

WOODWORKERS



of Southwest Michigan

<http://www.woodguild.org> May 2018

Next meeting:

May 8th @ 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: Our speaker for May 8 will be Gerren Young who will talk about what he produces in his shop as well as do a live demo of how to make the Maloof chair joint.

The April meeting was held at Rick Hale's shop in Kalamazoo. Rick Hale is an artist & clockmaker based in Kalamazoo, Michigan. His work attempts to explore & challenge the way people feel the passage of time in the post-industrial era.



Rick Hale has reported that he sort of stumbled into clock making, but you can see he has found his passion. It started with turning the pages of a book on old clocks, and from there the love of woodworking has a spark which has fueled a fire. He recalled times with his father in the wood shop making things and the connection with wood reminds him of the time that he spent with his father as a younger man. Even though Rick's dad is no longer here with us the passion of woodworking and the skill set he passed on is living on in the world.

Ricks clocks are an example of free movement with exposed gears, and pendulum. His clocks are generally day clocks having to be wound about every 30 hours, but he is working on a lunar clock design which will tell not only the time, but the phases of the moon as well, and this clock should go about 15 days between windings.

Each Gear is individually crafted with as many as 128 individual hand cut parts. Those parts come together to make gears with as many as 120 individual teeth. The cross members of the gears are made from quarter sawn lumber making for a strong axis. The rounded tooth bearing pieces are sawn similarly to plywood.

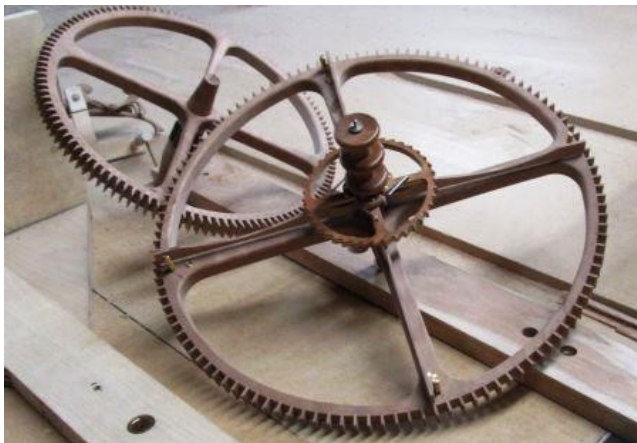


In this way expansion of the gear due to moisture or heat is minimal. Initially Rick was hand making gears with a scroll saw, and this did not go well. Later his gear grooves were made with a router beveling out the space between the teeth, and now his gears are made of several individually cut teeth that are glued into a recessed groove in a circular wheel. Rick has commented that this design is more accurate and caused less friction in the motion, which according to Rick is a time killer in in a clock, and it puts more stress on the clock overall because you have to use a larger weight to drive it. Most of the day clocks use a 60 tooth drive wheel, but with Ricks new found successful design of gear making; he is able to expand the gears to hold 120 teeth and now the clock will go for a 48 hour time frame between windings.

Lignum Vitae is Rick's lumber of choice for the small bearings he hand carves to fill the spaces and reduce friction. Lignum Vitae is self-lubricating and very hard. It is used in the drive components of aircraft carriers and for the bearings in the Hoover Dam turbines. Until recently coming across Lignum Vitae was a relatively easy task, but now with the limitations put on imports it has become a more difficult wood to source. Fortunately for Rick his lumber needs on this rare material are small.

When completed each clock can have as many as 600 to 1000 man hours, but you can see that the overall time is much greater. There was study of wood working techniques, trial and error, and Rick himself reports that he stands on the shoulders of the giants that were clock makers before him like John Harrison, maker of sea clocks of old. See more of Ricks work at

www.clockwright.com



Additionally Gerren Young was present and gave demonstrations of Barrel making.

Green door a local distiller was looking for a source for wooded barrels to age whiskey into bourbon. Gerren felt he was up for the challenge. He used his know how to hand make several time saving pieces of machinery to make cooping a less labor intensive task. Machines such as the Head cutter, Stave cutter and a new router which dados out the recess in the top of the barrel for the head to fit into neatly. Interestingly enough glue can't be used when making a barrel so all joints are press fit, and should be air tight, but minimally water tight.

The head cutter. Takes the press fitted top and bottom head and cuts them to a round shape previously these pieces of wood were press fit together, and the head cutter cuts them into a round shape.

The Stave cutter uses a blank and a special easily adjusted table to easily cut several staves in a short period of time with minimal time needed to adjust for varied degrees of angle and length.

The recessed head slot is made using a router and a special scissor lift table to hold the barrel and cut the lip inside the barrel.

The process has a few steps.

1. Cut the staves
2. Join the pieces of wood together that will become the head.
3. Cut the head round.
4. Assemble the staves so that they make the shape of a barrel and bind them together with the top and middle rings.
5. Set the roughly formed barrel over a fire and cinch in the bottom of the staves.
6. Fire the Barrel it take one minute of the barrel actually being on fire to produce the char needed for bourbon.
7. Cut the recess for the head plate.
8. Assemble the Barrel.

Currently they are able to make about 50 barrels per month using this system. They have been sold to other brewers and distillers, but ironically none to the Green Door.

Rick Hale and Gerren Young were great hosts for our April meeting. Thank you.



Woodworkers Guild of S.W. Michigan

7572 S. 10th St
Kalamazoo MI 49009

The Woodworks Guild of South West Michigan is a group of hobbyist and professional woodworkers of diverse woodworking interests that meet monthly to share knowledge and craftsmanship skills that serve the many facets of woodworking.

Meetings are held second Tuesday of each month from September through May. Meeting time is 7:00pm at a local shop or location of interest.

Annual member ship dues are \$25/year.

Find us on the web at www.woodguild.org

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Vice President - Al Collison	685-8428
Treasurer - Ted Maxon	477-2577
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