

Making Your Own Thread Chasers for Woodturning



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I wanted to give chasing threads on my wood lathe a try but did not want to invest in an expensive commercial set of chasers. So I decided to make my own. This web page describes the method I used. Hopefully, other turners will find this information to be useful.

The advantages of making your own thread chasers are several:

- you can select most any thread pitch you want
- you may custom angle the chaser teeth for specific jobs
- you may save a significant amount of money

Background information: My basic premis was that as long as the tools were made of steel, they would be adequate for the job. Since I would only be doing this on a very part time basis, I was not concerned about using high speed steel. With the method used for making these tools, resharpening as needed would be quick and easy.

I decided to really go cheap! I went to Harbor Freight and bought two wood chisels for \$1.59 each. These are poorly made tools from China. I was not too concerned about this as I planned to do regrinding anyway.

The tools commercially made for chasing threads have the threads of the cutters running perpendicular. This is a compromise in design. Because I would be making tools for one specific job only, I decided to slant the cutting threads. Be certain to slant them the correct way or you will cut left hand threads!



The slant required varies with the diameter of the wood on to which the threads are to be cut. I slanted mine based upon the slant of a standard threaded bolt of the size I wanted to duplicate. In addition to producing tighter fitting threads in the finished product, this slant in the cutters tends to almost automatically feed the chaser into the wood at the correct speed and to help avoid cross-threading.



Making the tools: The first thing I did was to grind the cutting edge of the original chisels back to a thick flat surface. It was into this surface that I cut my slanted threads. To get the correct distance between threads, I held up a thread gauge against the tool and marked the steel to indicate exactly where I wanted to file my V's for the threads. I set the angle from comparing things with a standard bolt of the size I wanted. The threads were initially cut into the tools using a triangular file. To remove any slight irregularities, these threads were finished off with a rethreading tool. The top surfaces of the new chasers were smoothed with a stone and they were ready to cut threads! Simple, quick, and cheap!



The rethreading tools I have (see above image) allow for cutting 9, 10, 11, 12, 13, 14, 16, 18, 20, 24, 27, 28, and 32 threads per inch. That is a pretty good assortment.

The techniques for using such thread chasers have been well and fully explained by Fred Holder. Check his site or an article in a back issue that he wrote for Woodturning Magazine for details.