



**Watergap Woodturners
Meeting Notes
May 1, 2024
S. Hendricks – Secretary**

It's Wednesday evening and the Club held their first meeting of the 2024 Watergap Woodturners at the Peters Valley (PV) woodshop, and it was good to get back. The shop looked as good as when we left it after spending a Friday several weeks ago giving the shop a through tune-up in preparation for PV first wood class.

Meeting attendees included (alphabetically): Steve Ackman, James Cerra, Scott Hendricks, Joe Kopec, Ed Nikles, Dave Robinson, Eric Svendsen, Mark Wallace, Rick Wortman, Larry Zarra.

Presidents Opening Comments

The meeting started with Steve providing an update on his experience at Wantage elementary school where he did a day of wood turning demonstrations for the students.

A discussion on the proposed club structure covered topics, i.e. incorporation, checking account, operating agreement, options for selling products, etc. Steve is exploring several different possibilities and will present recommendations at the executive meeting scheduled for 5/18/24 at 10:00am.

Dave shared the name tags that he made for each member. He demonstrated the Laserpecker product explaining how to set it up and then burned his name into a piece of wood.

PV will not be holding their annual craft fair at Sussex Fair grounds this year. Last year was a limited success due to the weather and subsequent poor attendee turnout.



Rick indicated that PV needs more club product to sell in their store, so the members were asked to provide product for Rick to deliver to PV.

Looking forward:

- 5/25/24 - Peters Valley Art in the Park Day, at PV, 10:00AM until 4:00PM. Club attendees include Rick, Dave, Joe, Erik, Steve, Scott
- 6/18/24 - The next club meeting will be held at PV at the regular time of 7:00pm. Matt Monaco will be presenting.
- 6/25/24 – Club meeting at PV at 7:00pm. Kimberly Winkle will be presenting.

Treasurer Report

Rick indicated that the current account balance \$813.35.

An announcement was made by Steve that Dave Robinson is the new treasure and will be taking over for Rick Wortman who has been doing an outstanding job for many years. Rick, thank you for your service.

Scott indicated that there are 5 members who have not paid their 2024 dues. Steve will be calling each member to remind them that their dues are due.

Monthly Challenge

Ed suggested making turning tools as the next monthly challenge and will bring an article on the topic to the next meeting.

Steve indicated that he has a list of challenges and will bring the list to the next meeting.

Show & Tell

Joe showed a mahogany charcuterie board with 4 accompanying bowls.

Rick shared a box containing ~40 labeled wood samples.

Dave had a ball and pepper mill that he lased.

Mark shared a walnut bowl and 4 bottle stoppers.

Erik shared an ash bowl.

Larry shared 5 small bowls out of oak and myrtle. When discussing the textured bowls he said, "If you're carving, you're not sanding".

Ed shared an ash candle holder with a accompanying candle

The projects:



Joe



Dave



Mark



Erik



Larry



Ed

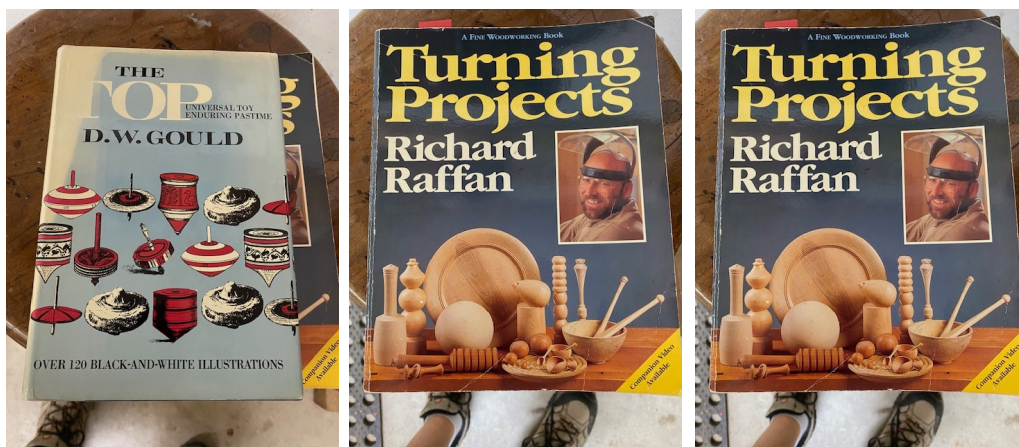
Demonstration

Larry conducted a demonstration on making tops. The attached document clearly defines all you need to know to make outstanding tops. He also shared 3 books on top making. Larry started the demonstration by very quickly turning 2 tops. One small and the second tiny. He then moved on to taking his time and explained each step in the process and the different tools he employs and how he enters the wood at each step and the methods he employs in tool control. This is covered in the attached document.

He finished the demonstration by turning a top then texturing it and coloring it. Very impressive. A great demonstration.



Larry's Demonstration



Turning Tops

Larry Zarra - larryzarra@sbcglobal.net - <https://larryzarra.com>

Abstract

In this demonstration we will employ the simple top as a vehicle for fun, creativity, and disciplined repetition of fine detail. Turning techniques include effective and efficient use of the detail gouge and 1/4" bowl gouge. Guidelines for sharpening these tools will also be covered. We will begin with basic design considerations and physical constraints. Optimal cutting techniques yield a surface requiring little sanding, and as we all know, less sanding means more fun. Variations in form, proportion, ornamentation and surface treatment allow each top to be unique. Some popular design variations will be demonstrated too.

I have been a serious part-time woodturner since 1995, and routinely turn a variety of items, ranging from very large to very small. Although I am mostly known for my large bowls and hollow vessels, I actually have turned more tops than any other object. Practicing fine detail on spin tops will provide confidence when you step up to turn an extra-thin finial, or a refined bead that compliments a special bowl. The attention to detail and very fine motor skills can open new avenues for turning, such as miniature bowls, hollow vessels and lidded boxes.

Demo 1 – Will turn one or two quick basic tops first followed by discussion on... why turn tops.

- All about practice and repetition
- Developing fine motor skills and muscle memory
- Outlet for and stimulus for creativity

Wood Selection – The most important factor is to use straight grained dry hardwood. Turning tops is strictly an endgrain project; with sidegrain, the spindle will always break. Additionally, the wood must have uniform density so that it is balanced when it spins. Dense woods spin best, and also tend to have a waxy texture, which has the added benefit of reducing friction. At home I use drops from dimensioning large vessels, cutting 1 1/2" spindles from green wood and storing them until dry and ready for use. Avoid blanks with; heartwood/sapwood contrast or other density contrast, burls, punky woods, spalted woods, green woods, and any wood that will require more than minimal sanding.

Chucking – Wood must be firmly gripped in endgrain mode in a 4 jaw self centering chuck. Be sure to tighten on both sides of chuck and test free rotation before turning the lathe switch to on.

Tool Techniques – Most basic tops are turned using the 1/4" bowl gouge and the detail gouge, alternating between tools to use each where it is most efficient.

The overall turning process is to turn the top starting at the point and ending with the spindle or optional spindle top ornament. The different parts of the basic top are; the point, lower surface, edge, upper surface, transitional element, spindle, and an optional spindle top ornament.

Demo 2 will involve turning several tops while discussing tool selection and optimal cutting techniques for each surface or part of the top.

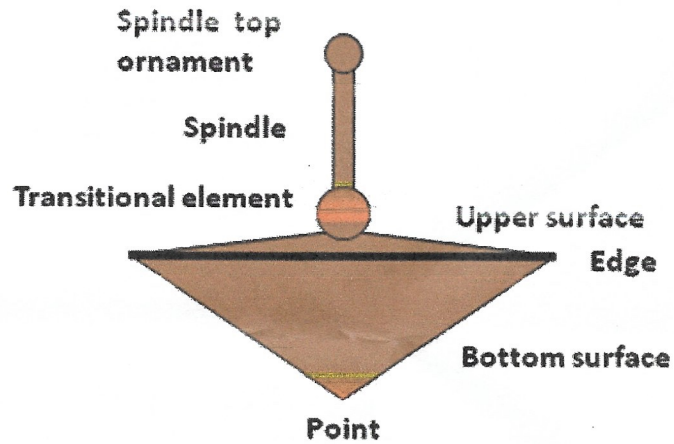
Physics (light) of spinning tops

- Here's how it starts... the snap of your fingers (torque) imparts angular momentum (spin) around the axis
- Smaller spindle diameter allows faster initial spin for given initial energy
- The top spins on axis the principal axis of rotation, which is a vertical axis through the point
- In an ideal world a top would spin forever, but two main forces act to slow the top down, these forces are friction and gravity.
- Friction is the drag or resistance that occurs at the point, where the top spins on a surface. The smoother the surface, the less friction is imparted to the spin process.
- Gravity is the force that holds the top on the spinning surface and also acts on density variables in the material making up the top. Again, in an ideal world, the center of mass and center of gravity would be the same, and the top would be perfectly balanced.
- As spin slows, variability in the center of mass or balance causes the top to wobble, or precess. As the top slows, the precession increases. Once the precession allows the bottom surface to contact the surface the top is spinning on, the angular momentum or spin dissipates very quickly.
- Denser wood is better – longer spin for same initial rotational speed
- The best spindles establish an optimum balance between spindle diameter and durability. A thinner spindle will allow faster spin to be imparted, but a too-thin spindle can snap off.
- Optimum size for most tops is around $1\frac{1}{4}$ " – $1\frac{1}{2}$ " diameter with a not too tall spindle.
- Tops larger than 2" can be hard to get spinning fast enough.
- Smaller tops ($< 1\frac{1}{2}$ ") do not spin as long (less mass) but are lots of fun.
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Demo 3

Design & Ornamentation

An optimum design keeps the center of gravity low without interfering with spin. A good spindle diameter is $\frac{1}{8}$ ". Within these guidelines, there is a lot of freedom to be creative.



I usually try to do something a bit new on every top. Surprisingly, I still get new ideas even now, many thousands of tops down the road. Here are some ideas:

Ornamentation

- Chatter designs on upper and lower surface with chatter tool; highlight with color. Need a hard, light colored wood for this. Maple is best.
- Cut a chatter pattern with a gouge
- Color with markers (Tombow, Sharpies, Prismacolor, wood stain pens)
- Color bands, blend colors, solid or contrasting colors, slow speed for spirals
- Acrylic paint, refractive paint, metallic markers (finish these with spray lacquer)
- Pyrography designs after turning; can put back in lathe (carefully) in a Jacobs chuck.
- Grind a pointy tool for scoring circles
- See what you can do with a super thin parting tool
- Holiday themes: red and green for Christmas; orange and black for Halloween, etc
- Look around, experiment... yellow and black pinstripes for bumblebees; pyrography and hand coloring for stained glass; how about sunset colors; ocean colors...

Design Options

- You can learn to cut a large variety of steps, curves, beads, coves, and other shapes with the detail gouge. It's a good time to experiment and learn new techniques.
- Mini tops are great practice.
- I make it a habit to turn a bead or other detail at the junction between upper surface and spindle. This provides structural support at the most likely breakage point and teaches you to turn small beads in tight places.
- I also make it a point to turn a bead or two at the top of most spindles, just for practice. This should be in proportion to the top and spindle and not be so large as to interfere with the spinning action. Box turners and spindle turners will find these skills to be especially helpful.
- Cone form – Upper surface incised below edge.
- Curved body
- Acorns; Martini olives, be creative!

Finish – Wipe on poly, wiping varnish, whatever is handy. Wax is optional.

The point is to have fun, be creative, and learn fine motor skills while working on small, fast projects. When you do get to working final fine details on more involved projects, you will have the skills and practice to accomplish your designs with confidence.

References:

- Cullen, M., 2008, *Tops, Making the Universal Toy*, Linden Publishing Inc., Fresno Ca., 128 p. ISBN 13:978-1-933502-17-5
- Raffan, R., 1991, *Turning Projects*, The Taunton Press, Newtown, Ct., 169p. ISBN 0-942391-38-1
- Gould, D. W., 1973, *The Top, Universal Toy, Enduring Pastime*, General Publishing Company Limited. ISBN 0-517-504162