

Cindy Drozda

"The Fine Art of Woodturning"

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CD's Gouge Grind

When I learned to accurately grind the bevel angle on the cutting edge of my gouges, my turning improved a lot. The bevel angle and edge shape that I choose to use are well suited to the type of turning that I do. I am not suggesting that this is the "correct" tool grind, only that it works well for me. My gouge work consists mainly of either shaping the outsides of hollow vessels with a bowl gouge, or finial turning with a spindle gouge. I am using a 40 degree bevel angle on both bowl and spindle gouges, as well as on my roughing gouge. This bevel angle requires low cutting force and gives a clean cut without being difficult to control. The roughing gouge is sharpened straight across the flutes, with no wing sweep. My bowl gouges and spindle gouges usually have the wings swept back. I like a parabolic flute shape, and a wing ground to a very slight crown. The tip is shaped to different radii depending upon what job I plan to use a particular tool for. To make smoother concave shapes, I grind away the heel of the gouge, leaving a bevel width at the tip of between 1/32" and 3/16" depending on the size of the tool and what job it will be doing.

Sharpening on a Wolverine platform:

There are 2 motions to this sharpening technique, which I learned from Stuart Batty. The swing of the handle serves to keep the grinder's tooth marks on the steel at 90 degrees to the cutting edge at the point of contact. Rolling the tool keeps the surface of the inside of the flute parallel to the platform at the point of contact with the grinding wheel. The platform is set to give the desired angle to the cutting edge of the tool. The amount of handle swing controls the angle of sweep on the wings. The rate of handle swing and roll controls the shape of the edge. This sharpening method doesn't give the edge its shape automatically. The tool is guided around on the wheel to create the shape of the edge by eye. It does take a bit of practice. Stuart recommends to begin learning this method by sharpening one wing, then the other wing, and finally blending them together at the tip. He sharpens by starting at one side of the tool and doing it in all one sweep and roll motion. I find it easier to get a symmetrical wing shape if I sharpen from the sides towards the tip. Sometimes I will go back and accurately shape the tip if I didn't get it nice and smoothly curved.

Sharpening with the Wolverine Vari-grind jig:

It is possible to approximate this gouge grind with the Vari-grind jig. This is a method that I learned from Stacey Hager. Setting up the jig this way, rather than how it is described in the manufacturer's instructions, gives you the same bevel angle on the wing as on the tip of the tool. I find it easiest to start with a platform-ground tool, and use it to set up the jig. Stacey prefers to free-hand grind the tool first. Basically, the Vee-arm is set to give the desired bevel angle on the wing, and the wing nut is set to give the desired bevel angle at the tip. The adjustments will affect each other to some extent, so check back and forth with both until the wings and tip are both being ground to the desired angle. The amount that the tool sticks out of the holder determines where on the wheel the tool is being ground. Best results seem to be achieved with the grinding happening above the centerline of the wheel. This sharpening method doesn't give the edge its shape automatically, either. The shape of the edge is formed by guiding the tool around the wheel and shaping by eye. What the jig gives you is an accurate bevel angle without having to be conscious of holding the tool on the platform correctly. The disadvantages of the jig are that the grinder marks are not perpendicular to the cutting edge at the wings, and an operator with proficiency at the platform method might be able to sharpen the tool faster. It is also easier to shape a brand new tool using the platform rather than the jig (unless the jig is already set up).