The Bell Woodturner's

and the

Welcome you to this event.

Don Geiger

2014 Demo Series:

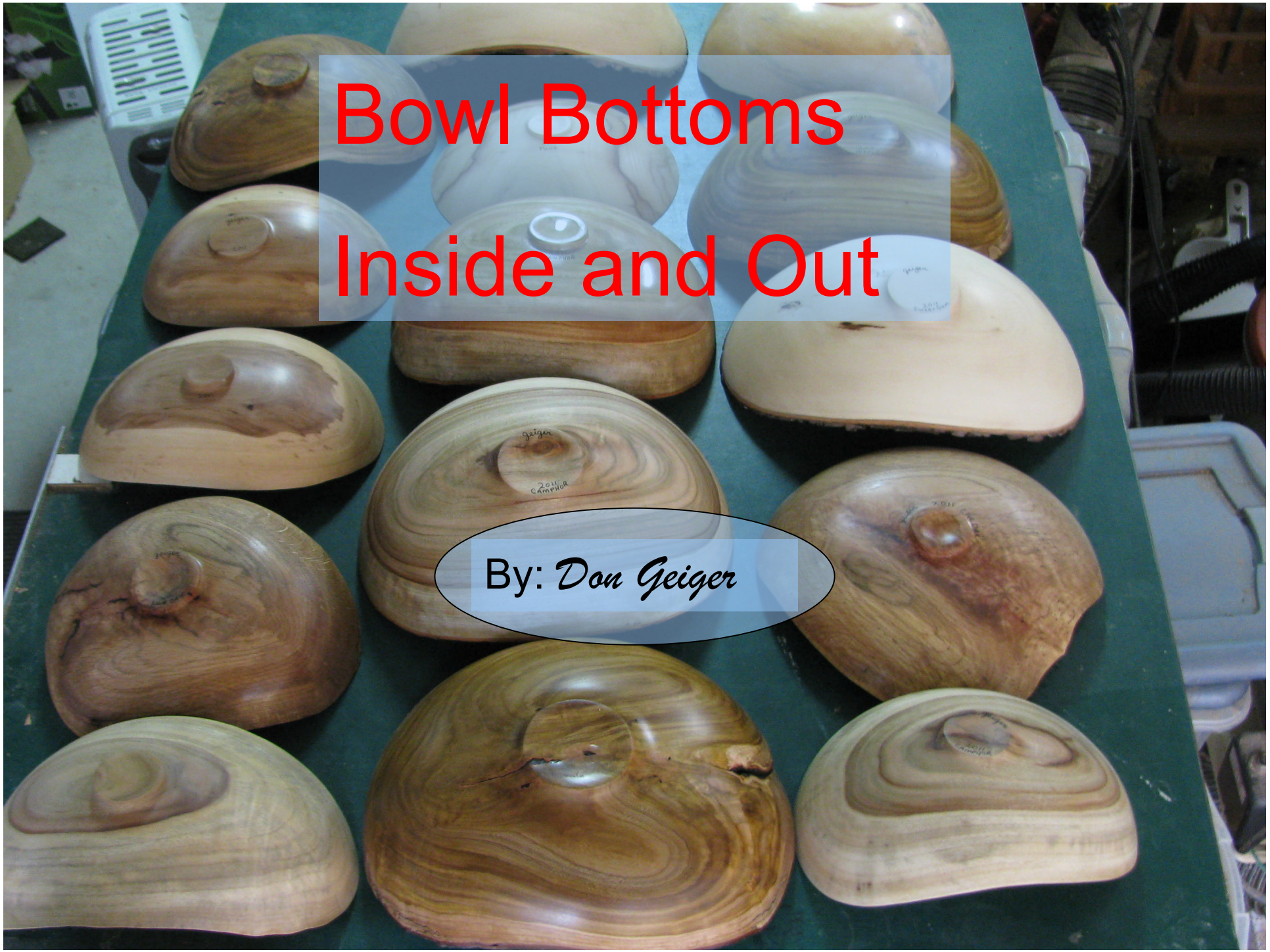
- **Mastering the Side-Ground Bowl Gouge**
- **Tuning Up a Grinder and Sharpening**
- **Turning an Odd Wobbler**
- **Turning a Hollow Form**
- **Bowl Bottoms Inside and Out**

Don Geiger © 2014

Notes about safety:

Warning! Turning wood and tool sharpening can be a serious health hazard!

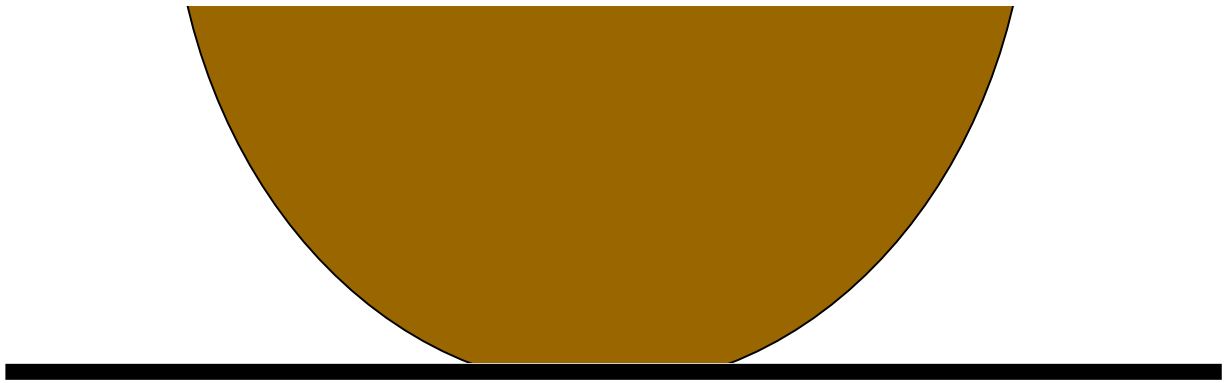
- Protect your face and eyes with a face shield.
- Protect your respiratory system and ventilate your work area with a proper dust collection system.
- Don’t wear loose clothing or jewelry. Tie up long hair.
- Remove all moldy and spalted wood and shavings immediately.
- Protect your skin from toxic materials. Be aware that some woods may cause serious allergic reactions.
- Work sober- never under the influence of drugs or alcohol.
- Be sure that factory guards are installed properly on grinders.
- Never sharpen tools on the side of grinding wheels and never dress the sides of the wheels.


Bowl Bottoms
Inside and Out
By: Don Geiger

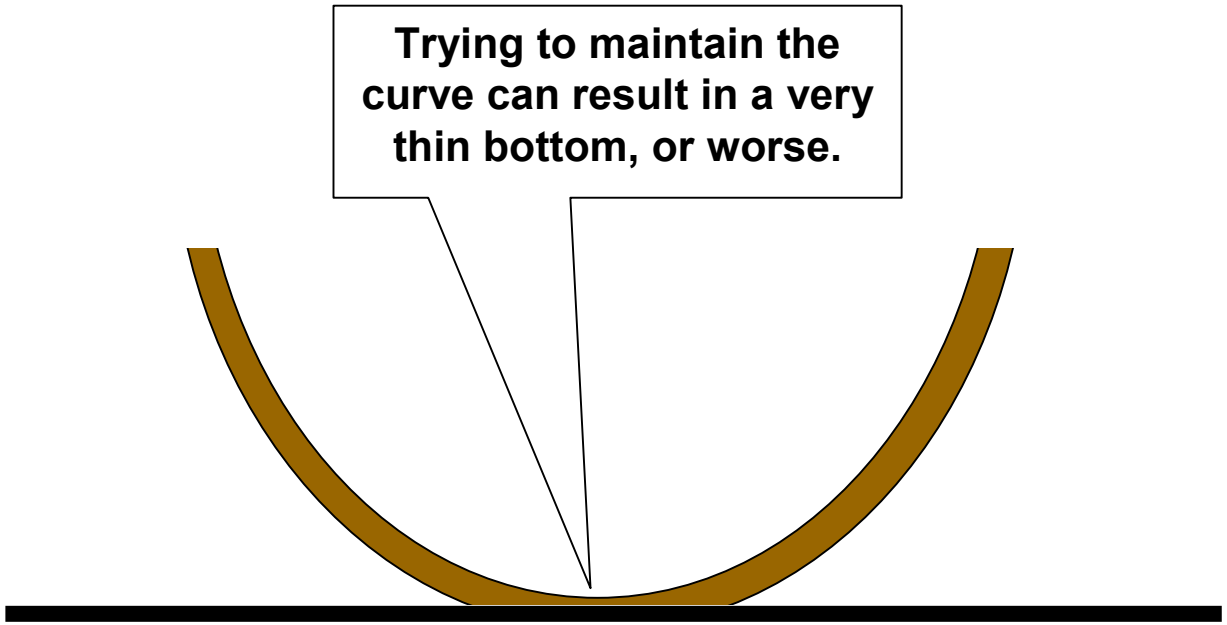
Nut bowl

Don Geiger ©

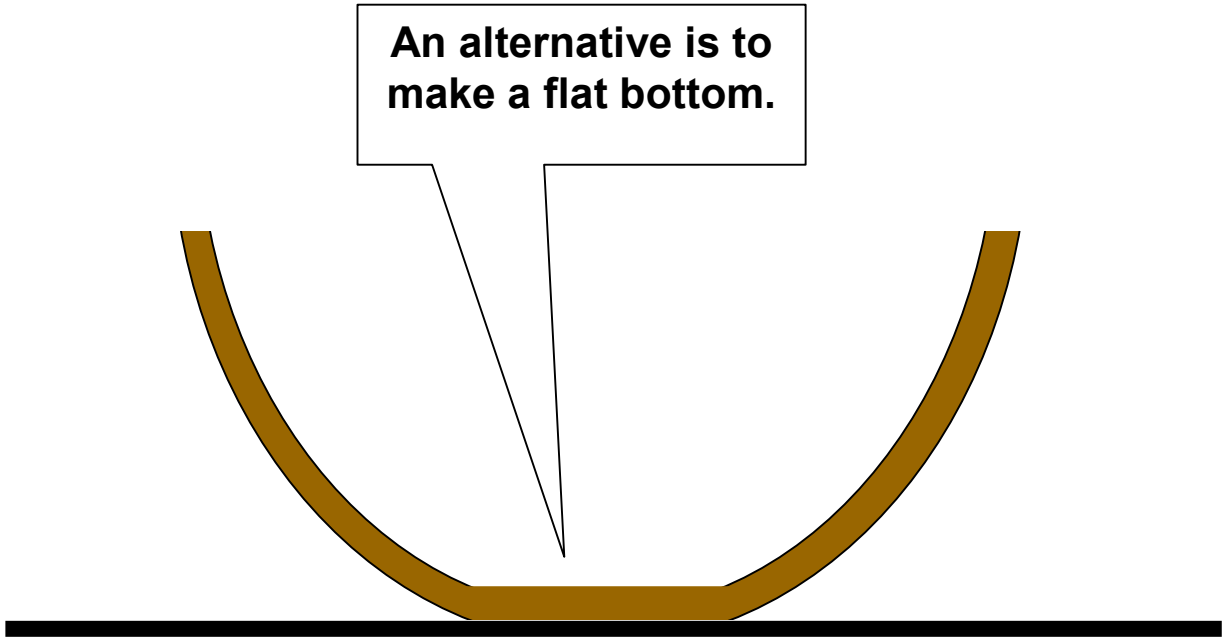
Don Geiger ©



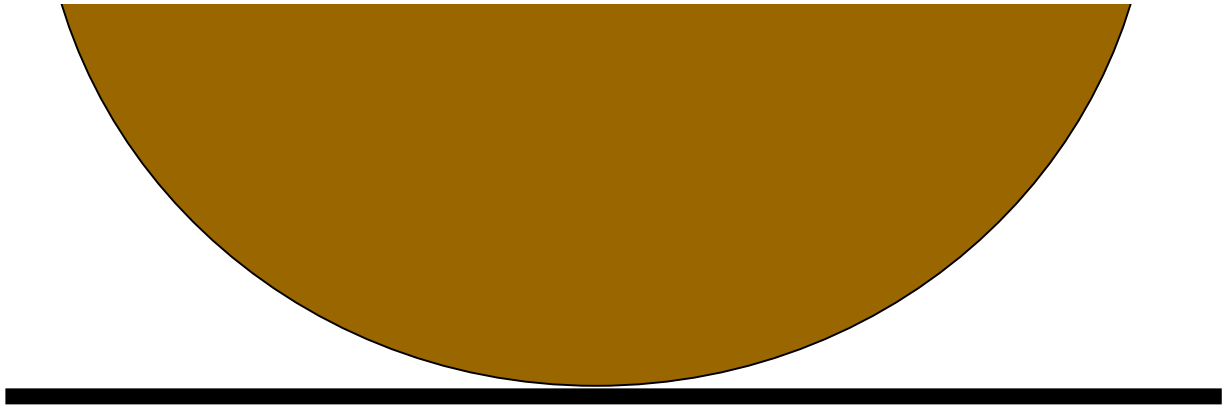
Don Geiger ©


Trying to maintain the curve can result in a very thin bottom, or worse.

Don Geiger ©

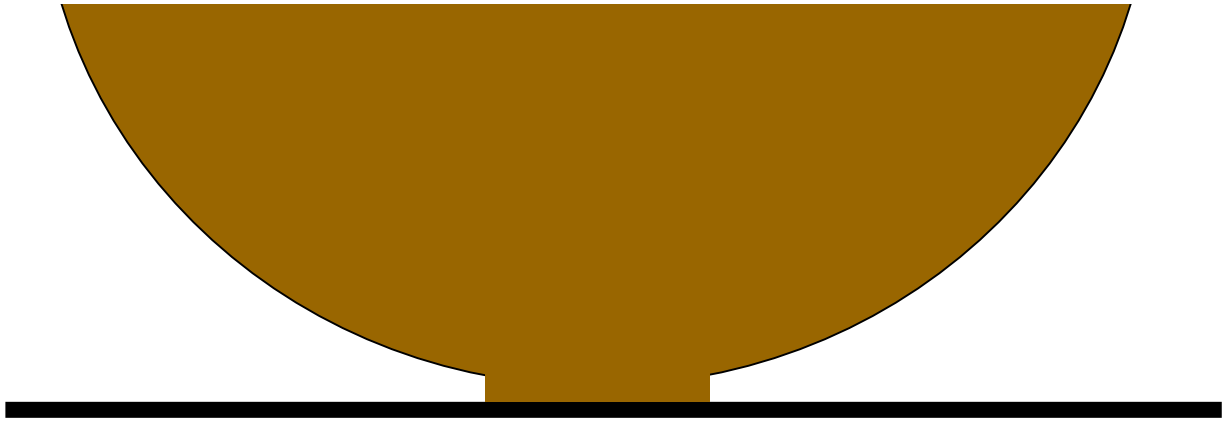


Don Geiger ©

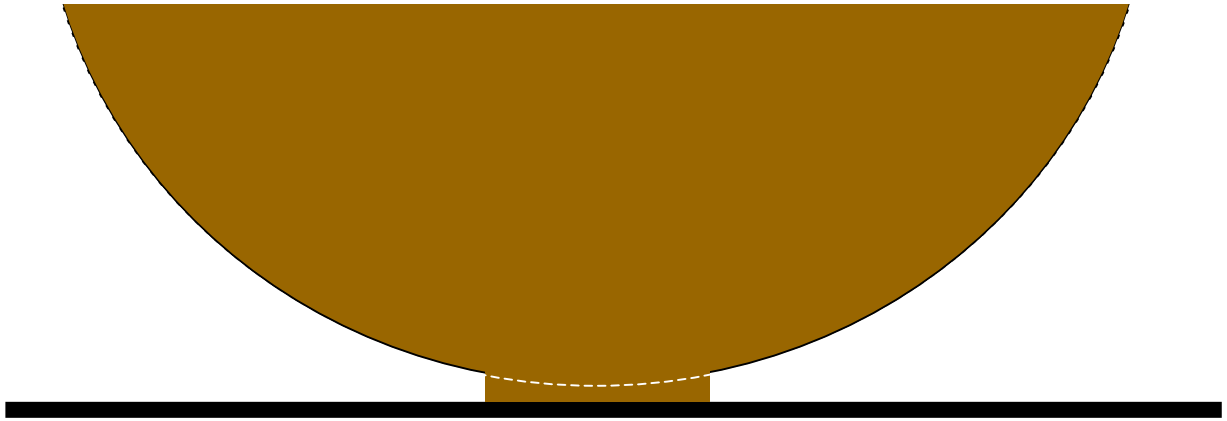


Don Geiger ©

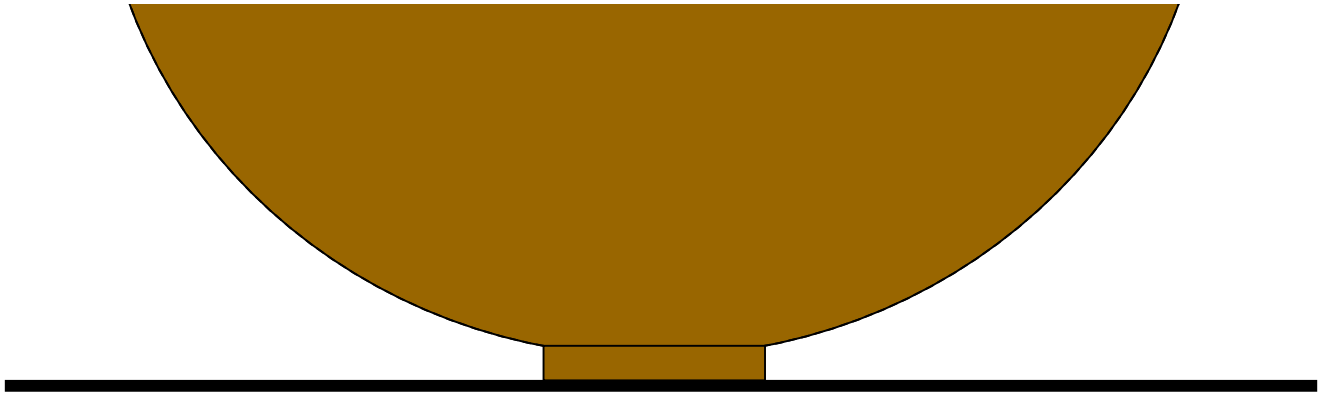
Don Geiger ©



Don Geiger ©



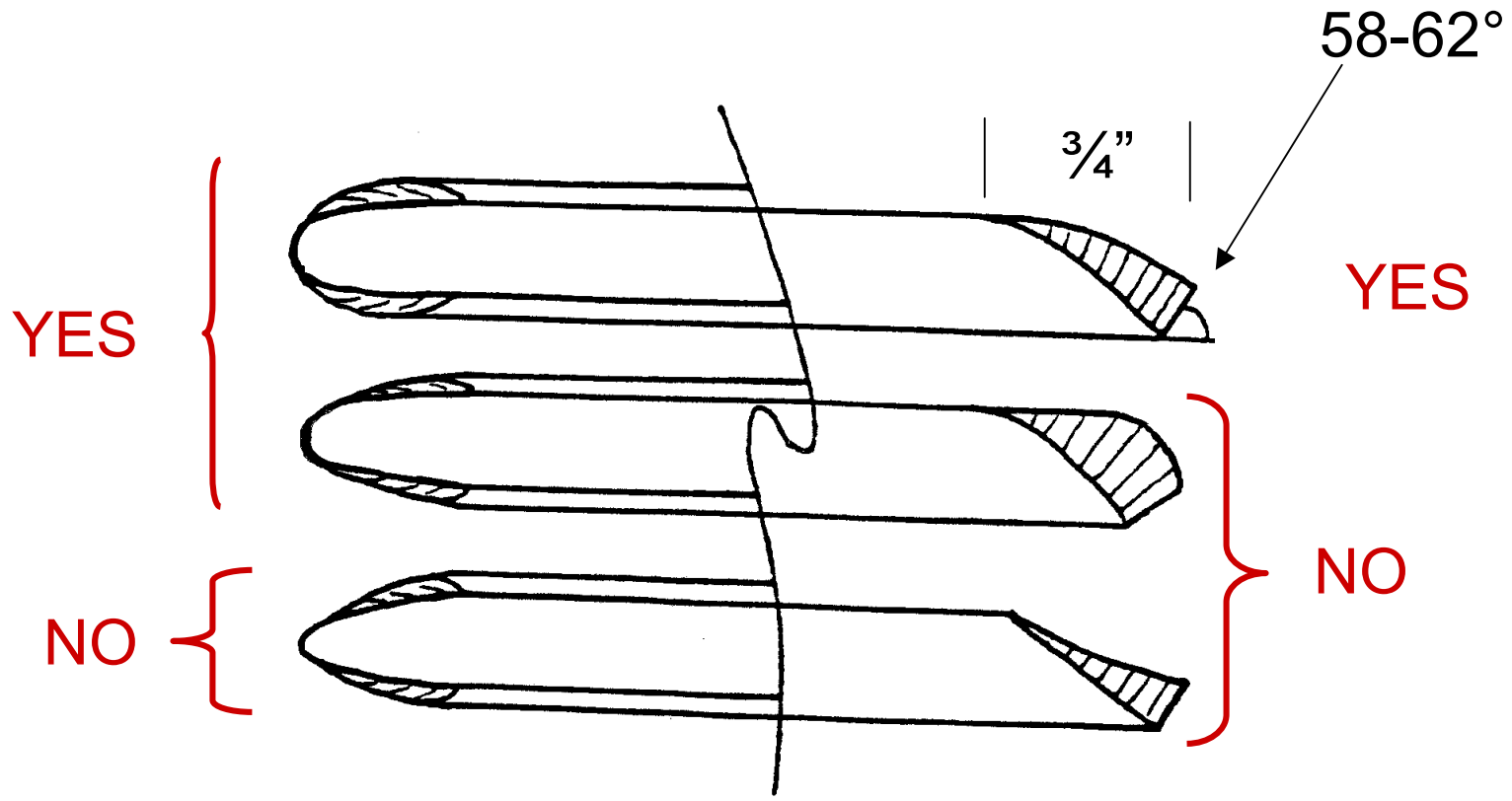
Don Geiger ©



Don Geiger ©

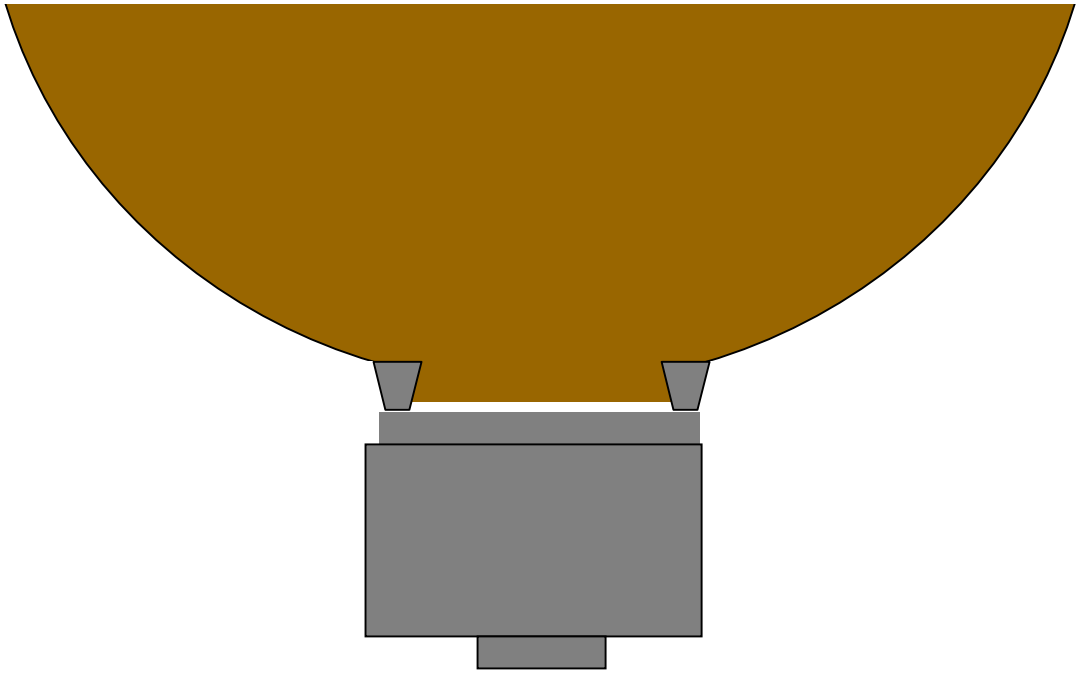
Side-Ground Bowl Gouge

Desired Shape

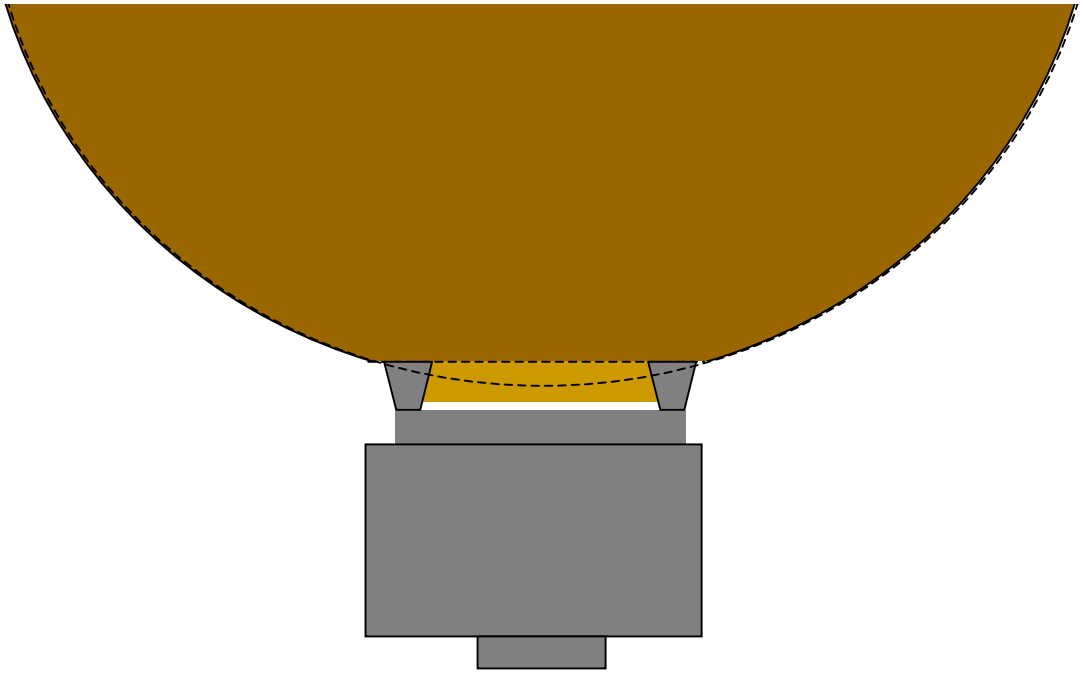


Enhancements by: Don Geiger

Drawing by:
David Ellsworth

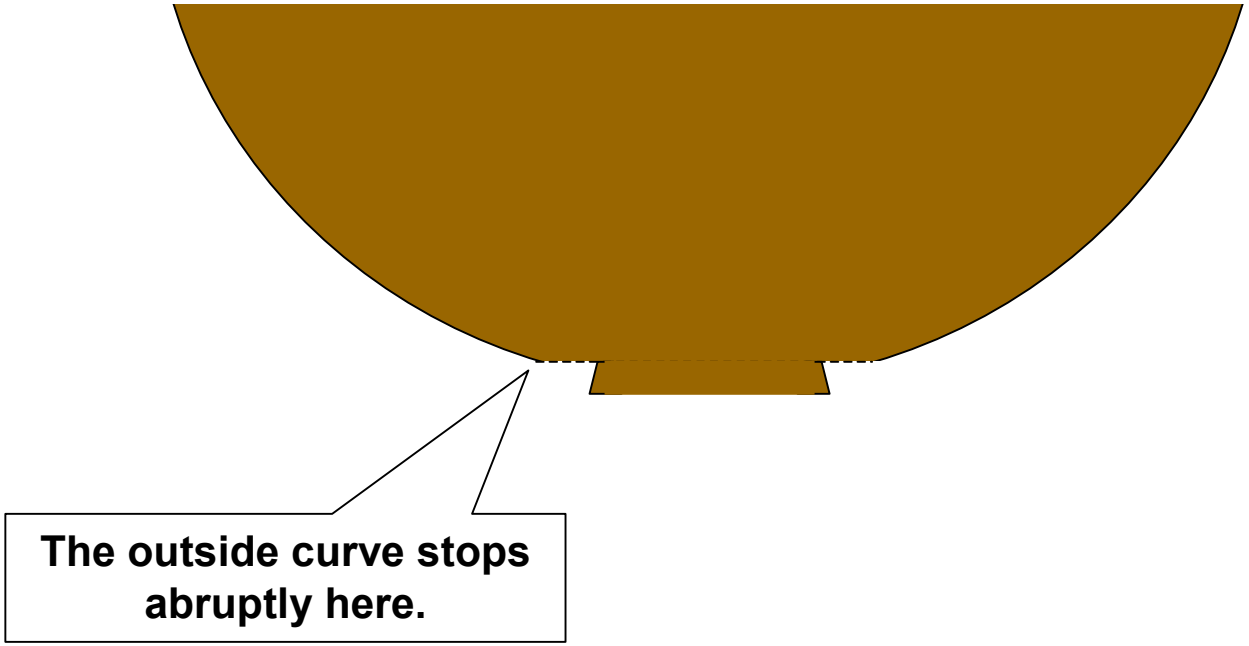


Don Geiger ©



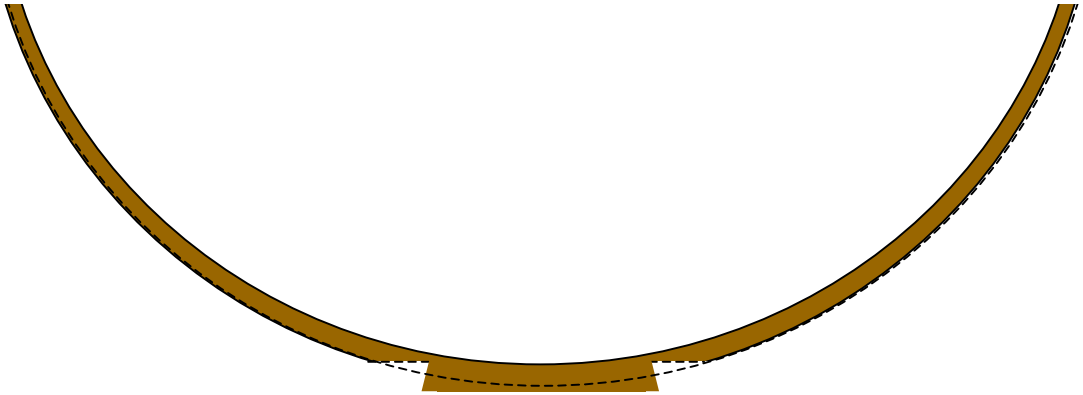
Don Geiger ©

With the chuck removed:



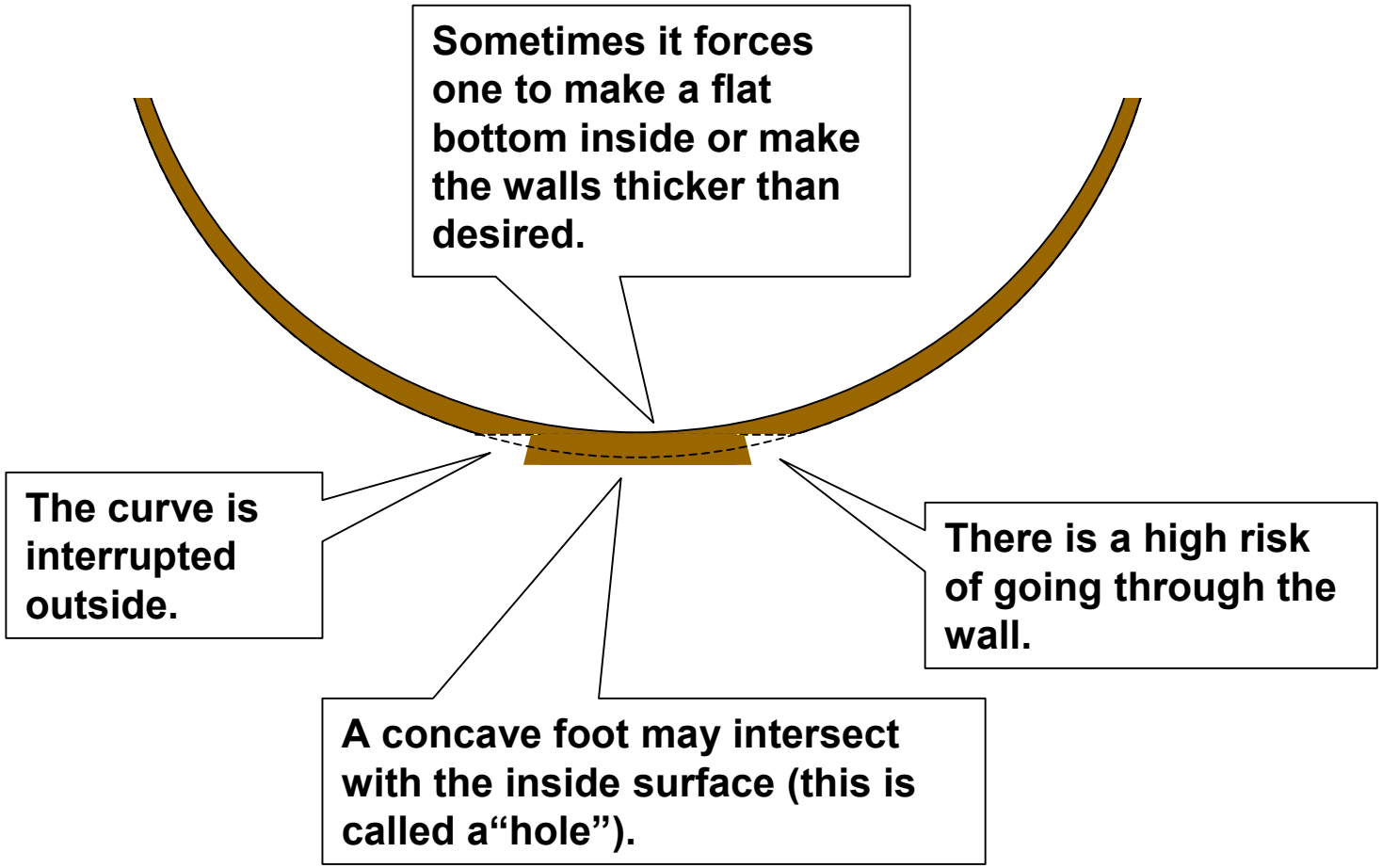
Don Geiger ©

With the chuck removed:



Don Geiger ©

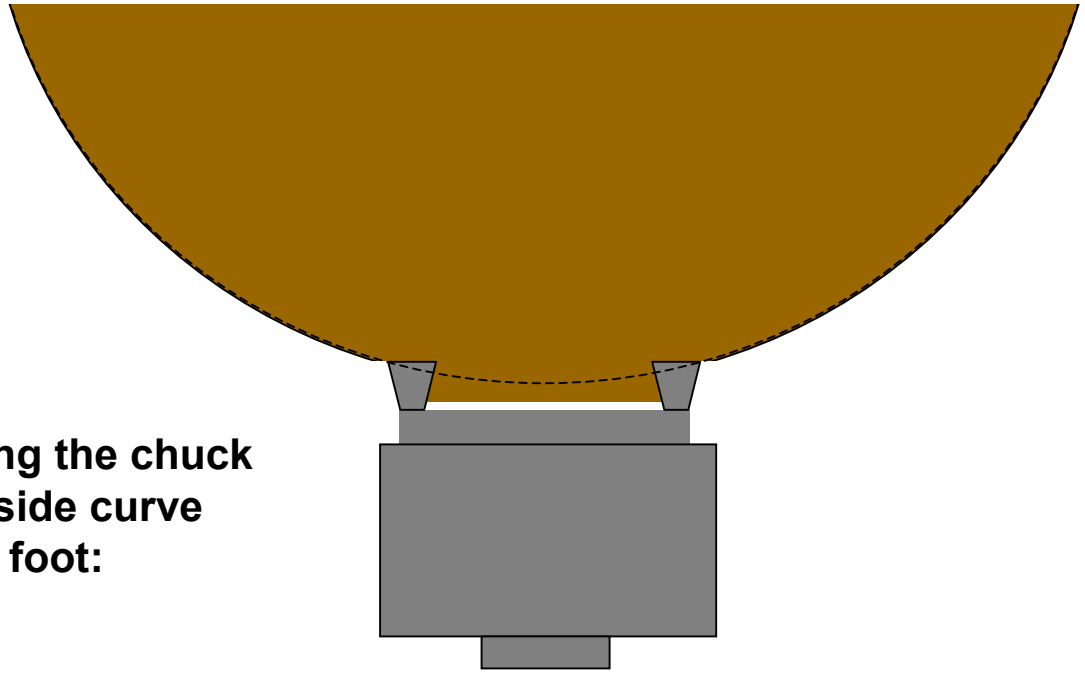
Potential Problems



Don Geiger ©

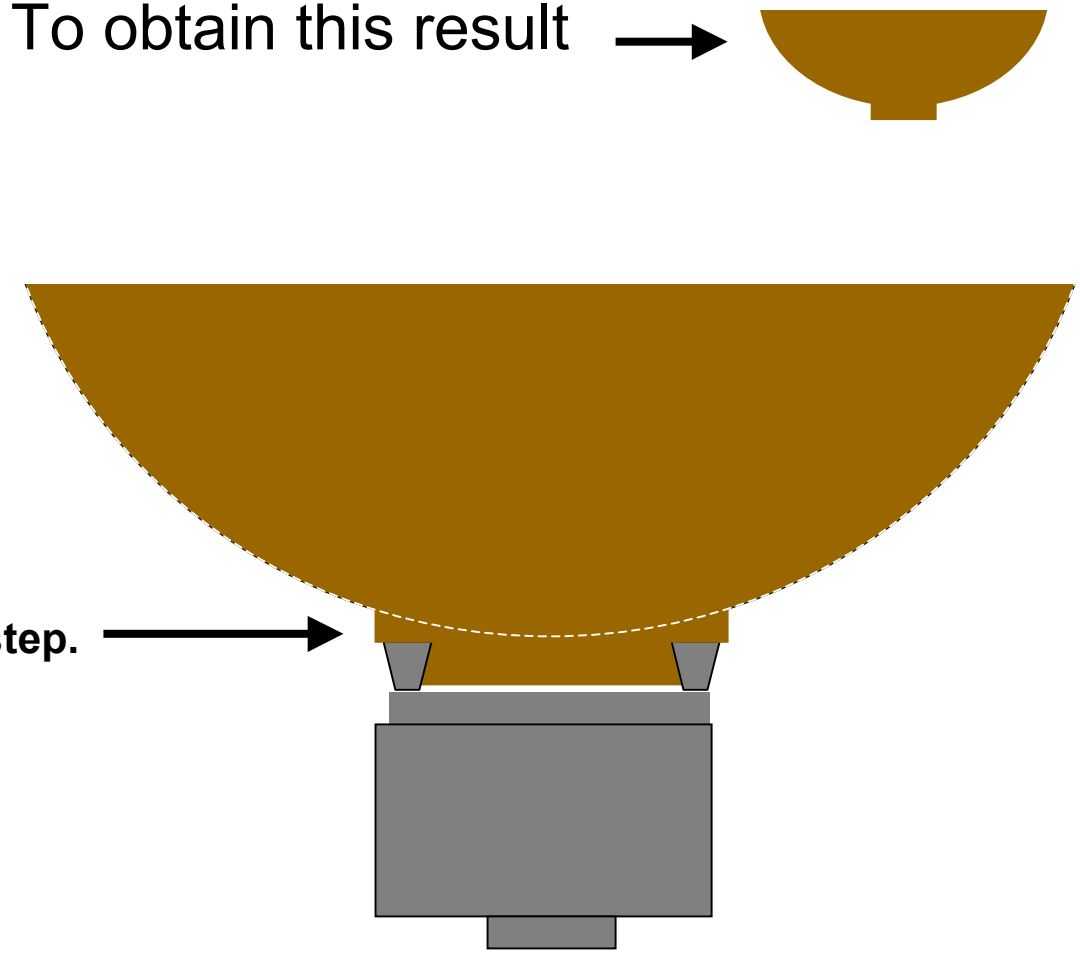
Don Geiger ©

Instead of letting the chuck dictate the outside curve and size of the foot:

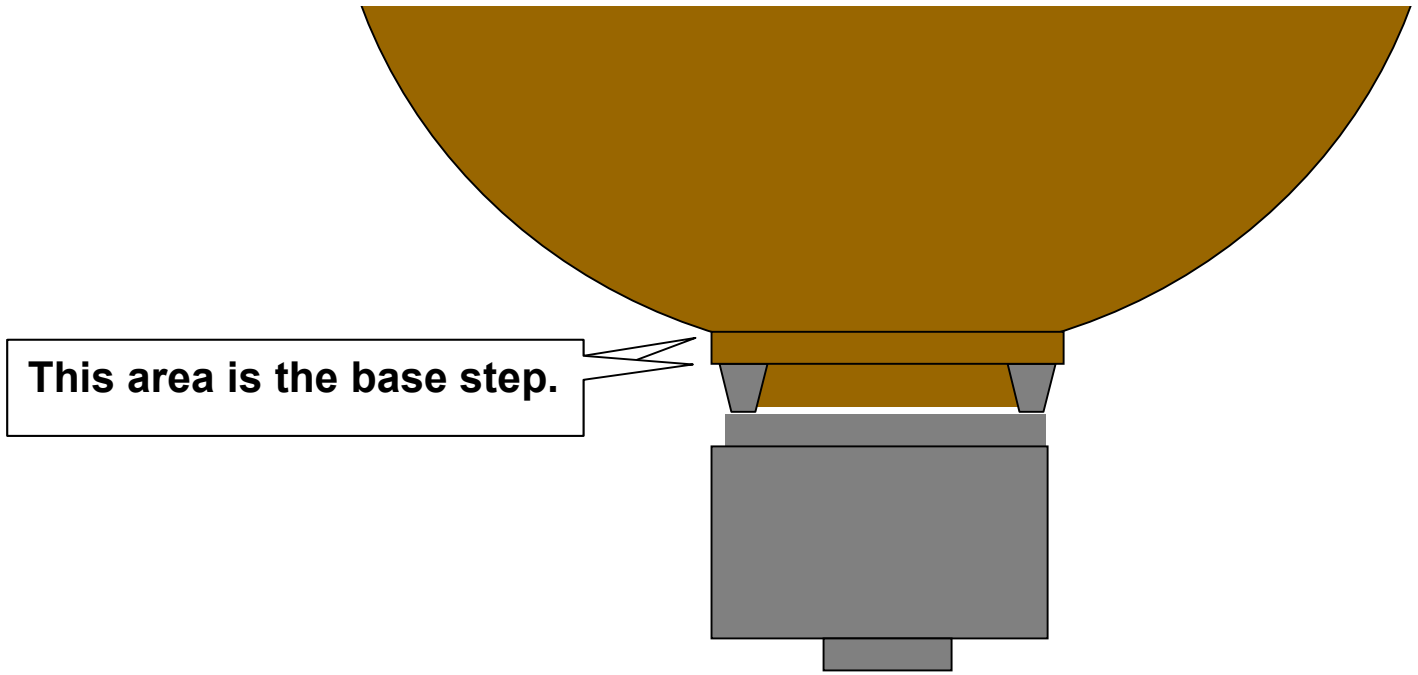


Don Geiger ©

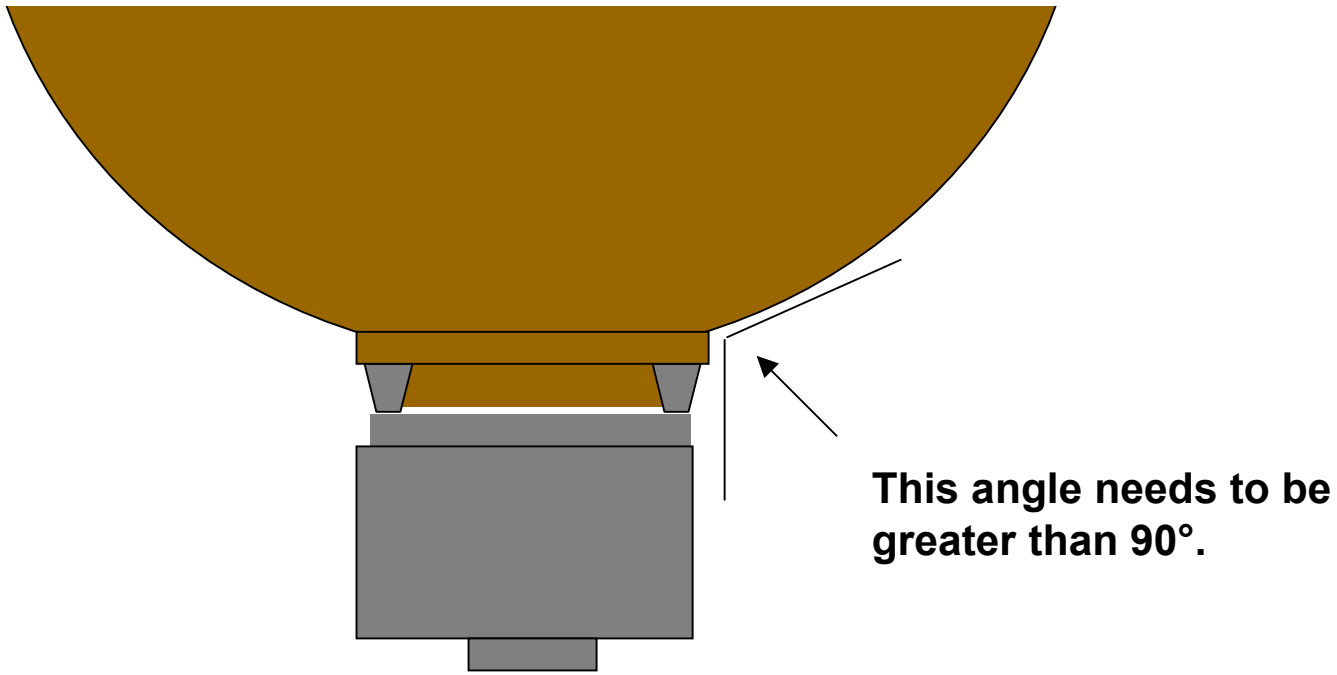
To obtain this result →



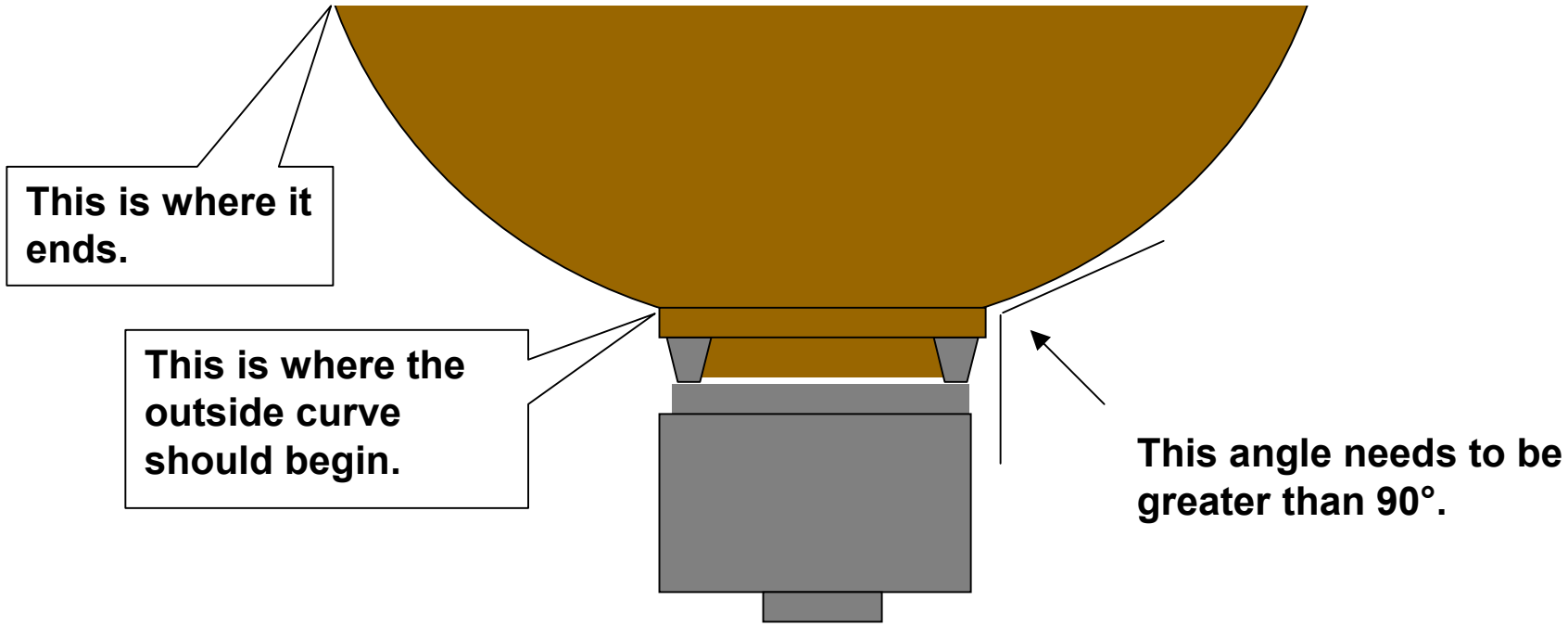
Don Geiger ©



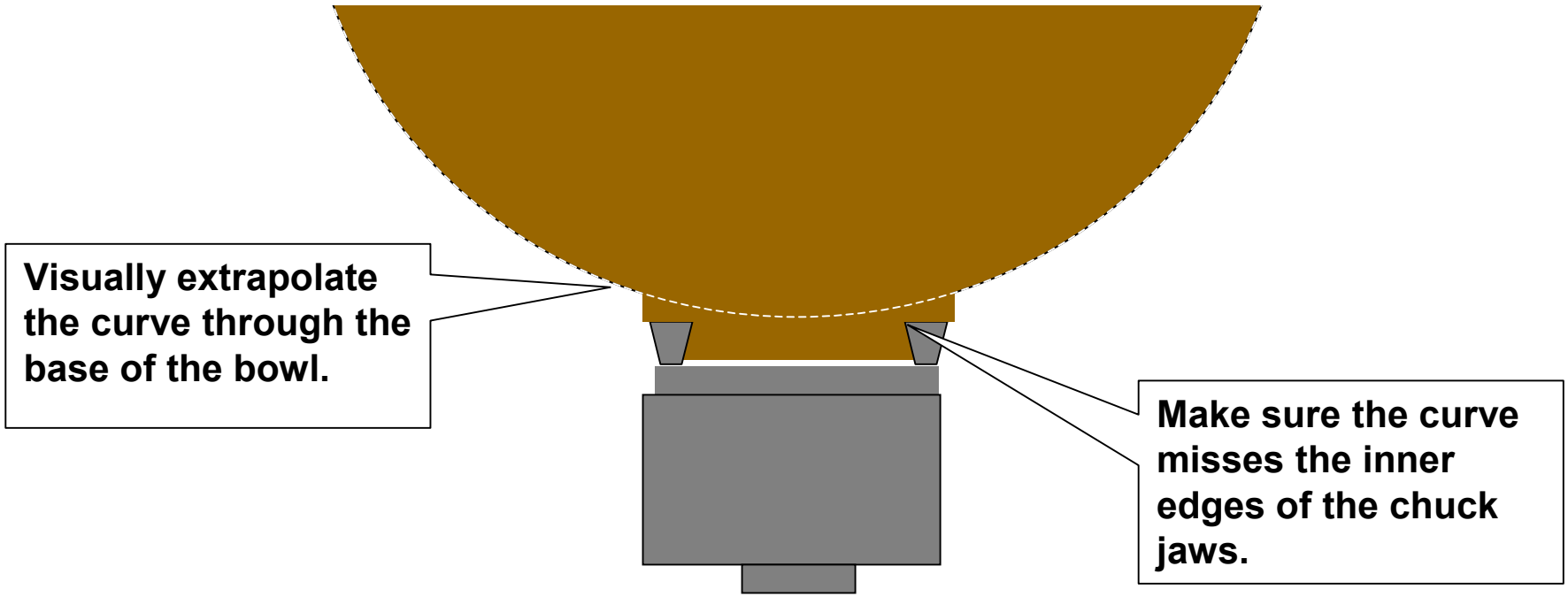
Don Geiger ©



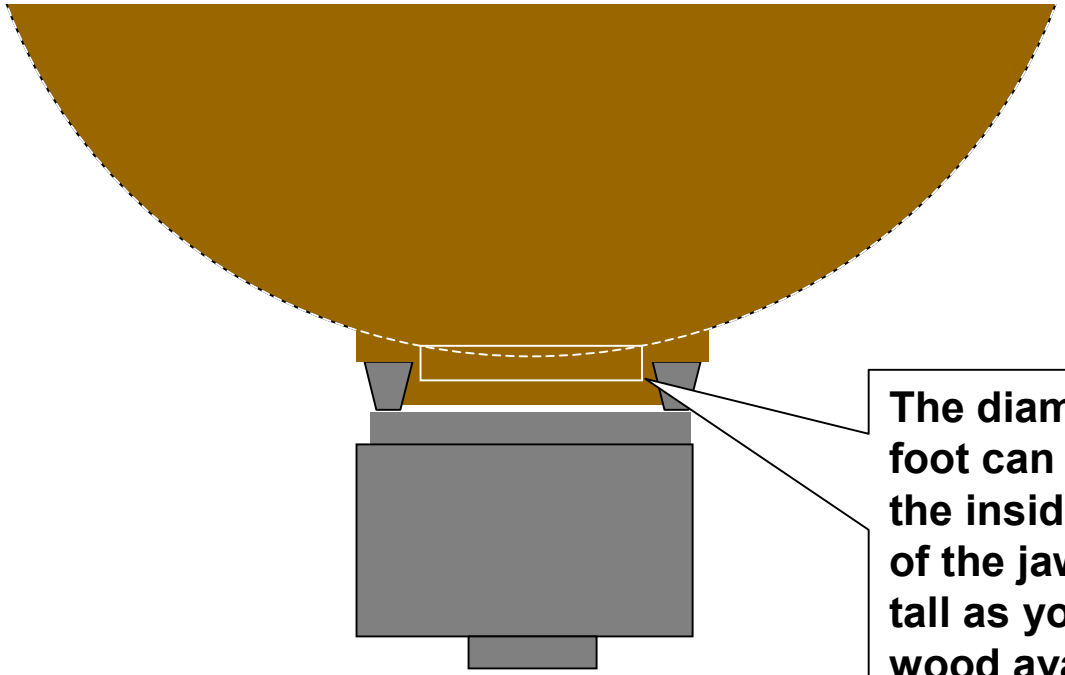
Don Geiger ©


This is where it ends.
This is where the outside curve should begin.
This angle needs to be greater than 90°.

Don Geiger ©

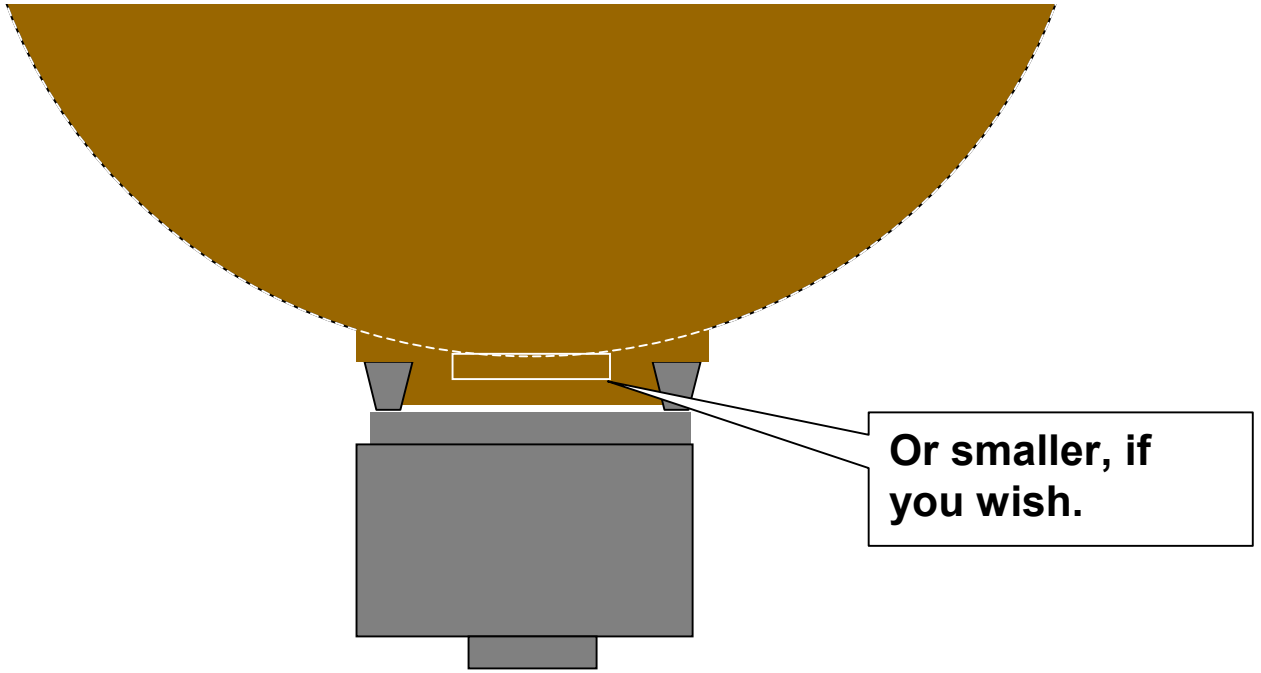

Visually extrapolate the curve through the base of the bowl.
Make sure the curve misses the inner edges of the chuck jaws.

Don Geiger ©



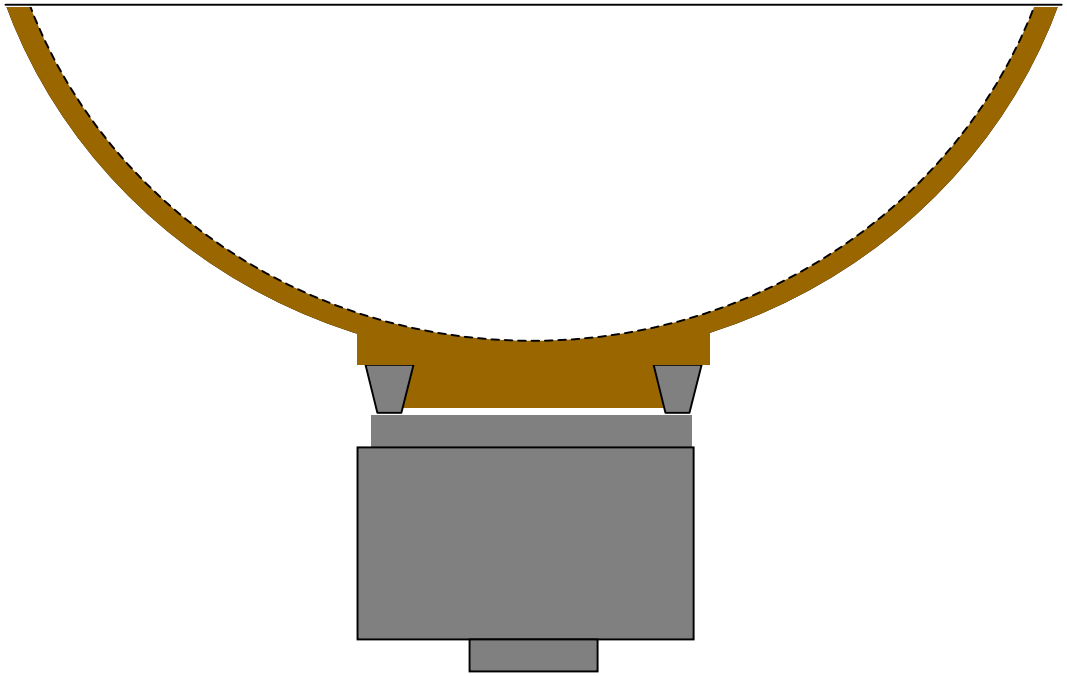
The diameter of the foot can be as big as the inside diameter of the jaws and as tall as you have wood available to you.

Don Geiger ©



Don Geiger ©

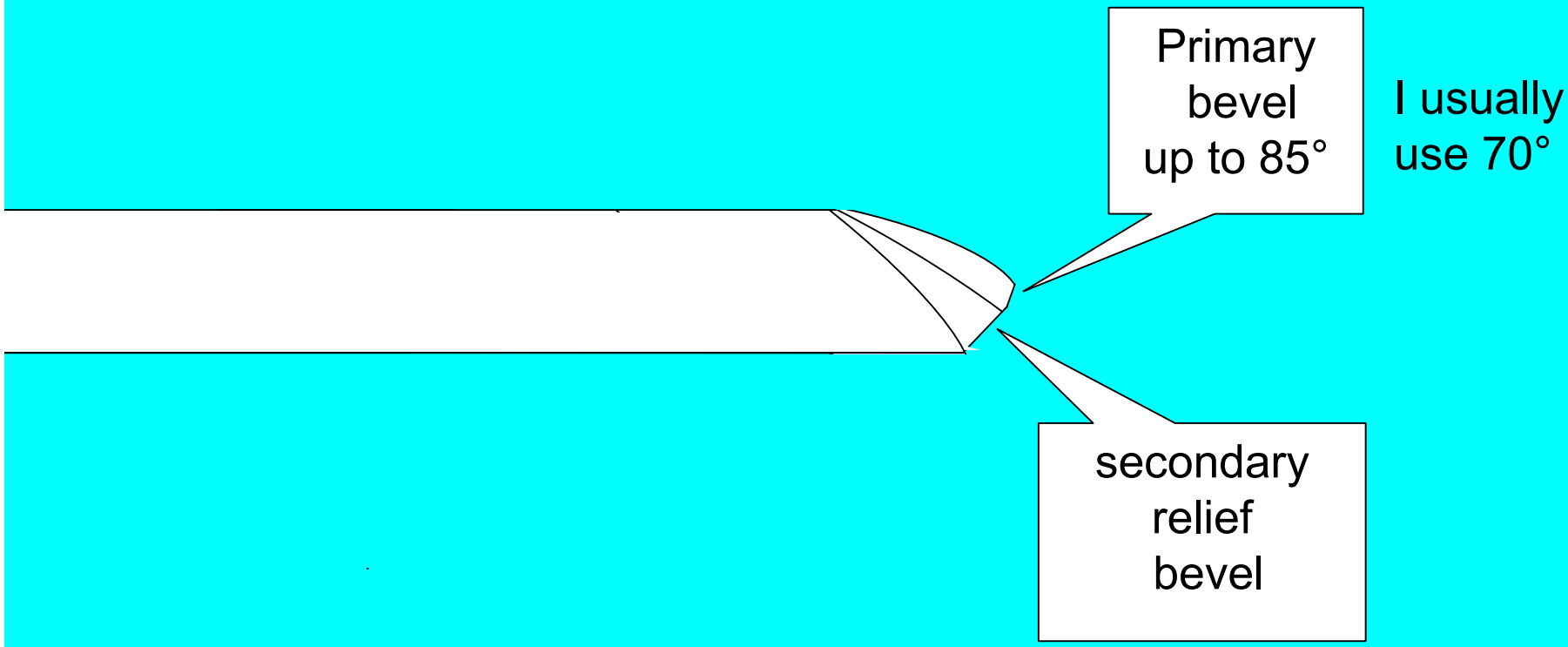
Inside the bowl:



Don Geiger ©

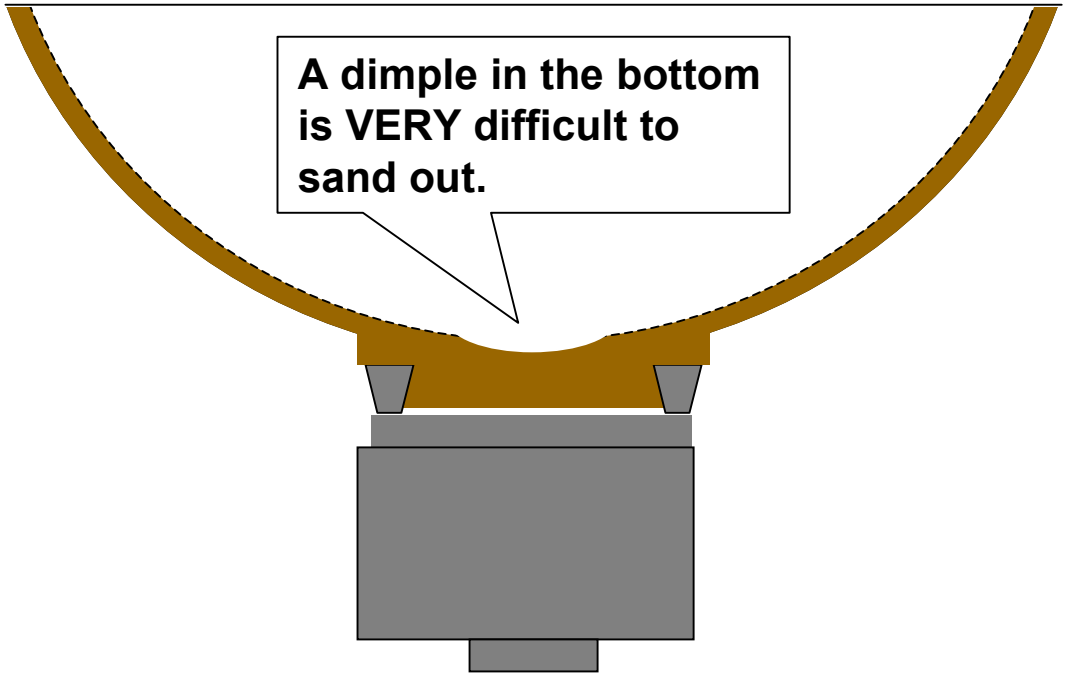
Gouge for the Inside Finishing Cut

If you are unable to maintain bevel contact when using gouge with a 60º bevel angle, you may want to use a gouge with a steeper angle.



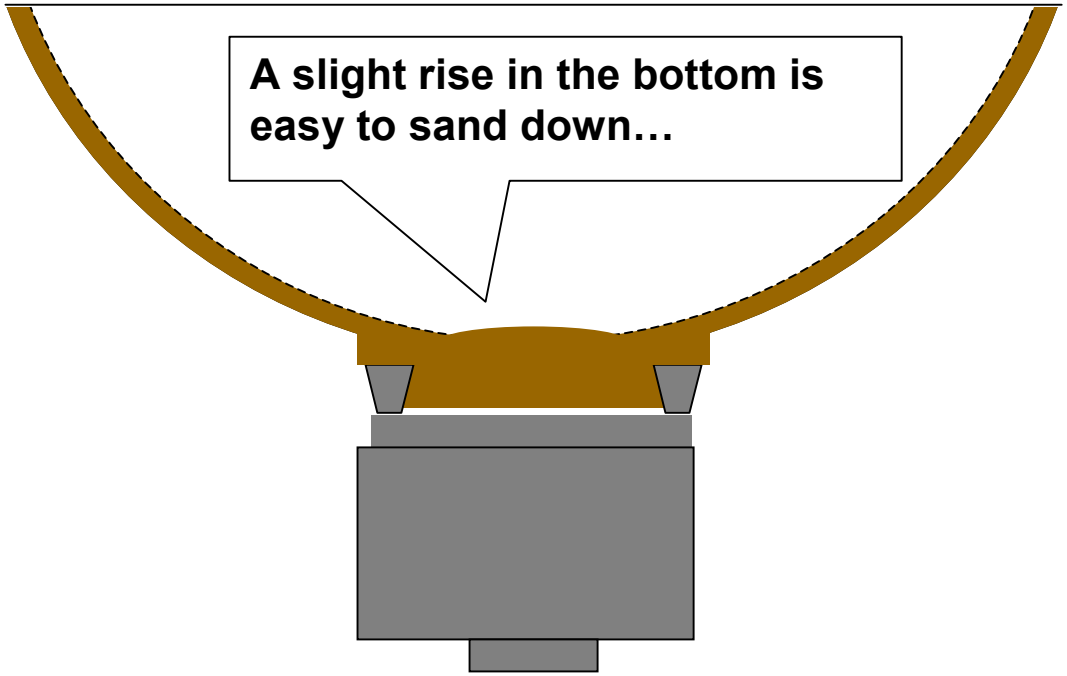
Don Geiger ©

Inside the bowl:



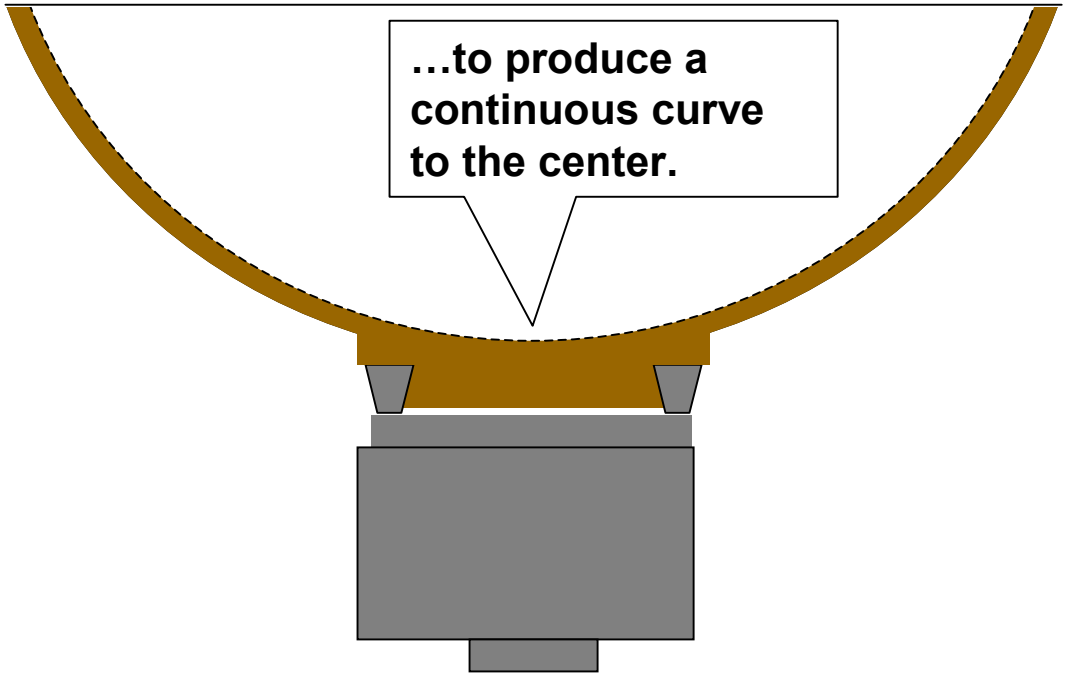
Don Geiger ©

Inside the bowl:

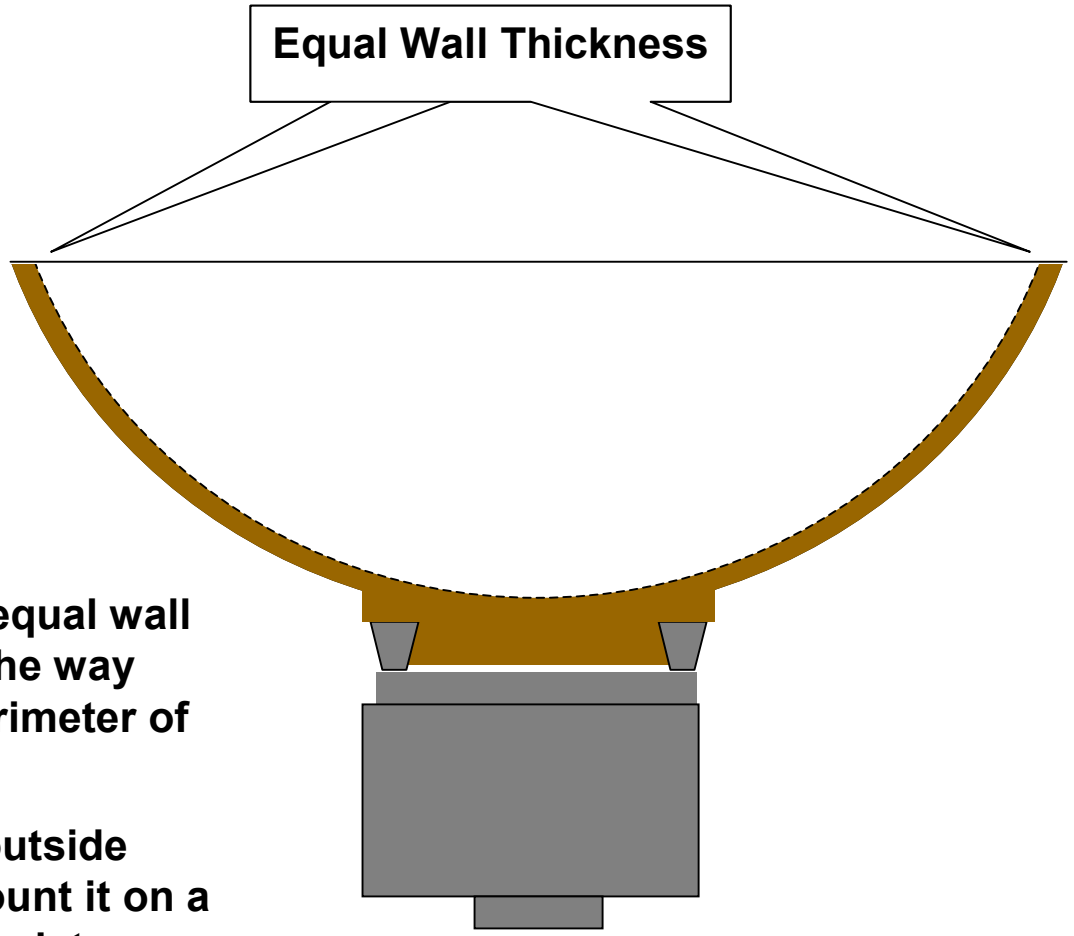


Don Geiger ©

Inside the bowl:



Don Geiger ©

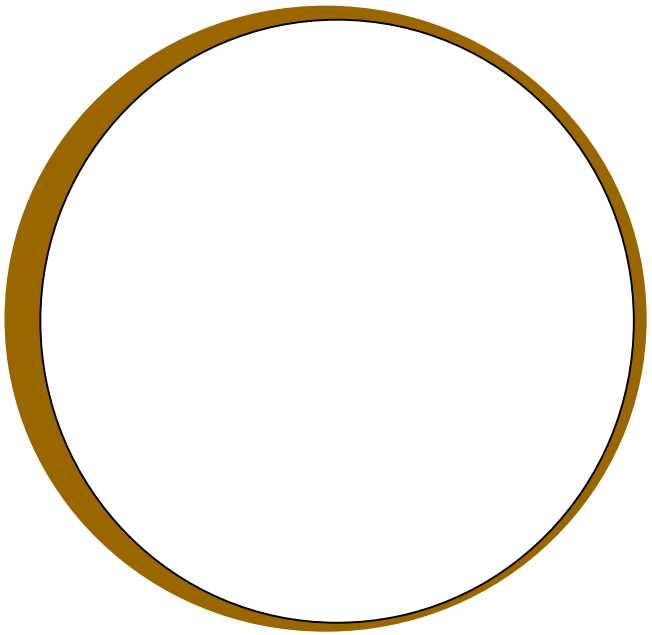


To ensure an equal wall thickness all the way around the perimeter of the bowl:

- **Re-turn the outside when you mount it on a chuck or faceplate.**

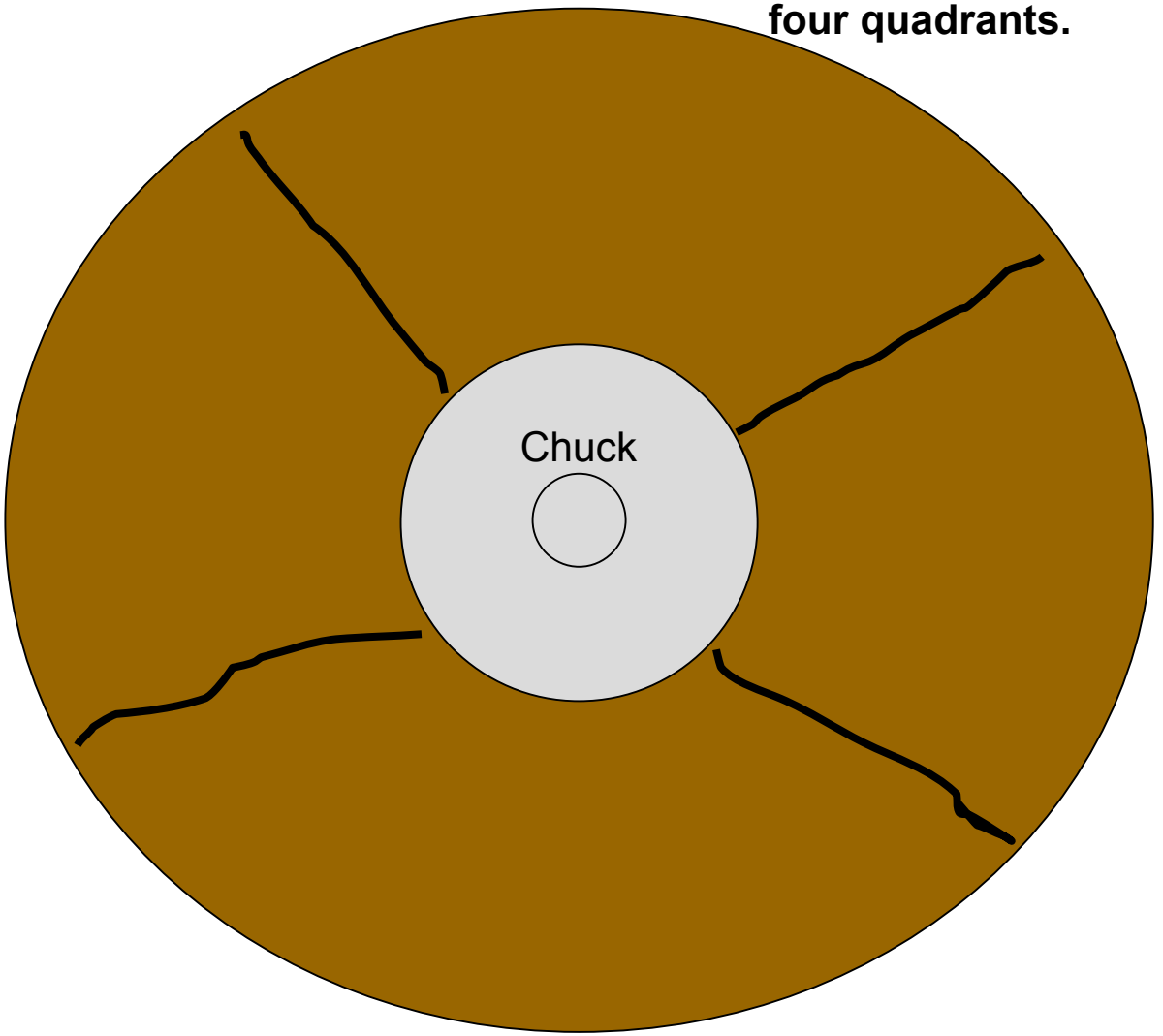
Don Geiger ©

If you don’t re-shape the blank before turning the inside, it is very likely that the outside and inside surfaces of the bowl will not be concentric!

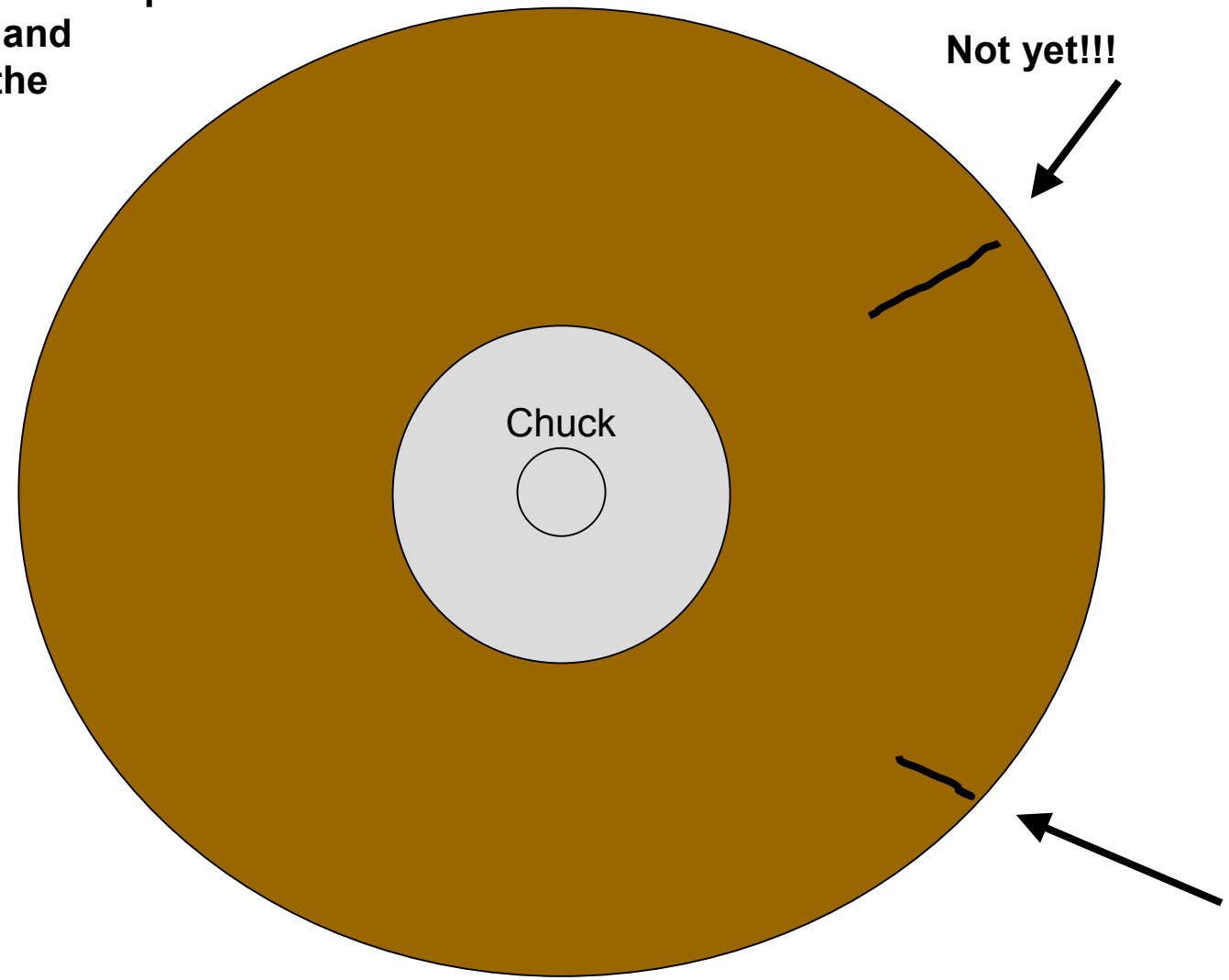


Don Geiger ©

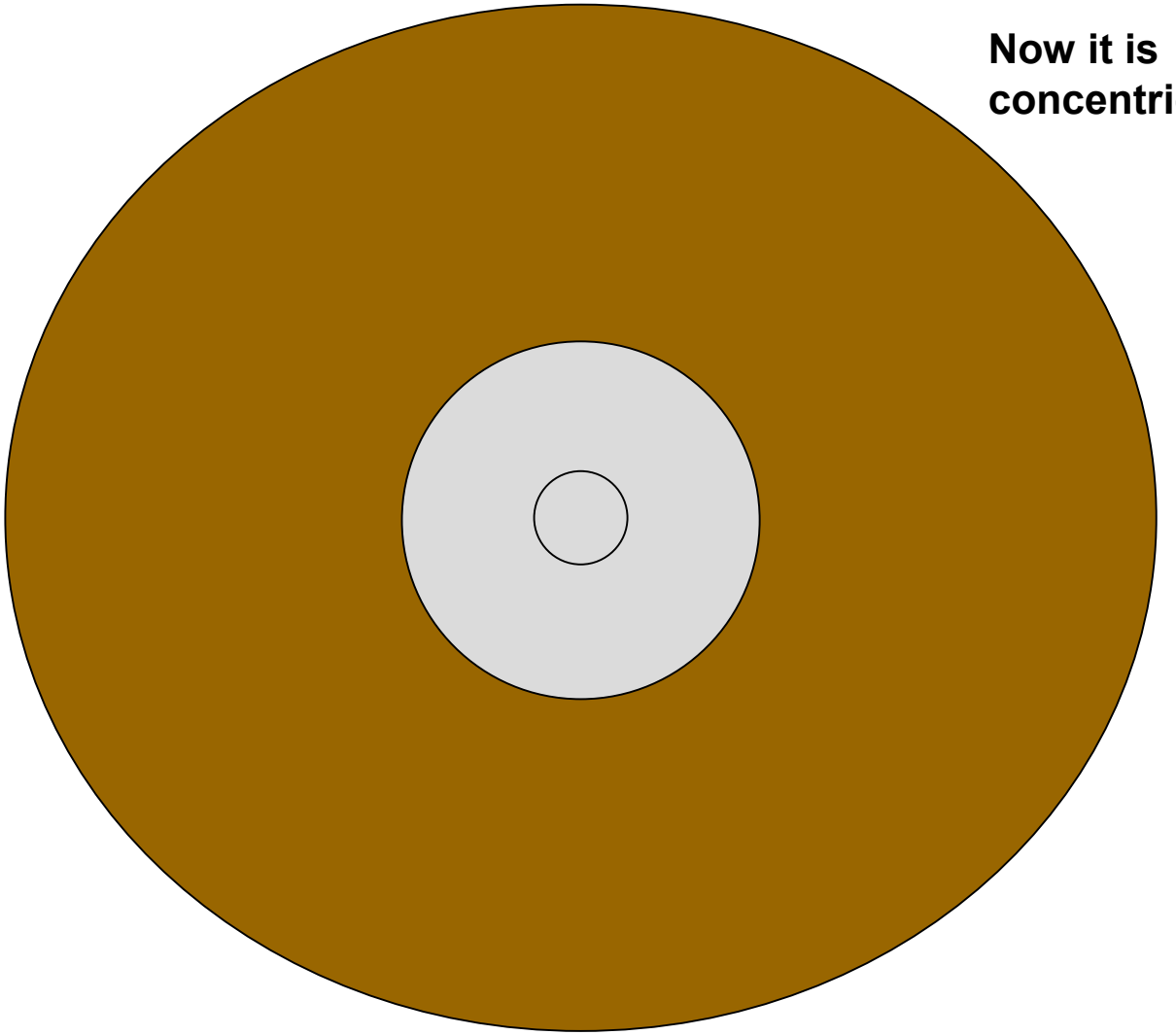
TIP: Make pencil marks from the base of the bowl to the edge in four quadrants.



Re-turn the outside, then stop the lathe and inspect the surface.



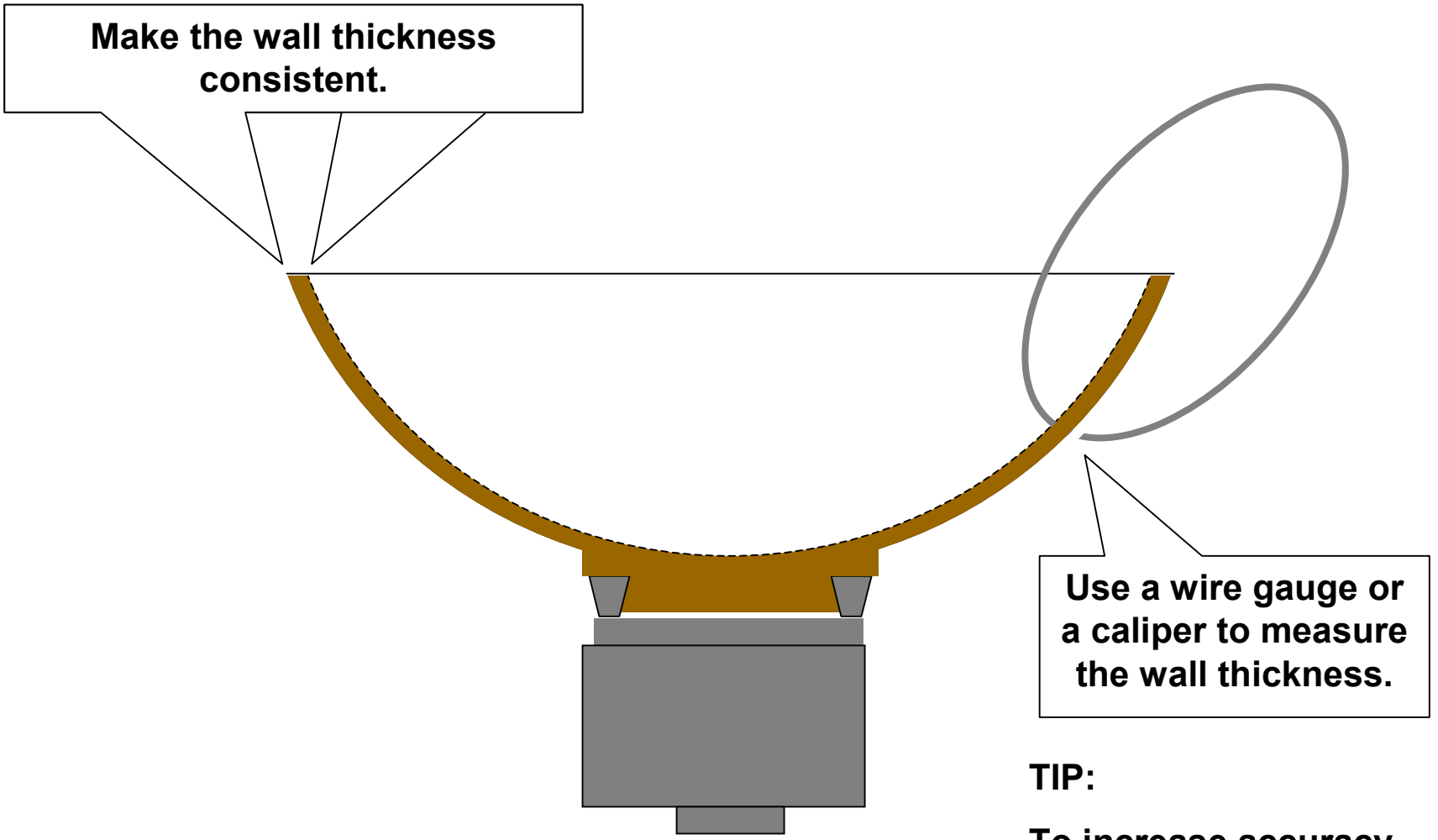
Don Geiger ©



Now it is concentric!!!

Don Geiger ©

Inside the bowl:

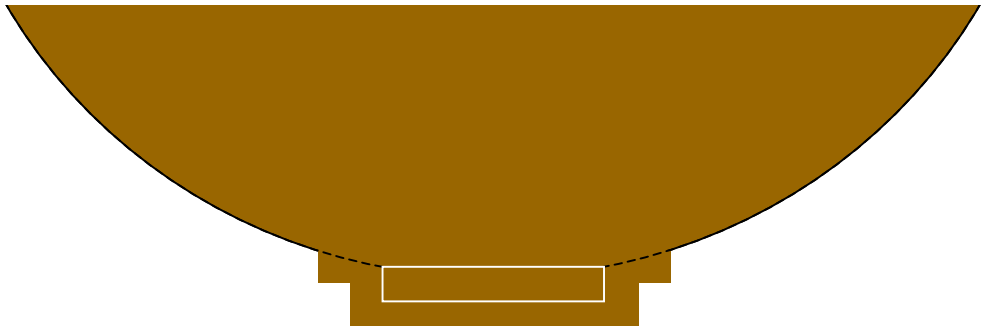


TIP:

To increase accuracy, always measure <u>perpendicularly</u> across the wall.

Don Geiger ©

Final steps to complete the turning:

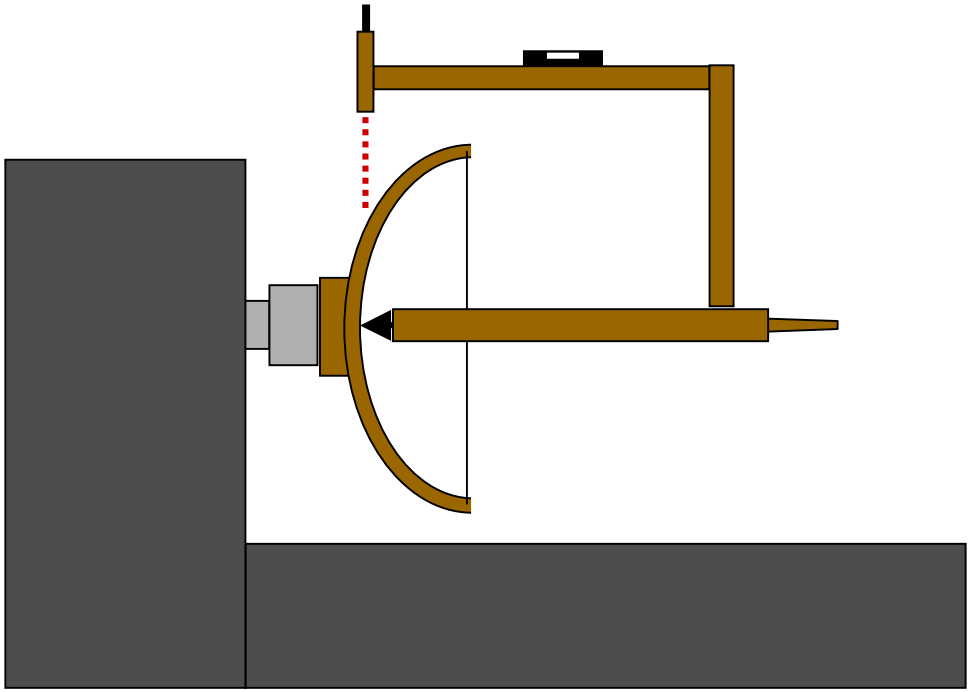


Jamb chuck or vacuum chuck the piece to facilitate:

- **The removal of the waste stock.**
- **Define the diameter of the foot.**
- **Extend the exterior curve to the outside diameter of the foot.**
- **Define the height of the foot.**
- **Create a concave foot .**

Don Geiger ©

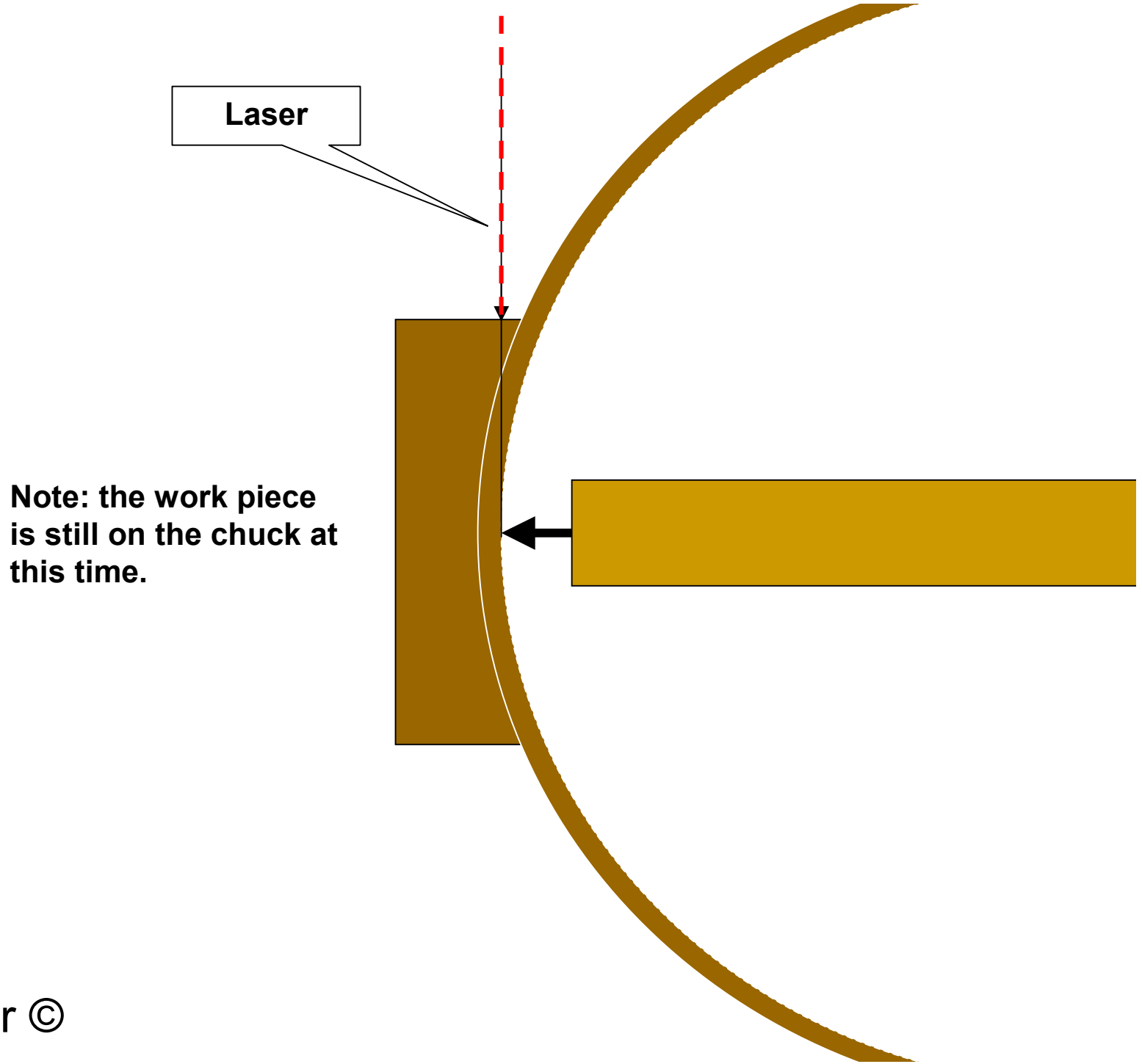
Depth Finder



- **Ensure the laser beam shines on the head of the screw.**
- **Move the depth finder into place.**
- **Maintain a level position.**

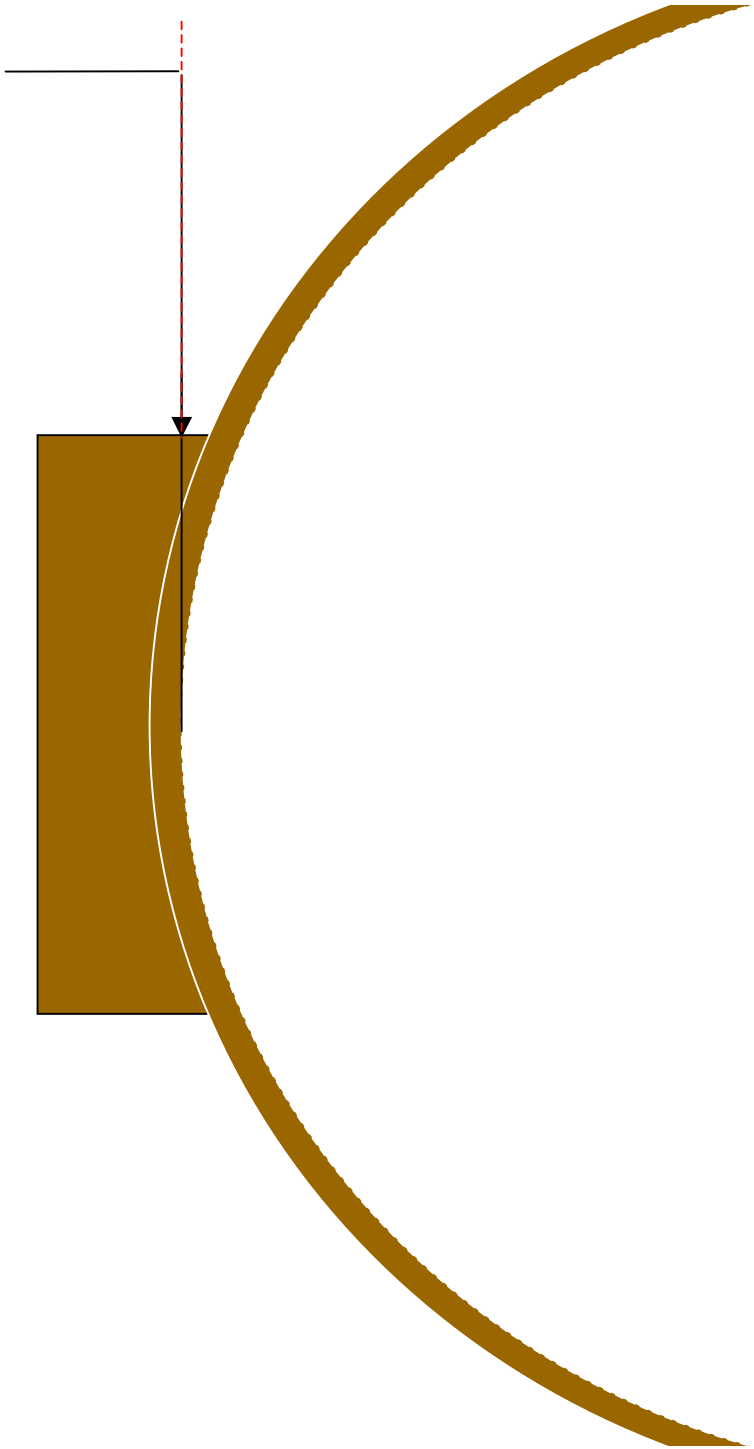
Tip: To improve the accuracy of the measurement: place a piece of aluminum tape over the end of the laser pointer and puncture a small hole. This will reduce the size of the dot.

Don Geiger ©



Don Geiger ©

1. Mark the inside bottom depth on the outside where the laser is.



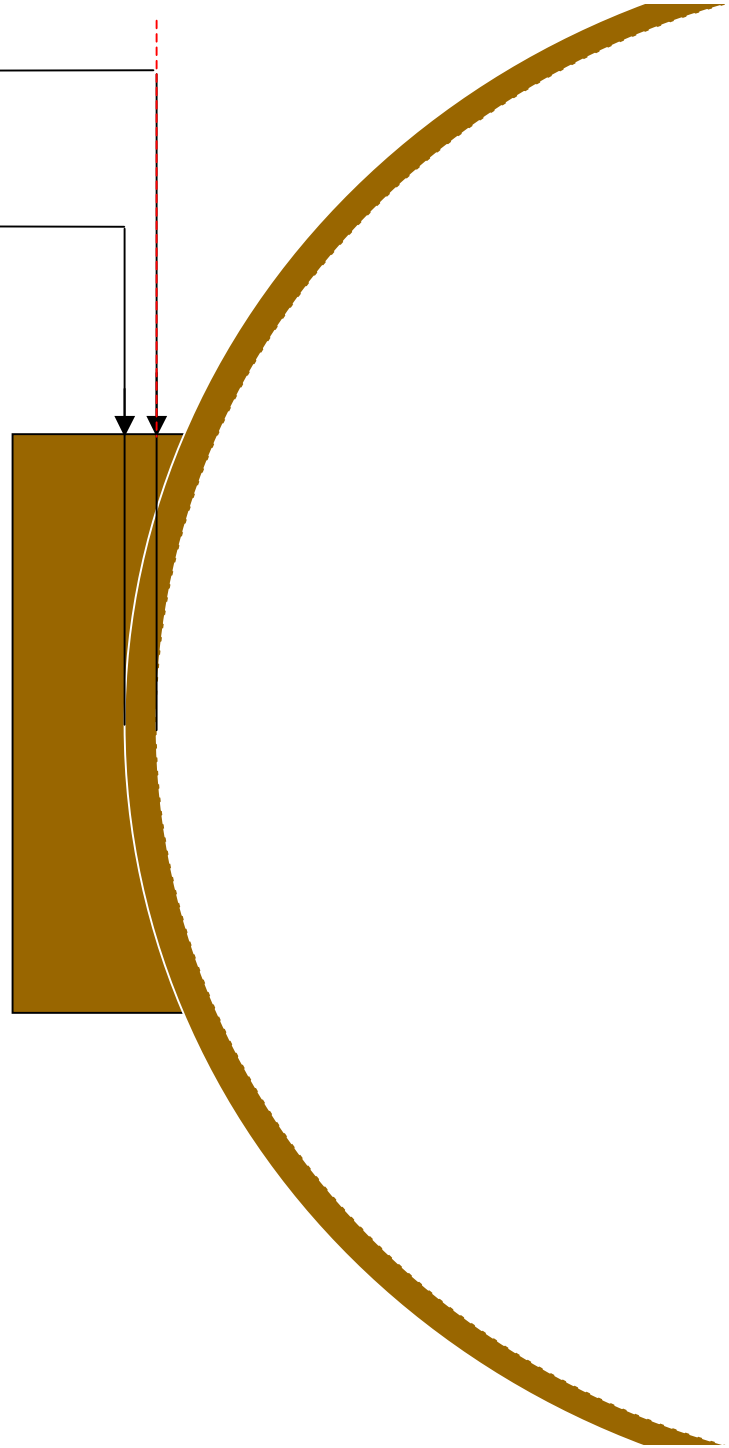
Note: the work piece is still on the chuck at this time.

Don Geiger ©

1. Mark the inside bottom depth on the outside where the laser is.

2. Make a mark at a distance from mark #1 equal to the wall thickness.

Note: the work piece is still on the chuck at this time.



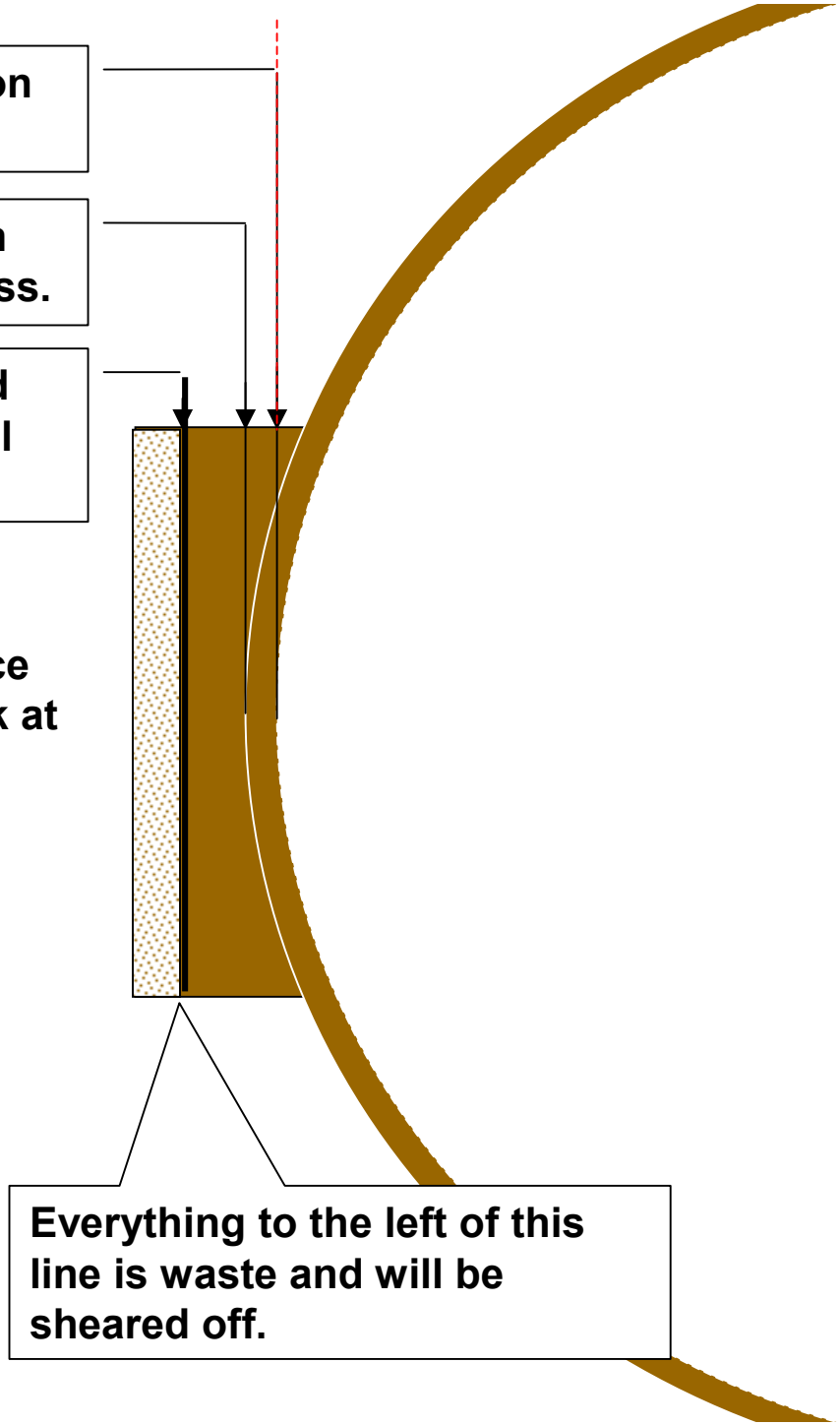
Don Geiger ©

1. Mark the inside bottom depth on the outside where the laser is.

2. Make a mark at a distance from mark #1 equal to the wall thickness.

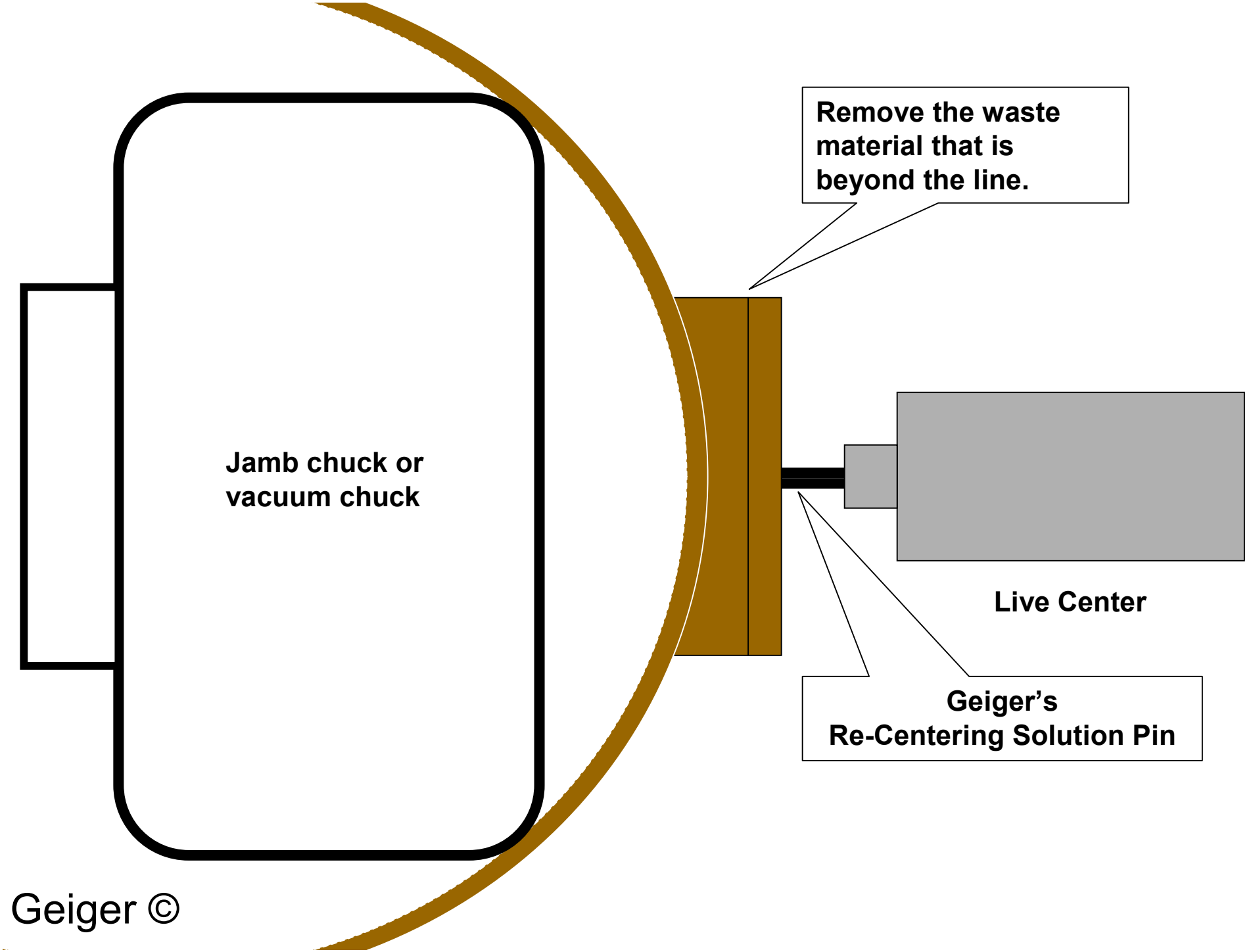
3. Mark the bottom of the planned foot. Mark a line at this point all the way around.

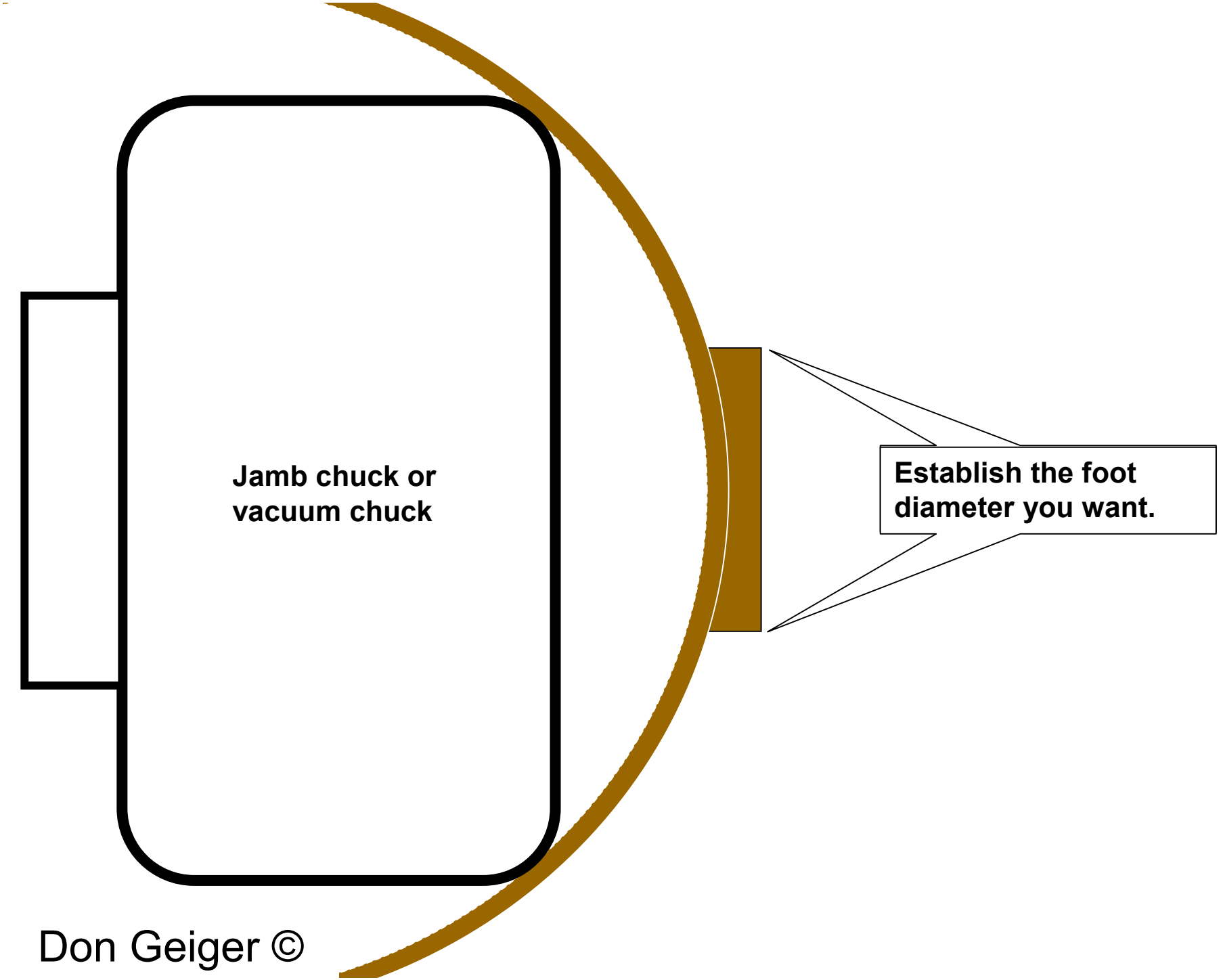
Note: the work piece is still on the chuck at this time.

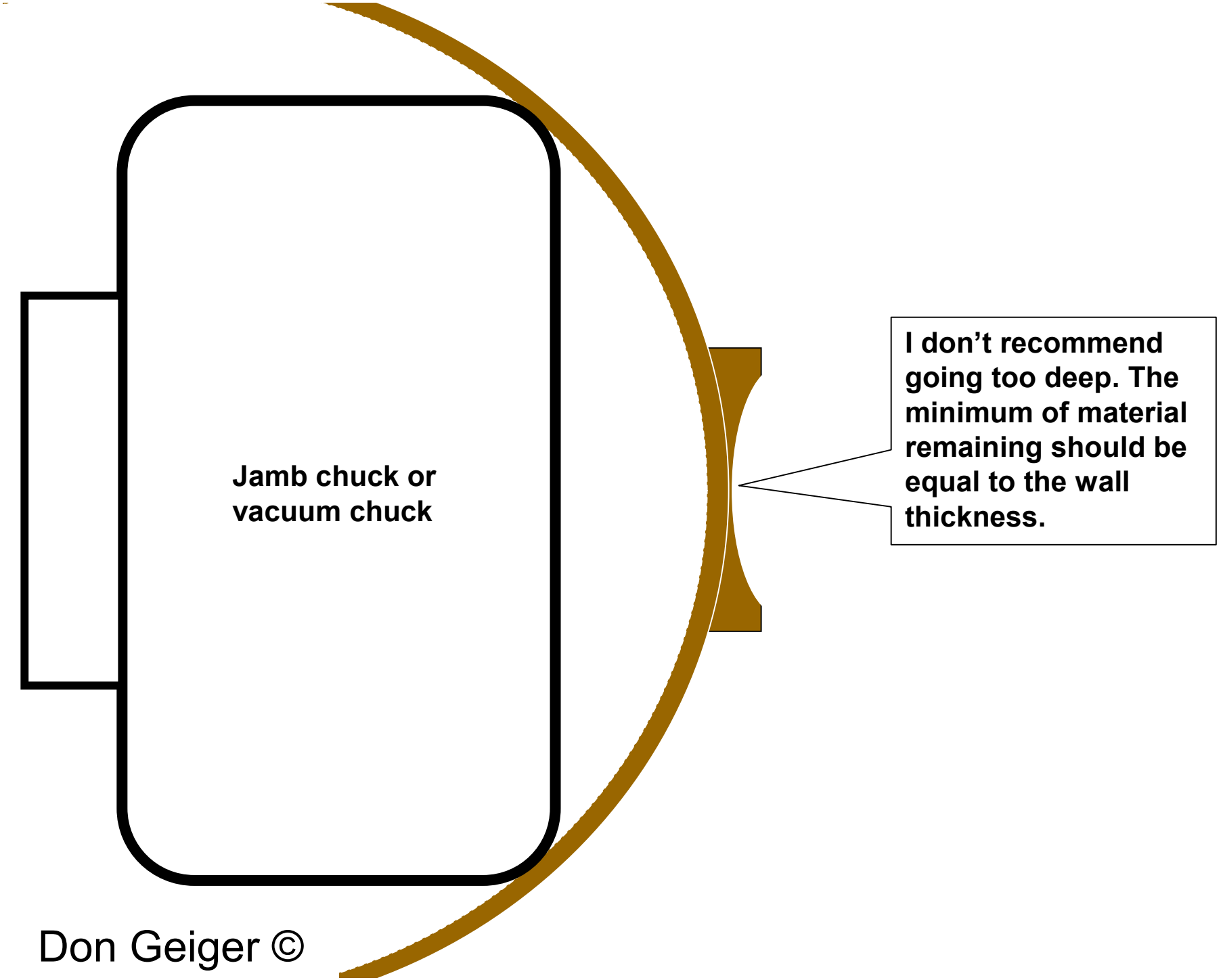


Everything to the left of this line is waste and will be sheared off.

Don Geiger ©

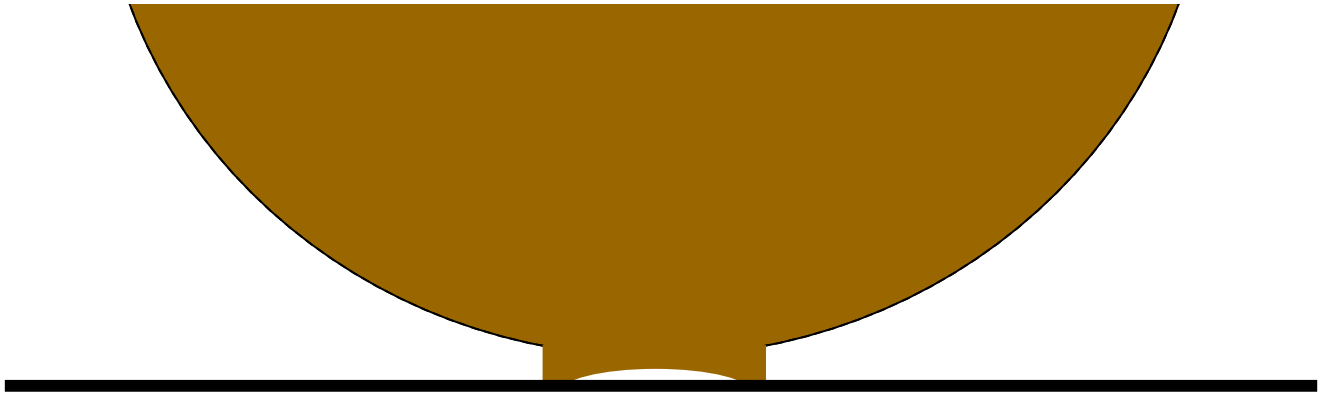

Remove the waste material that is beyond the line.
Jamb chuck or vacuum chuck
Live Center
Geiger's Re-Centering Solution Pin
Geiger ©


Jamb chuck or
vacuum chuck
Establish the foot
diameter you want.
Don Geiger ©


Jamb chuck or
vacuum chuck
I don’t recommend going too deep. The minimum of material remaining should be equal to the wall thickness.

Don Geiger ©

The desired result.



Don Geiger ©

Special Thanks To:

The Bell Woodturners and

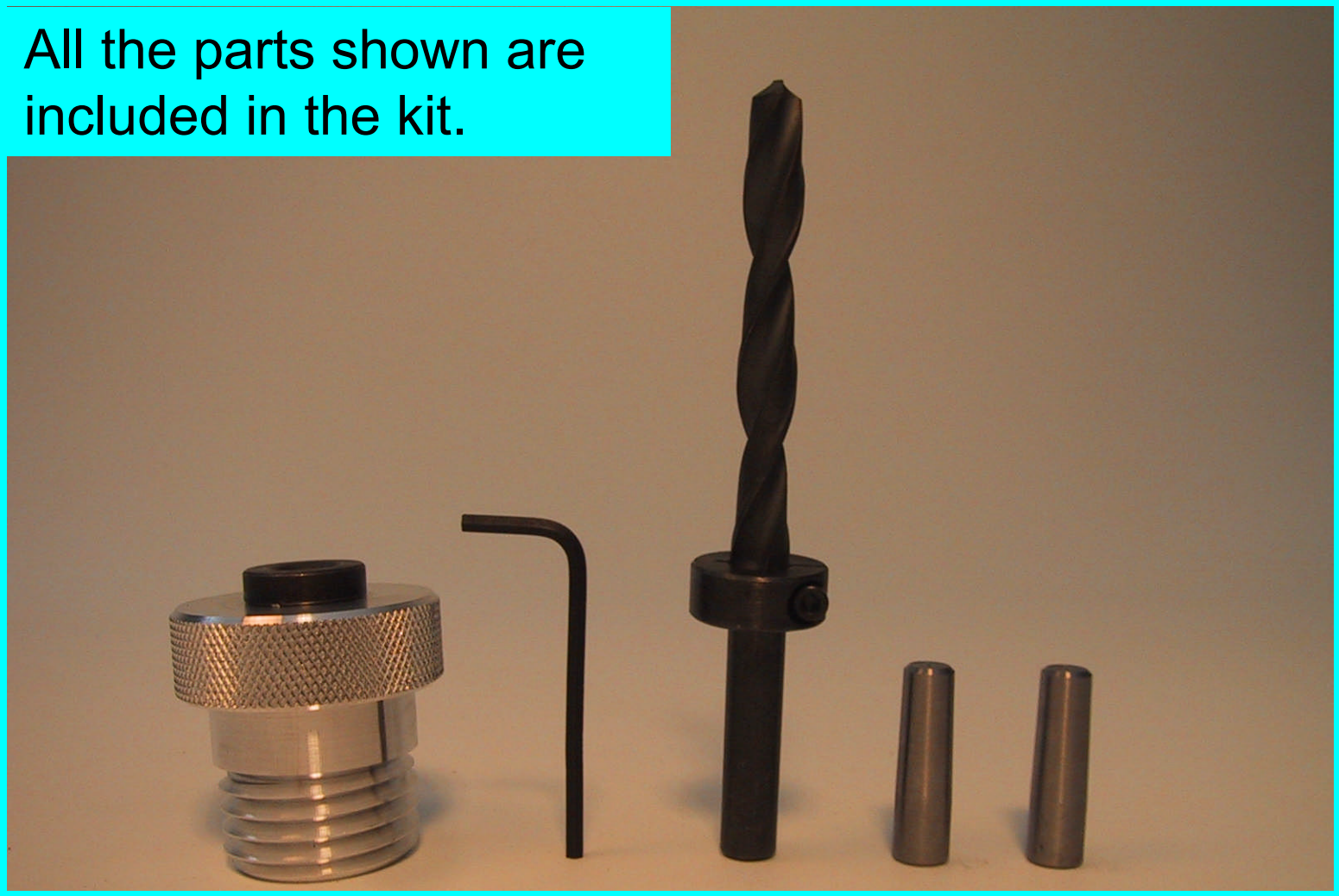
My contact information:
phone: 352-472-5035,
e-mail: dongeiger@cox.net
Web: www.geigerssolutions.com

Produced by: Geiger 2014

Don Geiger ©

Geiger's Re-Centering Solution

All the parts shown are included in the kit.



Available in three popular thread sizes.

Don Geiger ©