

Using a Chatter Tool

The Mad Woodturner

[Ed. This article and more on this topic is also on the club website.]

I must say that this isn't a tool that I have been anxiously awaiting to have. It's not a critical tool for the woodturning that I've been doing and major surface treatments just aren't something I normally do ... yet. Still, I had been mildly intrigued by doing some chatterwork on some of my smaller items and knew that this tool wouldn't be difficult to make myself. I was right!

As many woodturners are all too familiar with, chatter is usually considered a problem that must be overcome instead of something we strive to intentionally make. That terrible shriek of our gouges or scrapers skipping over the wood and causing those waves have to be fixed in our normal woodturning. Wouldn't it be nice if that were the "in" thing to have on the inside walls of all our bowls? And if we could reproduce that pattern every time we mean to as well?

So, what causes those chatter marks that we all so hate when it doesn't serve our purpose? Basically, it means that either the wood or the tool is vibrating. The vibration causes the tool edge to touch the wood intermittently and cutting at those points. The wood may be so thin that it starts to vibrate or maybe it's in the process of "moving" out of round. The tool may be simply too small (thin diameter) for the job. It maybe extended over the toolrest too far or any number of other reasons. In these explanations lies how our chatter tool works.

The chatter tool is really just a very thin scraper. So thin, in fact, that it contacts the wood and flexes back off the wood. This sets up a vibration where the flexible tip of the tool keeps hitting the wood and back and so on. Each time it contacts the wood it scrapes just a little bit of the wood. This is what you see on the wood surface when the chatter tool is used. Here are some of the variables affecting the effect you'll get with a chatter tool:

- 1) How thick the scraper is
- 2) The stiffness of the scraper
- 3) Shape of the tip
- 4) How far the tip is extended past the holder
- 5) What wood is used - or - the hardness of it
- 6) Lathe speed
- 7) Tool tip presentation to the surface of the wood
- 8) How fast the tool is pulled across the wood



With all of these variables, you can achieve a huge range of possible effects. Enough to probably say that you'll never get the exact same effect twice! This creates a uniqueness that we often strive for in our woodturning. At least a little bit of it. This tool does take a bit of practice to use. Just keep fiddling with these variables and you'll soon get it down pat. Just don't blame me when you don't cringe at that high pitched shrieking sound when you're hollowing out that bowl so much the next time. You might actually leave those chatter marks in there! Here's how you use this tool.

On the next page you'll see some drawings I made that shows how I hold the tool. It takes a bit of practice and positioning to get it to work and, unfortunately, it all depends on those factors mentioned above to get it to work right. If I don't start hearing that squealing within a quarter-inch I figure it isn't working and I adjust what I'm doing.

I start out with the tip of the tool just slightly under the centerline or even with it. I also rotate the tool so that the edges are pointing at around 1 and 7 or 2 and 8 on a clock face. This tool is a scraper, after all, and works best with a burr on its edge. You have to have that burr grabbing the wood to get any effect. Since this is a pull type of "cut" and not a push type, I position the handle of the tool far to the left of the center of the piece of wood and pull it toward me.... The tip of the tool trailing from center of the piece to the outside of the piece.

A couple of surprising things I found when I first started using this tool You really need to push quite hard into the wood to get a good chatter. Otherwise, it'll just slide over the wood and cut light grooves instead. Thinner steel works worse. I thought it would chatter more and better but it doesn't.. 1/16th inch works just fine. It does work on sidegrain ... sometimes and not all that well but it can work. Of course, you can adjust any of the above variables to get different effects but, in general, you have to pull the tip of the tool a little slower when it's at the center of the wood as opposed to the outer rim. So, you start slowly and then speed up your pull over the wood.