right (East) side. Or you can take 131 to D ave East to Douglas and turn left, (North). Al will have an orange cone and flashing light out to get your attention.

Agenda: The February meeting will be presented by Neal Ferguson on the topic of dying wood.

The January meeting was held at Dennis Dahl's Homestead Furniture and Cabinetry. Guild president Bill Crown opened the meeting with an introduction of the guild to visitors and guests and a brief business meeting.

Dennis began his presentation of walking us through the construction of an heirloom, four legged stool. He had our undivided attention for the next two hours. As with every undertaking Dennis has studied, refined and honed a process to consistently produce a finished product.

Dennis explained how centuries old standards applied to chairs and stools, much like cabinets and tables. Examples being base cabinets are 36" tall, tables are 30" tall, steps follow a rise/run ratio, chairs and stools for a table are 18" tall, and chairs have a 2.5° back angle. Stools and chairs for a counter are 27" tall. Stool diameter is no less than 15" and 1.5" thick.

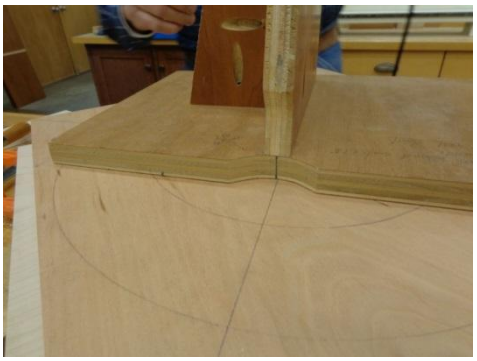
One always free to experiment with these dimensions, but centuries of history has vetted out dimensions and design that fit the human body well.

Dennis did highly recommend sticking to tried and true dimensions and “build to the final product”. Else one will find themselves “ending up with something you end up with” or “sneaking up on fit and size”

The legs are built from 2” square stock. A hard sugar maple is the material of choice as opposed to soft maple or other wood species. Again, history teaches us that certain species of wood are suitable for legs, while others are not. Cherry is an example of wood that is prized for its looks, but makes terrible legs that are just too weak. Liability issues come into play as well when building a chair or stool. Typically the legs must hold four times the max expected weigh load. Also consider that typical mortise and tenon joints are tight friction or piston fit. This is not true for the stool joints. Extra wiggle room is needed for assembly. The wedges added later will make rock solid joinery.

Dennis begins working with the seat blank. It is constructed from 16”x16” blank of cherry 1.5” thick. It will eventually be rough cut and turned to a final diameter of about 15”. On the top of the seat lines are drawn from each opposing corner to create a quad. A 9.75” diameter circle is laid out for the leg hole locations from the center of the quad. The blank is flipped and divided into quads again. A circle is added to the back to center up a temporary face plate for when the seat blank is turned on a lathe’s outboard side. Dennis explained how the blank was glued up from a single board cut into three pieces using a method of cross cutting the board to length and gluing the same edge to itself.

He went on to demonstrate how he drills the holes using a jig that he build to give the proper leg splay of 15.5°-16°. A few spacers under the seat allow the jig to be clamped in line with the quad lines. The holes are drilled from the top of the seat using a 1” brad point bit and 3/8” extension rod. Dennis has the ears of the brad point professionally ground back to prevent tear out from the drilling angle. He starts the drilling straight down at 90° to the seat and quickly leans the extension rod back onto the jig face. This helps create a slight tapered effect. After drilling through, the drill is pulled out without spinning; else the hole will get “buggered”.

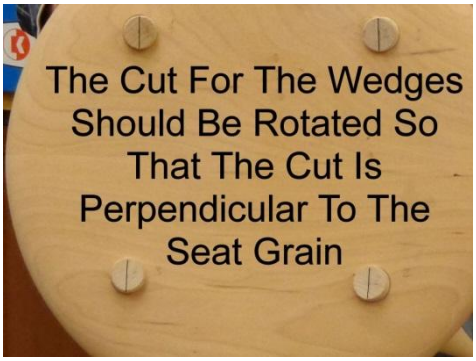


After the four holes are drilled, the seat can be rough cut round and mounted on the lathe for turning. The seat itself is dished approximately 3/8” toward the center. The outer edge is rolled beginning at the outer diameter edge of the four holes. Three beads are added to the seat edge for a traditional look. A cove is added to the bottom to give the illusion of a less thick seat. Dennis prefers to use

a Nova chuck on his lathe to hold the seat blank for turning. He also uses a lathe duplicator from a company called Vega (visit www.vegawoodworking.com). Vega woodworking is in Decatur Illinois, and makes lathes, lathe accessories and excellent aftermarket table saw fences. The duplicator allows him to turn the legs in about eight minutes each. He sands the legs with 120~150 grit while spinning and then turns off the lathe and sands at 150 grit with the grain. The tenons on the legs are test fit on a block with a hole drilled by the same bit used on the seat.

During assembly the legs are oriented such that the cathedral grain is facing out. This orientation also applies to the stretchers. A jig is used to hold the legs at the proper splay angle while the ¾" diameter stretcher holes are drilled. The sides of the jig will set the height location. The stretcher hole drill bit is also a brad point with the ear ground off. While the hole is being drilled, a little fineness is used if necessary to twist the leg to insure the hole is centered on the leg. The fit of the stretcher tenon is to be tight. The end of the tenon is eased with a slight bevel using a spokeshave. Dennis uses spokeshaves from Dave's Shaves (www.ncworkshops.com).

With the stretcher tenon holes drilled it is time for dry assembly. The excess tenon protruding from the seat can be marked and cut off with a band saw. The orientation for the wedges can be marked and cut on the band saw as well. The wedges are to be installed 90° to the grain of the seat. The wedges made from hickory, the dark heart wood gives a contrasting color. Hickory is used because it bends and does not snap. The wedges are 2" long, 1" wide, 1/8" thick tapering down to nothing. Christopher Schwartz of Popular Woodworking magazine has a couple of good YouTube videos on how to cut wood wedges. Tightbond III is the glue used on the tenons and wedges. The glue's brown color blends in well with the wood. After the glue has dried the legs can be leveled on a flat surface. The legs sharp edges are eased and a felt or sticky pad bottom can be added. A finish that Dennis likes to use on the stools is Waterlox Tung oil, buffing between coats with synthetic steel wool.



Dennis stayed after the meeting and answered questions well past 9:00. We thank him for giving us another evening of his time full of gold nuggets of knowledge and look forward to our next visit.

Guild Officers

President - Bill Crown	375-1594
Vice President - Al Collison	685-8428
Treasurer - Mike Cline	685-0535
Newsletter Ed. - Scott McDavid	544-2177
Secretary - Douglas Lynes	324-1449
Photographer – Gary Doyle	273-8035

Woodworkers Guild of S.W. Michigan

7572 S. 10th St

Kalamazoo MI 49009

Douglas & Son Inc.

Everyone's Favorite Paint & Wallpaper Store.

231 West Cedar St.
Kalamazoo MI 49007
(269) 344- 2860

J&J

Paint & Glass
Steve Klok Scott Miracle
Everything in Glass

509 East Vine St.
Kalamazoo MI 49001

Ph 269-344-2834
Fax 269-344-0378

Serving SW MI since 1954

Andy Jean's Sawmill
7616 W. Main
Oshtemo, MI

Cell 269-808-6230

Hardwood and Softwood
Professional Milling and Kiln Drying

WOODCRAFT
4265 28th St. SE
Grand Rapids, MI
616-957-9663
woodcraftmich550@sbcglobal.net
Directions
New Hwy 6 E. off 131 to M-37, N. to 28th St., Right on 28th, One mile from M-37 North
Just East of Paris Ave.
Next to Design Quest on your left.
Gary Foote, Owner

THE HERITAGE COMPANY

Architectural Salvage and Supply Buy and Sell old woodwork, doors windows and all other old house parts.

Open Wed – Sat 11-5
269-385-1004
150N. Edwards
Kalamazoo, MI 49007

S E L E C T MILLWORK COMPANY
BILL ADAMS
PRESIDENT
960
INDUSTRIAL
PARKWAY
PLAINWELL MI
49080
PH 269-685 2646