

Ada County Woodworkers Meeting

Minutes for October 11, 2023

The meeting was called to order at 6:33 PM by Treasurer Bill Johnson.

Demonstration

Ben Tyson gave a presentation on the unique hollow items he makes.

They appear to be turned, but are made by bending thin wood pieces that are edge glued together. Ben is also now incorporating CNC work.

Ben started in his 20's making lutes. He was mentored by a luthier who coached as he made his first one. The rose was made with a jeweler's saw and chisels. The staves for the bowl-shaped back were hand trimmed.

Wood globes were his first projects using the technique he talked about. Wood vases and footballs followed, and more recent projects are the hot air balloons.

Some things he likes about these bent, hollow enclosed shapes are the figure appears all around, there is efficient use of wood, and they're light weight.

How is it done?

The lutes he started with were made traditionally with an inside mold with strips added around the mold. The method he uses for his hollow forms now avoids the mold and is more flexible.

The staves come to a point at each end, and get widest at the middle according to the formula $w = 2 \times \pi \times r / n$ where w is the resulting width at any given point, r is the radius (if you take a slice through the object perpendicular to a line running from the top to the bottom), and n is the number of staves.

Pre-CNC, he computed w every 0.5" or 1" along the length of the stave and made a pattern by making a smooth curve through those points. Staves were roughed out and then smoothed. The CNC can cut them accurately enough they don't need to be cut oversize.

A project proceeds generally as follows to create the stave design:

1. Design the shape and draw it in a CAD program.
2. Determine the number of staves.
3. Draw a flat pattern of the stave in CAD.
4. Create the CNC tool path.

The staves are about 3/32" thick which is a balance between bending and errors that become more likely with thinner stock when gluing them edge-to-edge.

Most hardwoods can be bent. Ben looks for figure, and light/dark patterns that repeat. 8/4" stock is often needed.

Staves are resawn on the bandsaw then drum sanded to get a smooth finish and the right thickness. Blade selection is important. Keep track of the order in which the staves are cut so they can be glued together in the same order for best grain match. He aims for 0.085-.1" thickness after rough sanding and always cuts a few extra to allow for breakage.

After the blanks are cut, he uses a vacuum hold-down fixture on the CNC and a stop to keep position consistent.

The staves can be bent using a heating pad like instrument makers use, but spring back is a problem, so Ben uses a heated pipe and manually bends the staves to get the shape needed. You must watch for twist. With practice it takes less than 5 minutes per staff. A form of the desired shape is used to test the bent staff for the proper curve.

After bending, the edges of the staves are beveled by gently sanding using 100 grit sandpaper on a flat surface. The edge is tested against the neighboring staff for gaps. Note that the bevel changes along the length.

Staves are glued with Titebond II glue using masking tape as clamps and dried for an hour. Pairs are glued, then four, etc. to get half of the shape. The joints are typically not reinforced because it is messy. Bulges along the curve need to be minimized to reduce sanding later.

Gluing the two halves is the most difficult part due to tolerance build-up. The edges are sanded to fit and end caps are added as needed (for example – a globe on a stand). Alignment tabs staggered on both halves are sometimes used on larger items to help get the joints to align.

The last steps are sanding and finishing. Sanding needs to be done carefully to preserve the facets at the joints (so it doesn't look like a turned object) although with enough staves it could probably be sanded round. No specific finish is needed.

A football takes a couple of days, but more complex globes take weeks.

For more photos of some of Ben's creations, go to his web site: <http://baychico.com/>



Visitors & New Members

New members this month: none

Visitors: none

Treasurer's Report

Bill Johnson reported the current treasury balance is \$861.65. This does not include club income from the Star Craft Fair.

Announcements/Discussion

Christmas Party

Christmas Party information should be available at the November meeting. In the past, before Covid, we have had a joint party with the turners club and want to get back to doing that again. There should be a gift exchange. It will be held at the Presbyterian Church on Overland near the Woodcraft store. The clubs will provide meat dishes and members will be asked to provide desserts and side dishes.

Elections

November is officer election month as required by our bylaws. Nominations are open for members who want to run. Bill Johnson, Bill Nowlin, and Alan Hochhalter

side they are willing to run again. Tim Cripe was not present, so it isn't known if he will run again.

Turn for Troops

The turning event will be at Woodcraft on Saturday, Nov 11th from about 8AM to 3PM to turn and assemble pens. Coffee, snacks, and lunch will be provided.

Cars

Bill Johnson has some 2x6 lumber to make cars from.

Star Craft Fair

John Lee said it was a big show and this was the first year for crafts in addition to the juried art. The report included the following comments: There was lots of talk and not much buying which is normal for this type of event. Some attendees commented that the booth should have been in the fine art section. \$133 was donated for cars, and the sales total for both days was just under \$700. The Star event committee was very hospitable; there was free breakfast, lunch, and refreshments. John Lee said he has donated the booth used to the clubs.

Old Business

None

New Business

None

Raffle

The first item was a 3-legged stool made by Don Blasdel and won by Richard Clements. Other items were a \$10 gift card and a Woodsmith router book.

Show and Tell

Don Blasdel showed the stool he made, which was the first auction item.



John Lee had a card shoe to hold three decks of cards for the jokers wild game.



His Koa game board has CNC drilled holes and a channel for the inlay also done with a CNC. The inlay is 100 years old that was found and sold by Lee Valley about 25 years ago. It can be difficult to work with.



John Olden showed a
bandsaw box and a tic
tac toe board.



Paul
Verhage
had a carve
spoon he is
working on
and a
couple of
combs. The
Osage
orange one
broke.



He also had a box with intarsia lid and a couple of rubber band guns he made over thirty years ago.



The meeting was adjourned.

Alan Hochhalter, Secretary

Upcoming Events

Club meeting November 8, 6:30 PM at Woodcraft

2023 Officers

President – Bill Nowlin

Vice President – Tim Cripe

Treasurer – Bill Johnson

Secretary – Alan Hochhalter
Meeting Refreshments – vacant
Member-At-Large – vacant