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An Auxiliary Tension Screw

for a Unimat Lathe

by John G. Landwehr

About 20 years ago, being overcome with HO scale model railroading, I purchased a Unimat. This, in itself, is not earthshaking since others seem to have done the same thing. I finally learned how to use it, enjoyed that use and went on to bigger but not necessarily better things.

Over the years, in various magazines, I have read of various gadgets and gimmicks that could be made or adapted to "improve" the little lathe. Most of these seem to be directed toward extending its capacity which is not a bad idea, but they all have ignored two problems that are inherent in the basic machine. One of these is easily corrected. The other; well, I have some ideas but no longer use the machine enough to make me get off my duff and work them out.

The first and easiest problem is the cross slide locking screw; at some point in the operation it has too much or too little tension. Invariably the head of the screw is found under the milling table, vise or tool holder. You cuss, take down your setup and adjust. Then you try to match your original setup, usually with poor results.

The diagram shows an auxiliary tension screw setup. The whole thing is easily done; just remove the cross slide bar set screws, crank the table off and drill a hole for an Allen head cap screw, enlarge it for the head and tap the body for the screw. Chuck the screw you intend to use in the three jaw, take a round file in hand and cut away the threads to suit the dimensions of the cross slide bars. Assemble and Voila!

I used, and suggest the use of, one of the metric screws that come with various accessories since it will then have a head that will fit the wrenches that come with the machine, but any suitable cap screw would do. If you are serious about the use of the Unimat, you need to buy the appropriate taps anyhow.

Just get caught one more time with a buried cross slide lock and you'll do it. It takes about twice as long as you expected, of course, but well worth it.

The other problem is the lack of a compound top slide. Not much room, but I think it could be done.

One last word — my cross slide lock has been in use about 18 years without trouble of any sort.

