

Instructions for the Crown Ellsworth Signature Gouge

The unique tip design of this gouge will allow the turner to make roughing cuts and finish cuts on both the exterior and interior of a bowl. In most cases, this will be the only tool needed to finish the work.

PRIMARY CUTS

Exterior Rough Cutting: Quickly removes a tremendous amount of material when roughing out a block in preparation for shaping the form.

Position the tool rest so that the tip of the gouge is in the centre of the work piece when the gouge is horizontal.

Use the gouge in the horizontal position, not elevated like traditional bowl gouges.

Point the 'flute' of the gouge in the direction of the cut with a 45-degree angle across the top edges of the flute, and cut tangentially to the grain, not into it.

Begin cuts by using only the tip of the tool (not the long edge), and presenting the shaft 90 degrees to the surface being cut. Heavier cuts can be made using more of the long edge if working with green, or wet materials. Unlike conventional gouges, there is no bevel in contact with the wood when performing these roughing cuts!

Exterior Slicing Cuts: Used to refine the bowl form without tearing the fibers in preparation for the shearing cut.

Position the gouge the same as the roughing cut, keeping the line across the top edge of the flute at a 45-degree angle to the floor, then raise the tip up 20-30-degrees by simply dropping the handle. This is a pulling cut using the front $\frac{1}{4}$ - $\frac{1}{3}$ of the tip, not the long side edge.

Exterior Shear Cut: Refines exterior surface so one can begin sanding with 180 - 220 grit sandpaper.

Position the tool rest as above, parallel to the surface being cut and $\frac{1}{4}$ " from the surface.

Position tool horizontally, as if one were making a scraping cut with the lower edge and with the flute pointed toward the work piece. The upper edge should be no more than $\frac{1}{8}$ " away from the surface of the material.

Before making contact with the wood, drop the handle so that the edge of the gouge is now position 45-degrees to the work piece. Cut with the lower edge, keeping the upper (unused) edge $\frac{1}{8}$ " from the surface of the wood, making sure that the bevel is not in contact with the material.

Make slow, light cuts across the surface of the wood using the centre area of the long edge, not the tip. Unlike conventional gouges which require pressure of the bevel against the wood, pressure with this gouge is down and into the tool rest.



If bouncing occurs:

- A. Sharpen the gouge
- B. Slow down the feed rate of the tool into the wood
- C. Put more pressure into the tool rest
- D. Take super light cuts

As a bonus; you can perform this 'shear cut' in both directions on the wood; that is, with the grain and against the grain. In most woods, sanding can now begin at 180 - 220 grit!

Scraping Cut: Used to flatten base of the form to receive a chuck, faceplate or glue block.

Position the tool rest so that the cutting edge is at the centre line of the workpiece.

With the shaft in the horizontal position, rotate the gouge axially so that the lower edge touches the wood while the upper edge not being used is $\frac{1}{16}$ " away from the wood. The flute will be pointing toward the work.

You use the long edge to make the cut by pushing or pulling on the surface.



DO NOT rotate the shaft axially clockwise as this will raise the edge and you will get a catch!

Interior Roughing Cut: Removes interior mass in preparation for finish cut.

The order and direction of this cut is the same as with conventional gouges. The primary difference being that the gouge is used in the horizontal position, not at an elevated angle.

Position the tool rest so the tip of the tool bisects the centre of the wood when the tool is horizontal. Maintain a 45-degree angle across the top edges of the flute so that the right side of the edge and tip cut the wood.

Using the left hand on the tool rest and the right hand at the back end of the gouge, pull the handle toward you using the left hand as a fulcrum point. This will move the tip of the gouge to the right cutting the wood.

Interior Finish Cuts: Allows one to perform a single cut from rim to bottom of the bowl.

Position the tool rest height so that the tip of the gouge is in the centre of the work piece when the tool is horizontal. The gouge remains in the horizontal position throughout the cut.

Begin the cut using the right edge of the tip, exactly like in the rouging cut described above.

Cut $\frac{1}{4}$ - $\frac{3}{8}$ " into the material from the rim, then rotate the gouge counterclockwise (axially) until the flute is pointed straight up. This will allow the bevel on the left side of the tip to make contact with the wood.

Point the bevel on the left side of the tip in the direction of the cut and advance the tool forward, taking very light cuts of $\frac{1}{16}$ " deep or less. The area of the edge now making the cut now includes the tip, plus no more than $\frac{1}{8}$ " of the left side of the tip.

By keeping the gouge horizontal, and the flute pointed straight up, one can now ride the bevel to the bottom-centre of the bowl.



Take care not to rotate the gouge to the left of horizontal when making the finishing cut, as this will expose the full length of the $\frac{3}{4}$ " edge to the wall of the bowl.

GENERAL GUIDELINES FOR SHARPENING

Cut with the burr straight off the grinder, instead of honing the edge. Aluminium oxide (100-120 grit, pink or white) wheels are recommended. Dress wheels frequently.

Sharpen the gouge frequently to maintain the burr edge.

Use extremely light touches when grinding to extend the life of the tool.

Always cut at a tangent to the grain (across the fibres), not into them.

All cuts are the same for green or dry woods, but use less of the edge with dry woods.

Don't be afraid if you get a few 'digs' when first learning to use this gouge.

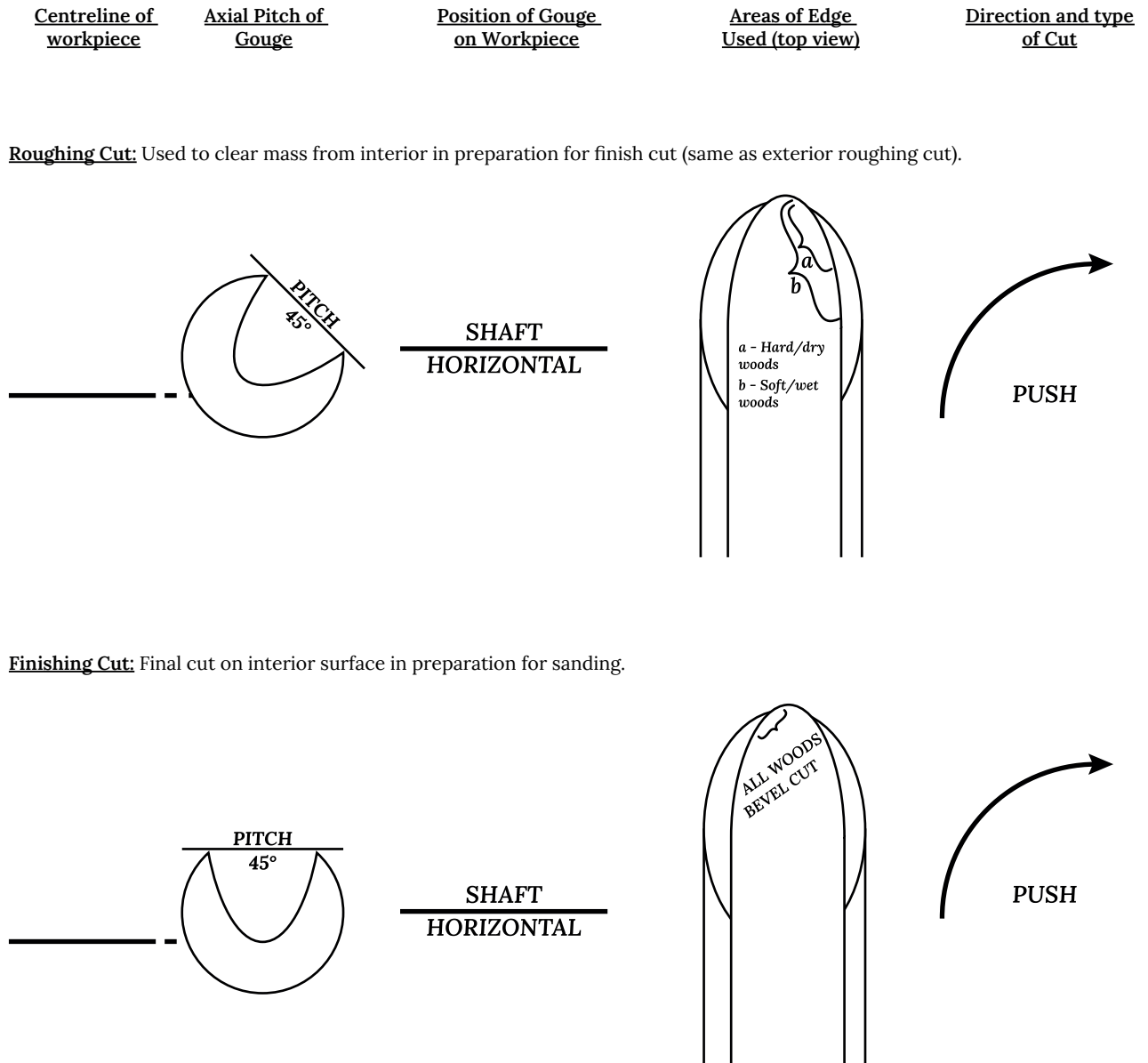
CROWN ELLSWORTH SIGNATURE GOUGE

Exterior Cuts

Centreline of workpiece	Axial Pitch of Gouge	Position of Gouge on Workpiece	Areas of Edge Used (top view)	Direction and type of Cut

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Interior Cuts



Roughing Cut: Used to clear mass from interior in preparation for finish cut (same as exterior roughing cut).

Finishing Cut: Final cut on interior surface in preparation for sanding.

Notes: Bevel must be in contact with wood throughout the cut.

To safely centre the rim, begin the finishing cut in the 'roughing' position as shown above, then rotate the gouge counterclockwise to horizontal to complete the cut in the 'finishing' position.