Converting a Spindle Roughing Gouge to a Shear Scraper for Finishing the Inside of Bowls

Mini-demonstration for 7/21/12

This method completely repurposes a spindle roughing gouge so it can **safely** and effectively smooth the inside of bowls. The bevel will end up on the concave side of the flute, not the convex side as spindle roughing gouges are ground. You will also have a rounded edge, not the straight and square edge we strive for on a spindle roughing gouge.

The rounded edge will resist catches, and the sharp edge will take off small amounts of wood, allowing you to obtain a much smoother surface before you begin sanding.

**Making the tool:** I suggest using an older spindle roughing gouge you are not too fond of, because you will be grinding away a ton of that expensive high speed steel. (Duane showed me this so I bought a used gouge at a club meeting to convert to shear scraping.) It will have to have enough length to lay flute-down on the grinder platform without the handle interfering with the tool rest. Don’t use the V-Arm attachment if you have a Wolverine or similar sharpening system. This tool is shaped and sharpened on the flat platform, as you would a scraper.

Of course, wear eye protection.

1. For shaping the tool I suggest using a gray wheel. They are less expensive and you will be doing quite a bit of grinding while shaping the tool. When the tool is shaped, use your white or blue wheel for sharpening the edge.
2. Set the platform to grind a 45 degree angle.
3. Lay the gouge FLUTE DOWN on the platform. The corners of the gouge will contact the wheel first and need to be ground down. Just keep grinding, this has to be done.
4. Be aware of heat build-up in your tool and don’t plunge a hot HSS tool into water to quench it, which I’m told can cause the HSS to fracture.
5. Keep grinding until the old bevel on the convex side of the tool has been ground off and you have a smoothly rounded end. The new bevel will be on the concave side of the flute.
6. When the tool is reshaped and the sparks are starting to come over the edge, switch to a wheel designed for High Speed Steel and grind the tool sharp.
7. Congratulations, you have built a shear scraper.

**Using the tool:**

1. Be aware of safe speeds for bowl turning. You have put a lot of work into bring the piece this far and you don’t want to launch it now that it is this far along. I use the rule I believe Dale Nish developed, multiplying the inches in diameter of the piece by lathe RPM’s and varying the lathe speed to obtain a number between 6,000 and 9,000. This will give you quite a bit of leeway to safely vary the speeds due to the type of wood, your skill level and how nicely the tool is cutting.
2. Use this tool on the inside of a bowl. Use other tools for finishing the outside of the bowl.
3. Lay the shear scraper flute-down on the tool rest. You now drive it like a scraper, holding it horizontally and at center, taking light cuts to shear away tool marks and to impart a desirable final profile to the inside.
4. Shear scraping will dull any tool quickly. Touch up with a hone or grinder frequently.