

**LARRY ZARRA**

# Turning Tops For Fun and Profit

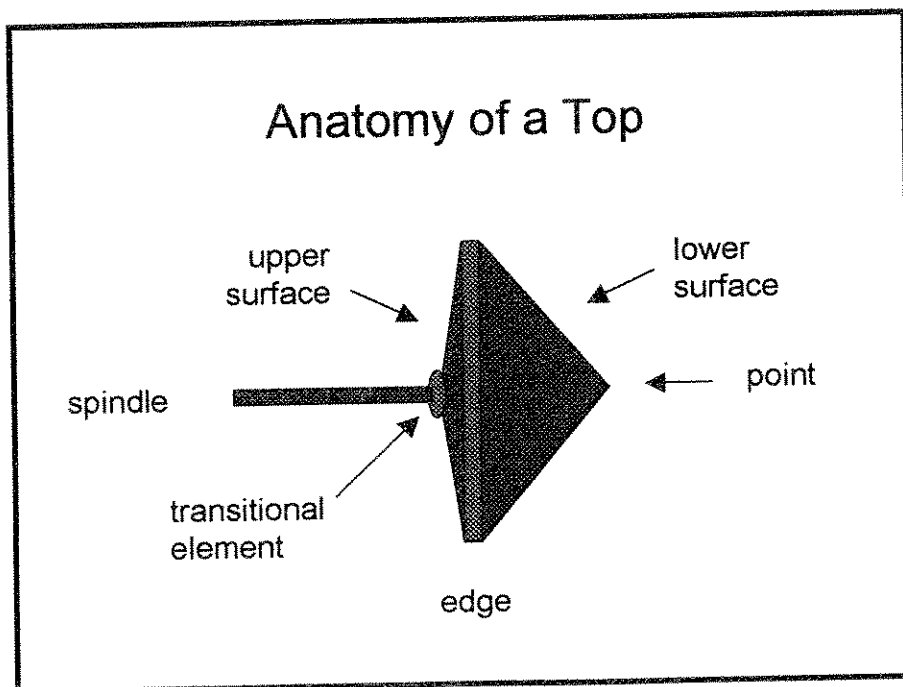
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In this demonstration we will employ the simple top as a vehicle for fun, creativity, and disciplined repetition of fine detail. Turning techniques include sharpening and mastering the detail gouge, 1/4" bowl gouge, and 1/2" skew. We will begin with design considerations and physical constraints. Optimal cutting techniques yield a surface requiring little sanding. Variations in form, proportion, ornamentation and surface treatment allow each top to be unique.

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 that special vessel. The primary "profit" is in what you learn, but marketing is also discussed.

## Demo outline

- Introduction
- Turn a few quick tops
- Basics
- Design 1
- Tools use
- Design 2
- Fun and Profit



## Basics

- This is an endgrain spindle project. The grain of the wood must be aligned with the axis of the lathe.
- Rough out short spindle –I use the ¼" bowl gouge. It is fast, sharp, and easy to use. If spindle is long (>5") or not absolutely positively firmly gripped by the chuck, use the tailstock and live center for safety.
- Shape and sand in stages – (240 & 320 grits, 180 on spindle if needed)
  - Cut lower surface and edge first, pay close attention to getting the point sharp. Make sure the edge is flat and round. Check wood for defects. Sand the lower surface
  - Cut the upper surface, and then sand the upper surface and edge.
  - Turn the transitional element and the spindle. The transitional element is a decorative feature, but also functions to strengthen the top at the point of maximum stress. Carefully sand the transitional element and spindle.
- Color is a fun option – I use permanent marker pens in a variety of colors. Sharpies are good to start with.
- Part off carefully – Use the skew or detail tool for this job. They are pointy and do not have a lot of steel where the cutting is happening, but you can see what you are doing better.
- Finish off of the lathe. The spindle will just not take a lot of torque at this stage. What to use is wide open. I use 1 coat of whatever finish I am applying to other turnings. (Wipe on Poly or Minwax Tung Oil wipe on varnish)

## Design considerations

- Shape – The shape shown above is a good starting point. There are many creative design options for shape, but it is good to honor some guidelines.
  - Keep the center of gravity low. This means that the lower surface should have a more acute angle, and the upper surface should be flatter. Tops where these proportions are reversed just do not spin as well or as long.
  - Keep the transitional element small. Make it large enough to strengthen the spindle to body transition without adding a lot of mass above the center of gravity.
  - Keep the edge thin, but not too acute or sharp.
  - Turn a thin spindle. 1/8" – 3/16" is a good target to try for. Thicker spindles are hard to get spinning fast, and thinner spindles will not be durable in all wood varieties. Too thin is a recipe for disaster.
- Size – For the basic design, 1½" is a good starting point. Tops larger than 2 inches can be hard to get moving fast enough to spin for a long time. Tops smaller than one inch may not have enough mass to spin for long.
- Wood selection –Do not use burl, soft woods, spalted wood, blanks with heartwood and sapwood together, or blanks where the grain is diagonal to the primary axis of the top. Use dry straight-grained woods. Some favorite local woods for tops are oak, mesquite, maple, crepe myrtle, and magnolia.

- Spin factors (physics) - The low center of gravity and thin spindle allow you to impart maximum rotational force (spin). For a given size and shape, a denser wood such as blackwood or cocobolo will spin longer than a low density wood such as poplar or cedar. Balance is also key...if the top has areas with different densities, the top will be out of balance, causing it to wobble and not spin very long at all.

### **Tool use and sharpening**

- 1/4" Bowl gouge - I use a sharpening jig on a grinder with a sliding support. This gives me a sharp edge with an "Ellsworth" style swept back grind.
- 3/8" Detail gouge - this is a spindle gouge made from round stock. I grind a sharp lady-finger-nail grind by hand. The bevel is convex, so there is little support for the cutting edge. The tool is kind of grabby and hard to control. On the plus side, the tip has a curved continuum of razor sharp edge that allows you to turn crisp detail, small beads, and sharp angles without effort (it's 99% control and 1% effort).
- 1/2" Skew - The skew can make very smooth planing cuts across difficult grain, and is easy to keep very sharp. This is a difficult tool for some to master. If one can master the detail gouge, real need for the skew is limited, but the detail gouge is far from foolproof. I sharpen the skew on an oilstone. Once the tool is sharp, it only needs a light hone for touch up.
- Thin parting tool - sharpen on grinder
- Chatter tool - hone cutting edge with diamond stone as needed

### **Design Options**

- Color - Color motivates buyers and captivates interest, much more than exquisite detail on plain wood. Apply color with sharpie pens with the lathe running at moderate speed. Light colored woods show off color more than darker woods. Wood stain markers are very effective too. Acrylic paints allow you to mix your own colors, and are applied with a fine brush at low lathe speeds. Experiment with your own ideas.
- Details - This is what the detail gouge is for. Practice turning beads, "V" grooves, coves, steps, different angles, and more beads. Turn details on the lower edge and on the upper edge. Practice turning steps and beads for the transitional element. Practice, practice, practice, and make each and every top different! Have fun, get good, and then get better!
- Chatter work can be successfully applied to the upper and lower surfaces of the top. Dense, very closed grain woods best. I have had good luck chattering hard maple, blackwood, cocobolo, crepe myrtle.
- Creativity- This is where you forget about production style turning, and let your thoughts run wild. Of course, actually transforming your creative ideas into finished results depends on a certain skill level that is only attained through much practice. How much...that is different for every turner.

- Here are out of the ordinary tops I have turned:
  - Multi-wood designs, dowel glued into an endgrain scrap
  - Carved with dremel or powercrafter,
  - Round body tops
  - Iridescent glitter paint
  - Hand drawn graphics and designs
  - Micro-captive ring on spindle
  - Acorn shaped tops
  - Saturn top
  - Other wild ideas...

### **Fun...**

- Tops are quick and easy to turn
- They make nice little gifts, and they are fun to give away (to kids and adults)
- If you make lots of tops with different types of turned ornamentation, you will develop a valuable set of fine motor skills that can then be applied to turning fine details on your other turning projects.

Examples of projects that can benefit from top-turning skills

- Thin finials
- Fine beads on bowls and other vessels
- Miniatures
- Details on boxes
- Better goblets and other thin spindle projects

### **...and Profit (Marketing)**

Not a stand-alone business strategy

I sell lots tops at juried arts & crafts shows

#### Cons

Break-even or loss leader item

Attracts kids, often in groups

Takes up selling time and booth space

#### Pros

A spinning top attracts people

Always a good seller

Very inexpensive original craft

Most purchased by adults, but kids do buy some too

Want more info...email me [larryzarra@sbcglobal.net](mailto:larryzarra@sbcglobal.net)