

Turning a Hollow Form



Finger Lakes Woodturners
A Chapter of
The American Association of Woodturners

Member
since 1988



Ralph Mosher 9/20/2018

Agenda

- **Tools**
- **From log to Hollow Form**
- **Preparing the blank and mounting on the lathe**
- **Turning the outside profile**
- **Hollowing Procedure**

Drilling

Removing Material

Wall thickness

- **Post Hollowing**

Holding the Hollow Form to Turn the Base

- **Finishing the foot**

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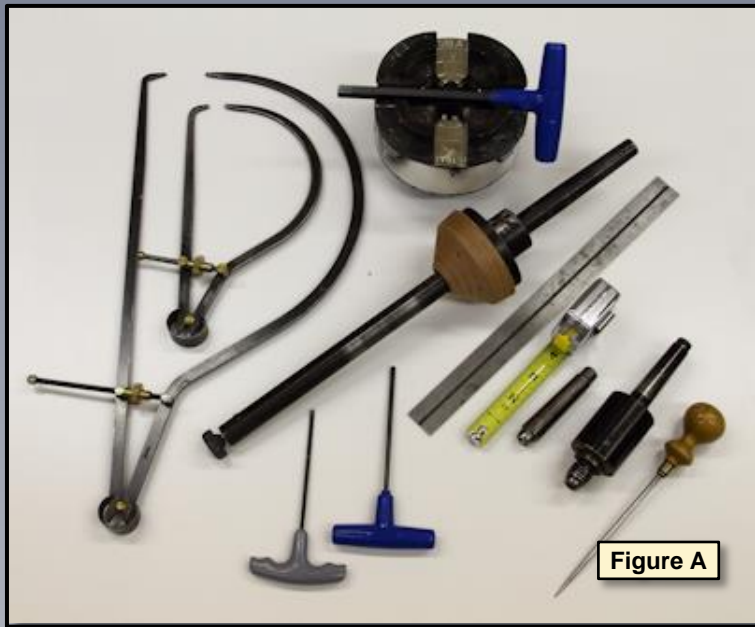


Figure A



Figure B

The tools

Figure A

- Thickness Calipers
- Wood Chucker Mandrel
- 4 Jaw Chuck
- Metal Ruler
- Measuring Tape
- Safety Drive Center
- Live Center
- Awl
- Allen Wrenches

Figure B

- Colt Maxi Cut Drill Set
- Morse Taper Adapter
- Adapter Extension
- Forstner Bit

Figure C

- Various Lathe Tools

Figure D

- Lathe

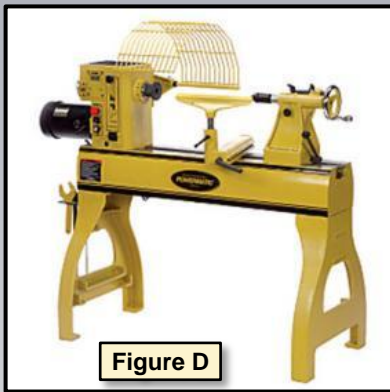


Figure D



Figure C

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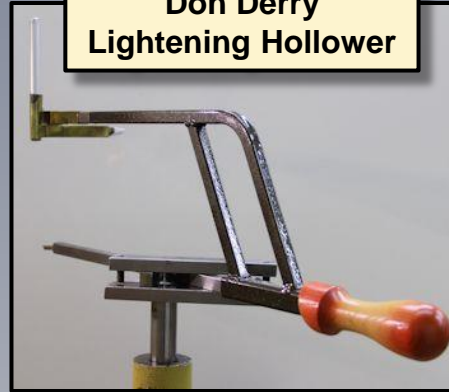


Hollowing Tools

Stewart Hollowing Tool



Don Derry
Lightening Hollower

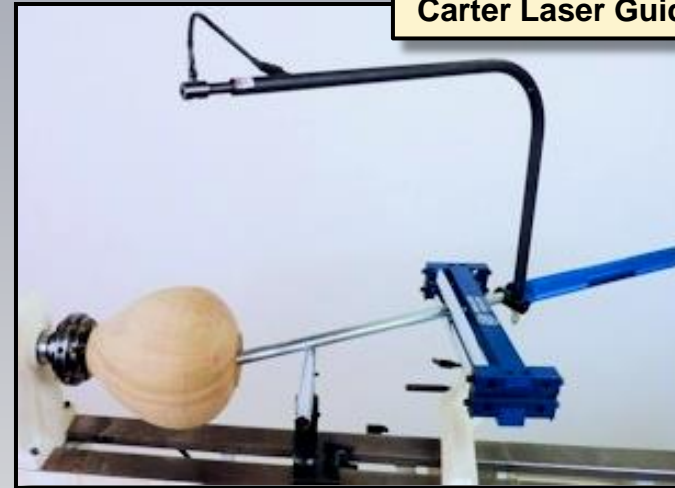


The Derry tool uses a laser to measure the wall thickness when turning a hollow form. The laser beam is set the desired wall thickness from the cutter via an X-Y positioning unit. The desired wall thickness is achieved when the laser beam is tangent to the outside wall of the hollow form.

Carter Hollow
Roller



Carter Laser Guide



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Preparing the Blank



Figure A



Figure B

Figure A
Using a chain saw cut the log in half length wise through the pith.

Figure B
After squaring ends of the half log bandsaw an end grain hollow form blank.



Figure C



Figure D

Figure C
The end grain blank.

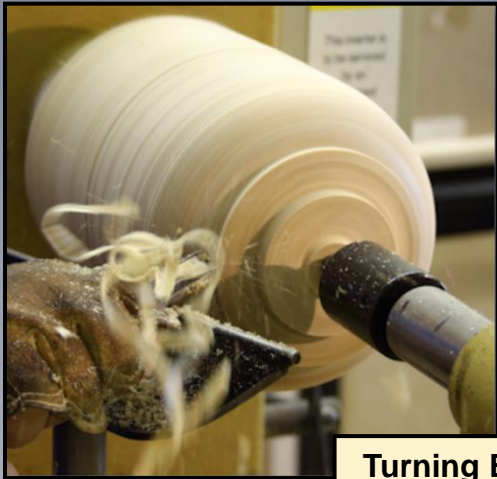
Figure D
Turn the blank to the desired maximum diameter.

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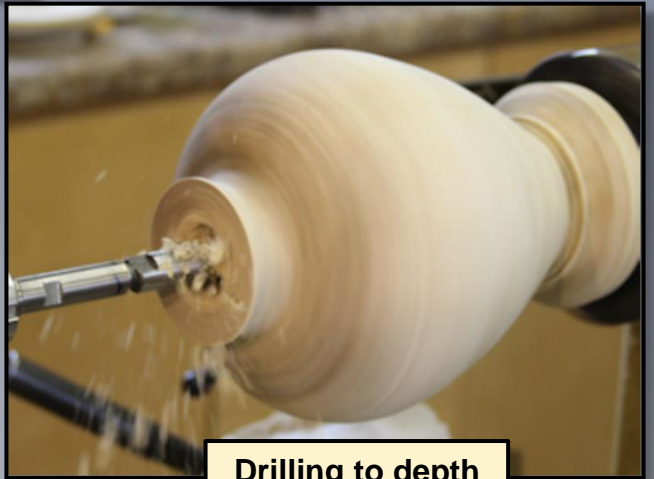
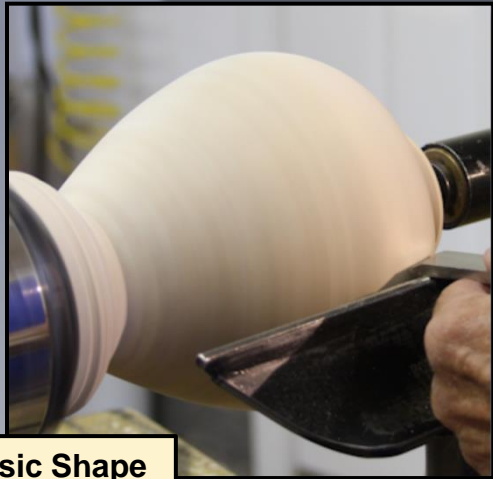


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Turning the Blank



Turning Basic Shape



Drilling to depth



Straight Hollowing Bar to Expand Initial Drilling

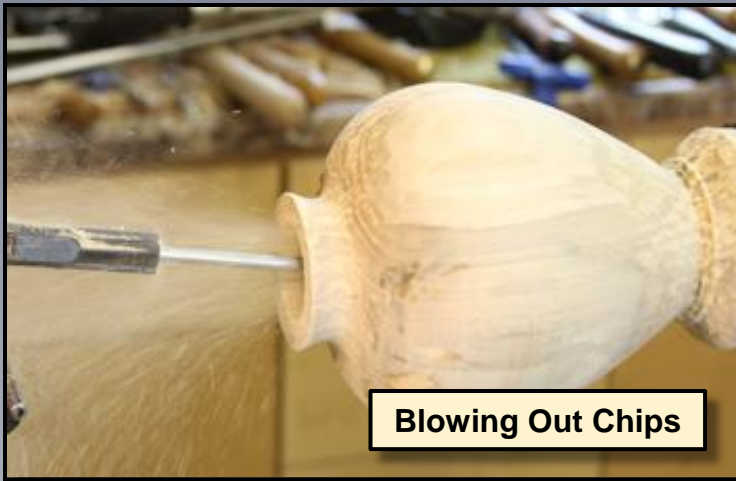


Swan Neck Hollowing Bar to Aggressively Remove Wood

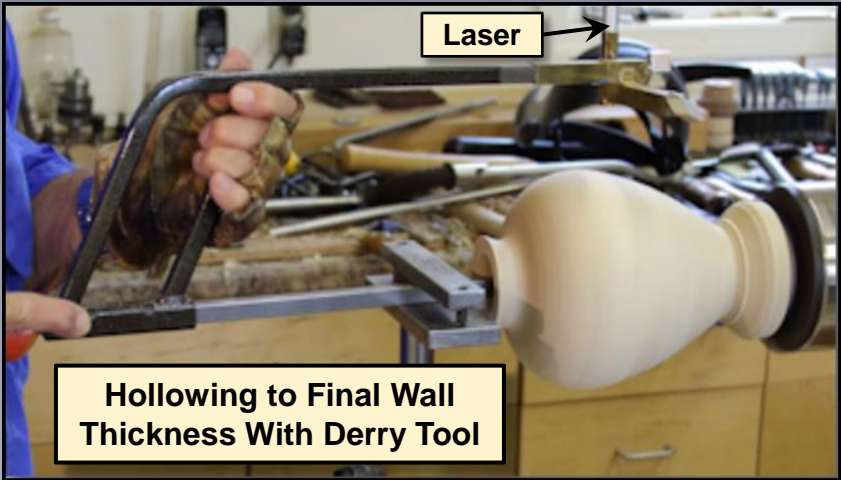
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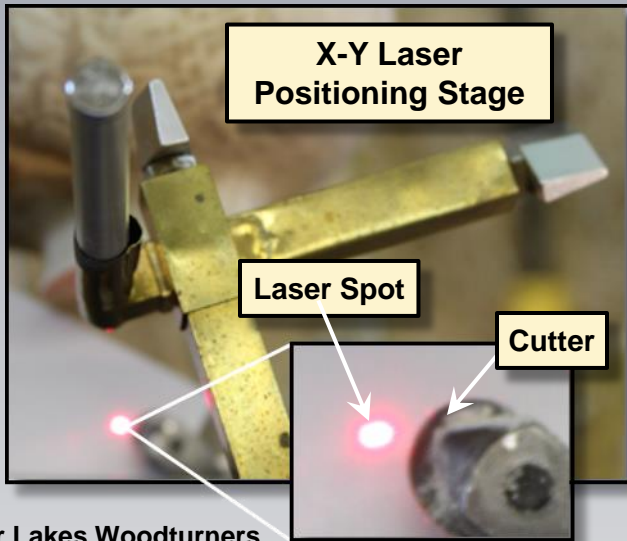
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Blowing Out Chips



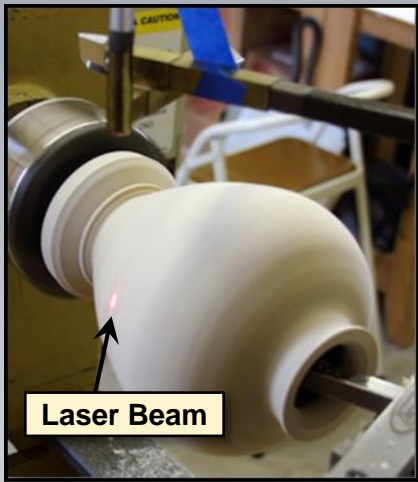
Hollowing to Final Wall Thickness With Derry Tool



X-Y Laser Positioning Stage

Laser Spot

Cutter



Laser Beam

Wall thickness is achieved when laser beam is tangent to exterior surface

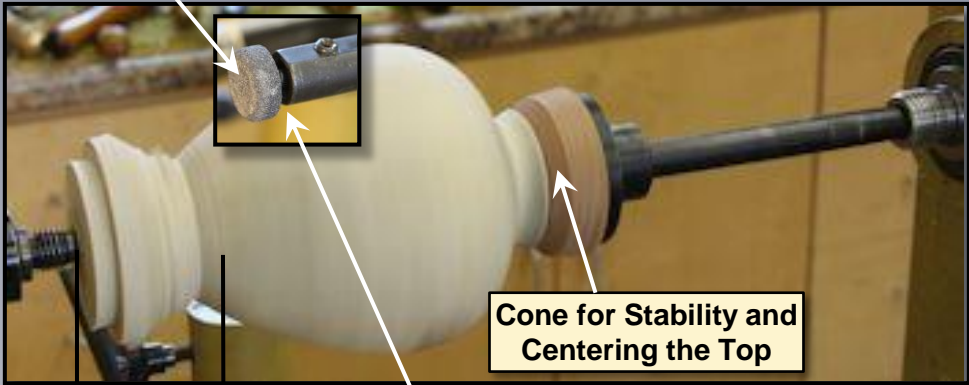
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Turning the Bottom *Wood Chuckers Mandrel*

Small Grinding Disk
for Drive Friction



Cone for Stability and
Centering the Top

Drive Pressure
Applied Between
these Points

The *Wood Chuckers Mandrel*
Provides Drive Pressure to
Finish Turning the Base
between the tail stock live
center and the inside Vase
Bottom



Finish Turning
the Vase Bottom



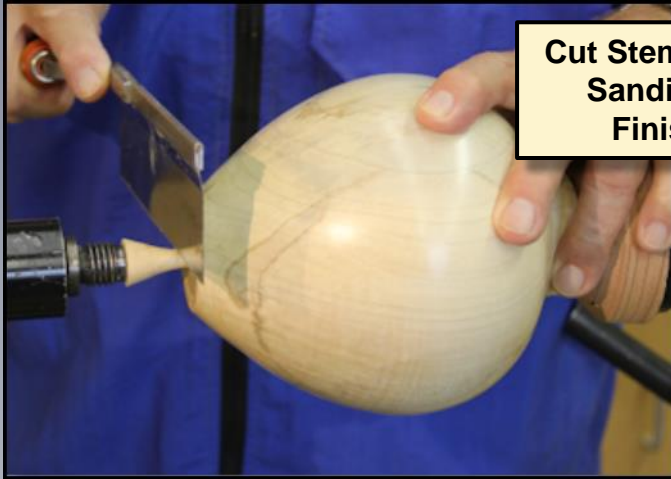
Leave a Stem for
Remounting
Between Centers
to Sand

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Removing the Stem



Cut Stem Off After
Sanding and
Finishing



Power Sand or
Chisel Remaining
Stem to Finish
Bottom

Completed Hollow Form



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