Project 39 — Turning New Handwheel Dials/Paul Petrzelka

Upgrading the Handwheel Increments on the Lathe Crosslide

First I turned some new dials. Larger in size, so with 100 marks they would be spaced about the same as your 50 mark dials.

FIGURE 1–New dial and thrust collars.

I then learned to do home anodizing that didn't turn out too bad. I turned a mandrel to hold them in the rotary table.

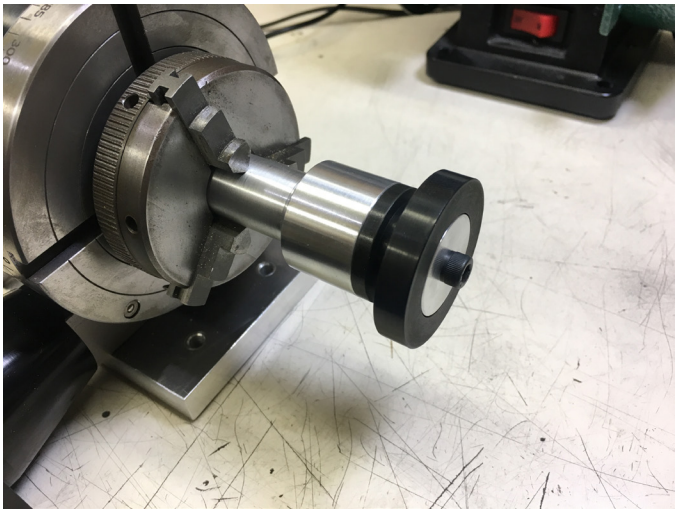

FIGURE 2

Next up was learning about Arduinos and programming them and built a controller for the rotary table, complete with scratch built case!

FIGURE 3—The Arduino program controller hooked up to the CNC rotary table. Each step is 3.60° x 100=360°.

A friend had acquired an old laser, so I drew up the marks and numbers and learned about laser etching.

FIGURE 4—The rotary table with the new collar are placed in the laser housing where the dial markings are etched. The Arduino program runs the rotary table through 100 incremental steps marking the lines and numerals around the dial.

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Replacing this old collar.....

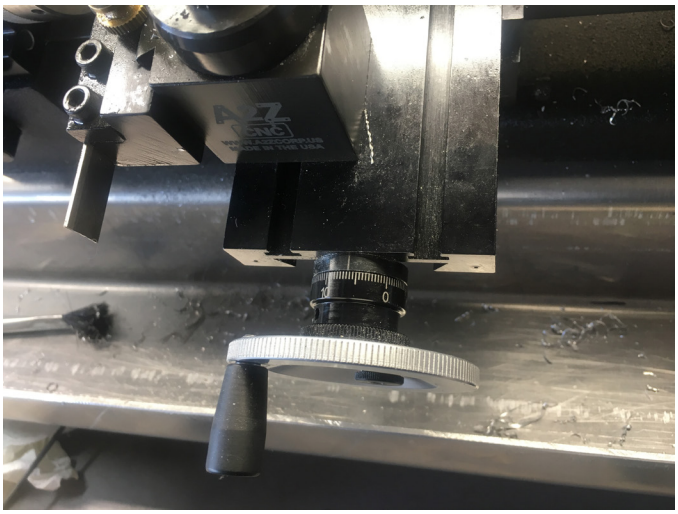

FIGURE 5—Original Sherline handwheel on the 4400 crosslide.

..... with this. It's far from a perfect dial like you produce but it works fantastic! I have two more to try to improve on the etching.

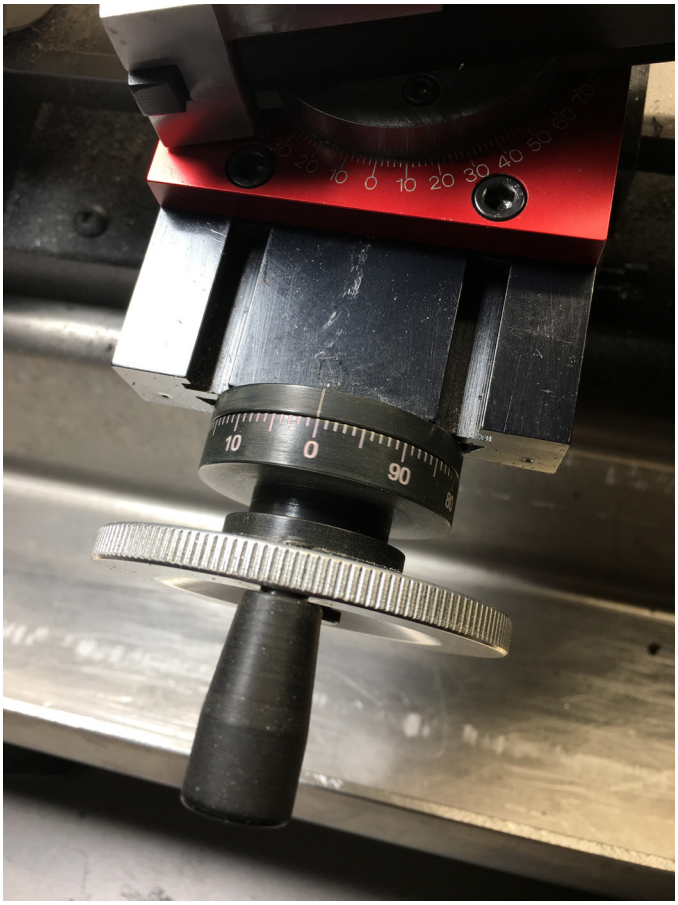

FIGURE 6—New handwheel dial mounted on the crosslide with 100 incremental marks.

It is a pleasure turning with this dial. It has the proper numbering also. I think this would be a great accessory you could offer many lathe users.

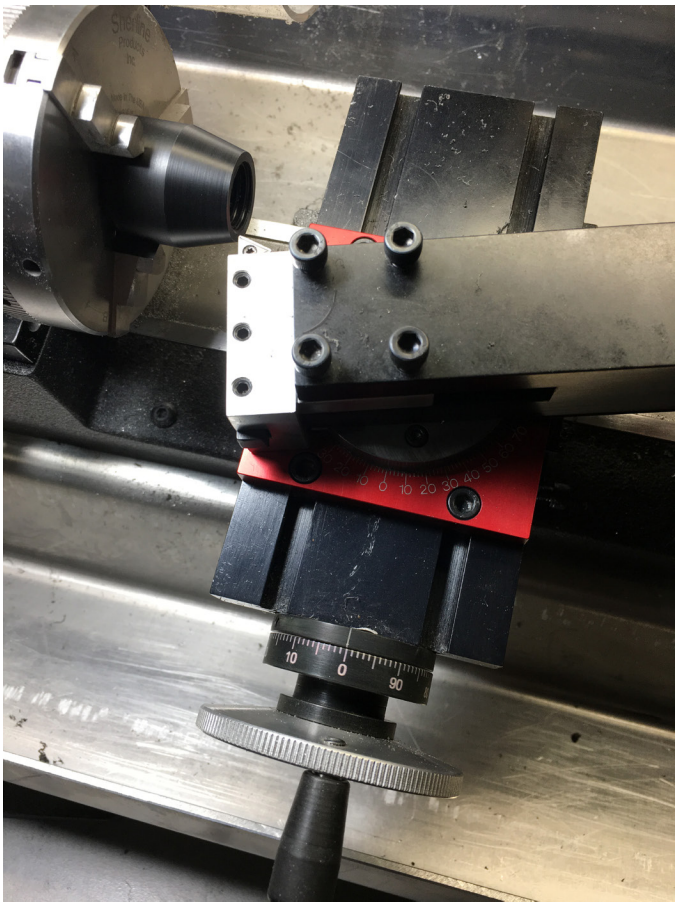

FIGURE 7

These are my machines. I truly love your Sherline Products (See Figures 8 and 9).

FIGURE 8—4400 Lathe with the new handwheel on the crosslide in a custom lathe enclosure.

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FIGURE 9—5400 Mill.

Thanks for taking the time to read this long email and hope you enjoyed it.

Paul Petrzelka

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