



The South Central Penn Turner

Newsletter of the South Central Pennsylvania Woodturners
April-May 2008



APRIL MEETING

April-1, 2008

Time: 6:30 pm

Place: Club meeting hall in Jacobus

Directions: From the North – take 83 south to Exit 14 – Leader Heights. Turn right at the end of the ramp. Go to the second traffic light. Turn left – this is George St., or the Susquehanna Trail, or Main St. once you get to Jacobus. Go two miles which will bring you into Jacobus. Turn right on Water St. (An additional sign on the sign post says “Lake Williams.” Go 1/10 of a mile. Right after the last house on the left (Which is 14 W. Water St.) you will see a white sign that reads “Lakeview Park – Christ UMC Cemetery.

Turn left onto a stone lane. You will see a cinder block building ahead of you.

Program: The April meeting, to be held on our regular meeting day (first Tuesday) will be on April 1, or, as it is better known, April Fool’s Day. However I am not requesting any pranks.

For the April meeting I am asking everyone to bring any jigs, fixtures, or anything else you have devised to help you in your turning. This might be something for your lathe, or something that you used in your setup or preparation for turning. I would also ask that you bring an item that you made using that jig or fixture. Please bring this item in addition to our regular “show and tell” items.

I am also asking everyone to bring any catalogs that you have found useful in obtaining items used in your woodworking or woodturning. I’m sure there are some catalogs that many of us get, but there are also some that some of us may not know about.

Our program will consist of each person describing their jig or fixture and how they used it. It will also consist of folks telling about some of the catalogs, and whether they have had good or poor experiences in dealing with the respective companies.

During the course of the meeting we will try to compile a list of all such catalogs to be distributed to all of our members.

SOUTH CENTRAL PA WOODTURNERS INFORMATION

President: Bill Fordney 717-741-0957
Secretary/newsletter:
Mike Galloway- 717-757-2907
Treasurer: John Stewart 717-755-1216

The South Central Pennsylvania Woodturners is a Chapter of the American Association of Woodturners (AAW). Membership dues are \$20/year. For membership, send a check, payable to “SCPA Woodturners”, to the treasurer, John Stewart 3088 E. Prospect Road, York PA 17402 .

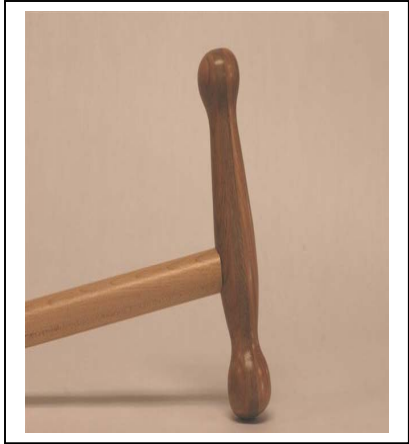
NEW BOOKS AND VIDEOS

Thanks to Malcolm Murphy we now have several new books and videos in our club library. Check them out at the next meeting.

Thanks to Dean Swagert and Don Wilson for doing the club meetings for February and March. Dean talked about one of the two Rose Engine lathes that he built and Don gave a talk about indexing on the lathe.



SHOW AND TELL



The Negative Rake Scraper (NRS)

by Andrew Hilton - Hilton Handcraft of the Ozarks (www.HiltonHandcraft.com)

You may have seen a new tool being used and discussed lately by some professional woodturners. This isn't too surprising as many pros will create or adapt tools to their particular turning needs. But, this one has actually been used for many years in one form or another by both the professional and the beginner. Instrument makers (flutes, etc.) have used these tools for centuries! The beginner just hasn't likely realized what they've been using and how best to exploit this tools' best features.

A turner will take their skew, parting tool or bedan and use it as a scraper. We've all done it at one time or another. Some of us do it far more than we'd like to admit as well. Ha! They've actually been using a NRS tool. They need some minor modifications to really rank as a NRS though. See these three pictures for 2 versions. The basic design of a NRS is a scraper with an additional bevel on top of the tool where it's normally flat. This gives that negative rake. The burr is still necessary and it's formed at the juncture of the two bevels as you'd expect.

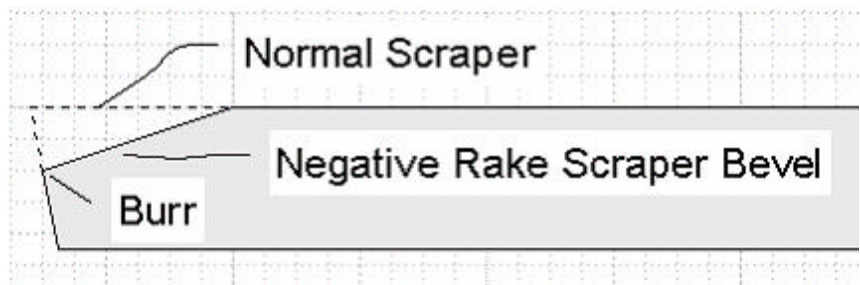
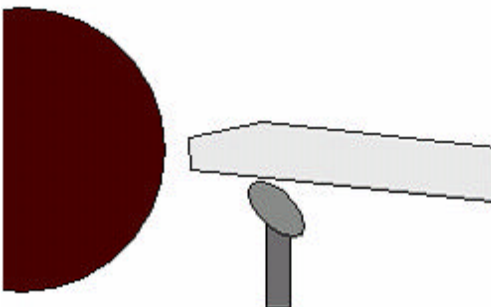


So, what's the big deal? The idea of NRS's is to slightly ride the bevel (the lower, smaller bevel) just as in a gouge but the "flute" of these tools is extremely small.... the height of the burr you raise on the end. With a reduced "flute" size as compared to a gouge, you get only so much bite or cut into the wood at any one time thus reducing (not eliminating!) huge catches. Of course, you only get so much bite or cut into the wood and can't really hog out wood like you can on a gouge either.

So, you can adjust the flute size by simply adjusting the burr you form on it. Of course, the burr (your cutting edge and resulting flute) doesn't last long at all and has to be refreshed frequently. Why does this leave a good surface? I think that we all know that we can get an exceptional surface from a scraper as long as we can control it and have an even burr all around the edge. Well, unlike a regular scraper, you're suppose to be riding that bevel under the raised burr of these negative rake scrapers. This gives you control that you don't normally get with a normal scraper. It's more of a gouge in that regard. It's less "catchy" when you have that support under you and doesn't want to "bite" into the wood as quickly.

Another reason is that negative rake or the upper bevel on this tool. It allows you to position the cutting end of the tool level or even a little above the handle end while still getting a cutting action on that burr. See the below, left picture. You can't do that with a normal scraper unless you turn it over on it's side to get a "shear scrape". But then you run into problems of controlling that angle and tool position.

Give this tool a try. You can make this tool yourself if you can't find one in a catalog. As seen below, right, you can just take a regular scraper and grind a (hollow-ground) bevel on the top of it to make a NRS tool. A slight curve along the top of the tool is usually better than a flat front. It's a nice finishing tool, especially for those very hard, dense exotics!

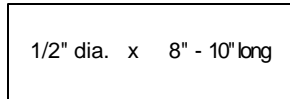


Pyramid / Point / 3-Edge Tool

Andrew Hilton
www.HiltonHandcraft.com

Fall '04

1. Material Selection



- HSS or Tool Steel (non-hss drill rod, shock absorber rod, reamers, etc.)

- 1/2" diameter is best but 3/8" or 5/8" will work too.

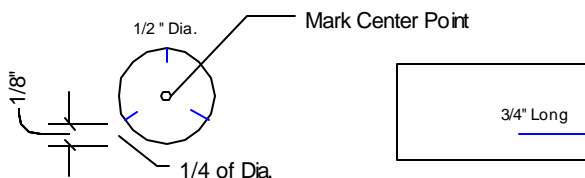
- 8" - 10" long is plenty with 2" handle sock-in included.

2. Material Preparation

- For Tool Steel, if it's not already annealed or if you don't know if it has been annealed, do this first. It makes it easier to do the initial shaping and grinding.

- To anneal, heat the area of steel to cherry red and let cool slowly to room temperature. It may take hours.

3. Marking Landmarks



- Mark the center on the end of the stock

- Make 3 lines from the end along the sides that are equally spaced and as long as the diameter of the rod used. This can be done by ...

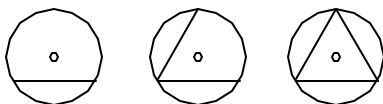
- Measure up from bottom edge 1/8 of diameter of rod

- Draw line on end of rod across its width using toolrest as straight guide.

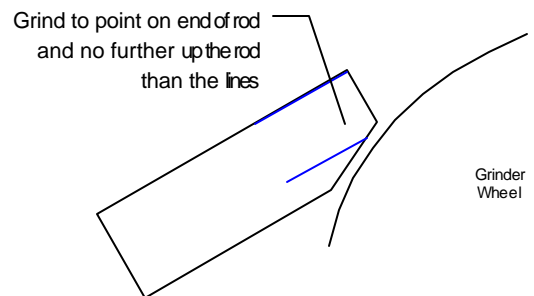
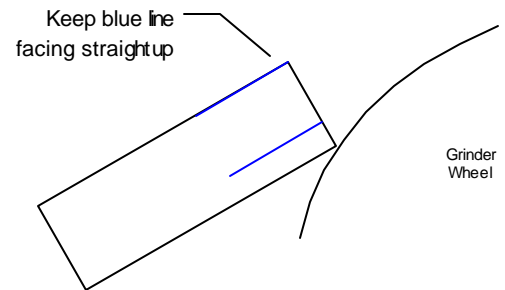
- Rotate rod so that end-point of 1st line is now at toolrest. Draw another straight line.

- Rotate and draw again. You should have a triangle drawn on the end of the rod.

- At each point of the triangle, mark a straight line down the length of the rod using the toolrest as a guide.



4. Rough Shaping on Grinder



Rotate Rod so that next blue line is straight up. Grind next bevel.

5. Heat Treat

- The tool needs to be hardened so it'll stay sharp longer. Heat to cherry red and then quickly quench in appropriate medium (water, oil, air) until cold.

- Sand and clean off tool so you can see raw steel.

- The tool is now very hard and brittle. Temper it to make it just a little softer. Heat to light straw color very carefully and slowly. Quench again.

6. Refine & Sharpen Edges

