

# Wiggler - a center finder for the lathe

## MT2 spring center - a wiggler and a help for tapping

February 2010



This idea came out during a [discussion](#) on the 7x12minilathe group in June 2008, though it is not really a new idea. This tool was made in 2008 and the MT2 taper, as well as the [drill chuck arbors](#) I'm using, was made using a taper attachment that is yet to be finished. I have been awaiting for the taper attachment to be definitively finished to show the tools made on it, but things go slowly sometimes and doesn't make sense to wait anymore. Of course, after all this time there are light wear signs.

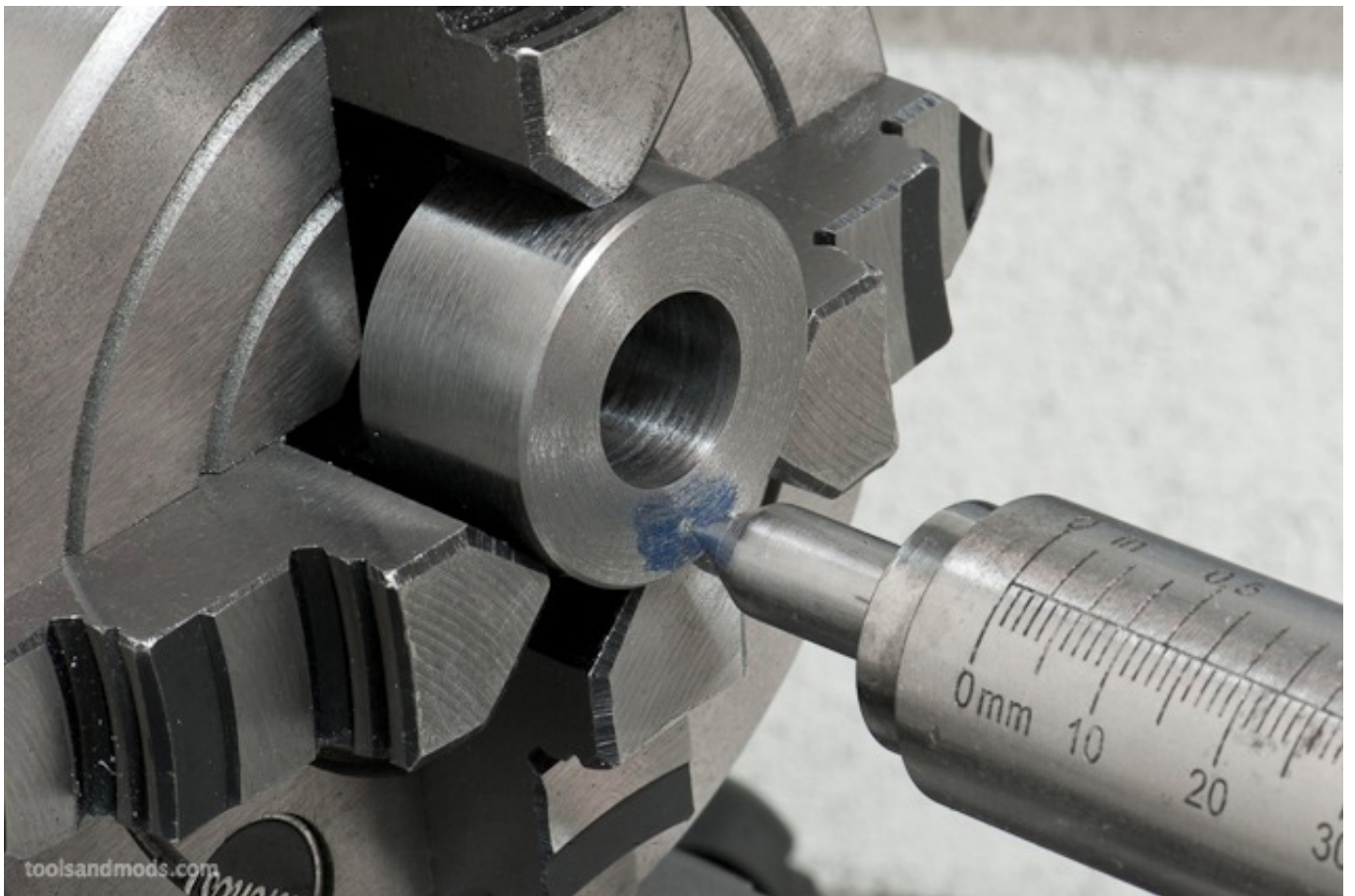
The main idea I have for lathe tooling is to make small tools for a small lathe. A spring center can also be made with a straight shank and then hold it on the drill chuck, but that is one tool holding other

tool and there goes the lathe bed length. So this one was made with a MT2 taper to fit the mini-lathe tailstock and for two different uses. To be used as a lathe wiggler (or center finder) and also for tapping.

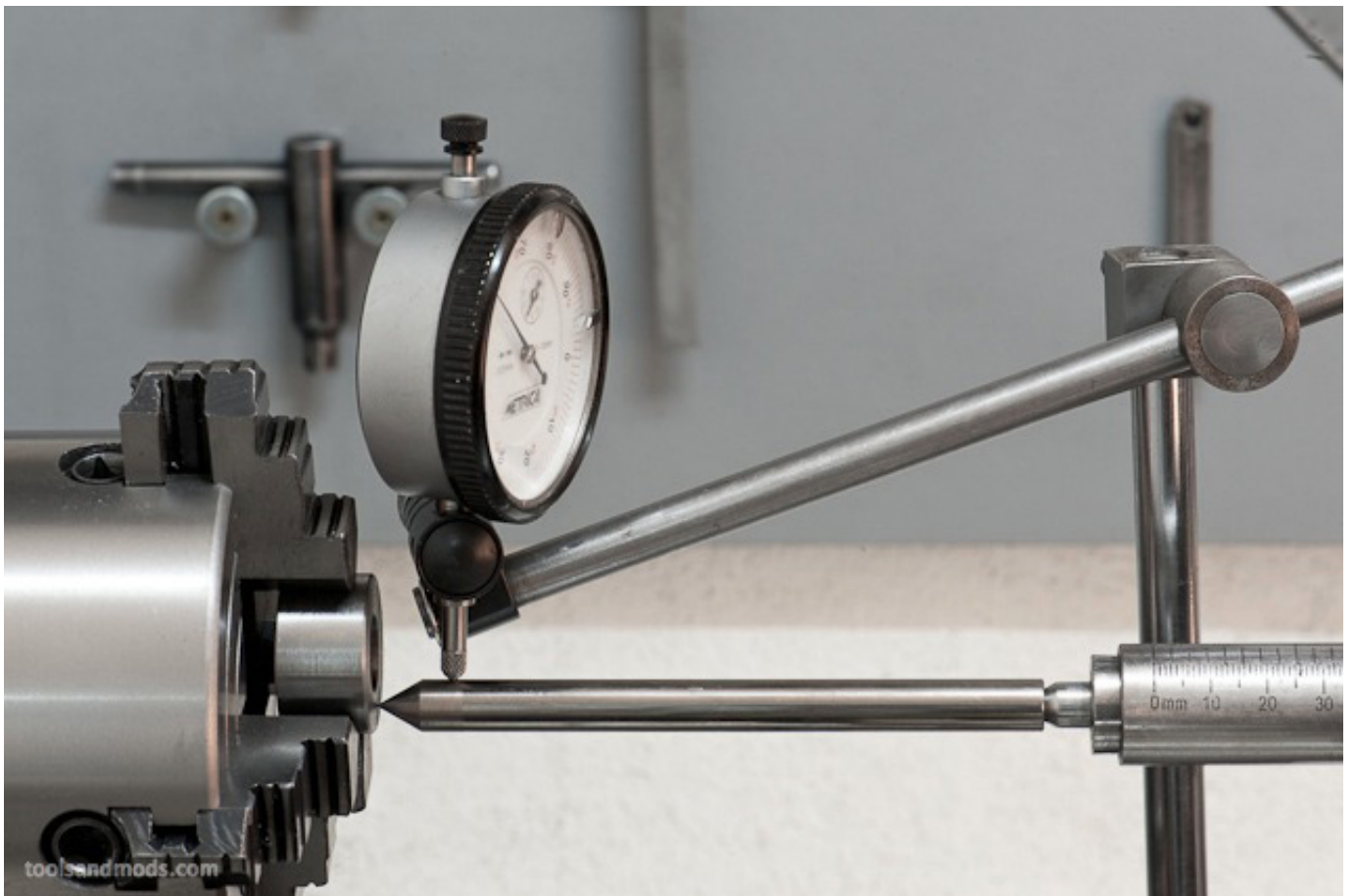
To use it as a center finder, a bar was center drilled on one end and a 60° center turned on the other end. For tapping, a tap holder was center drilled on the rear end.



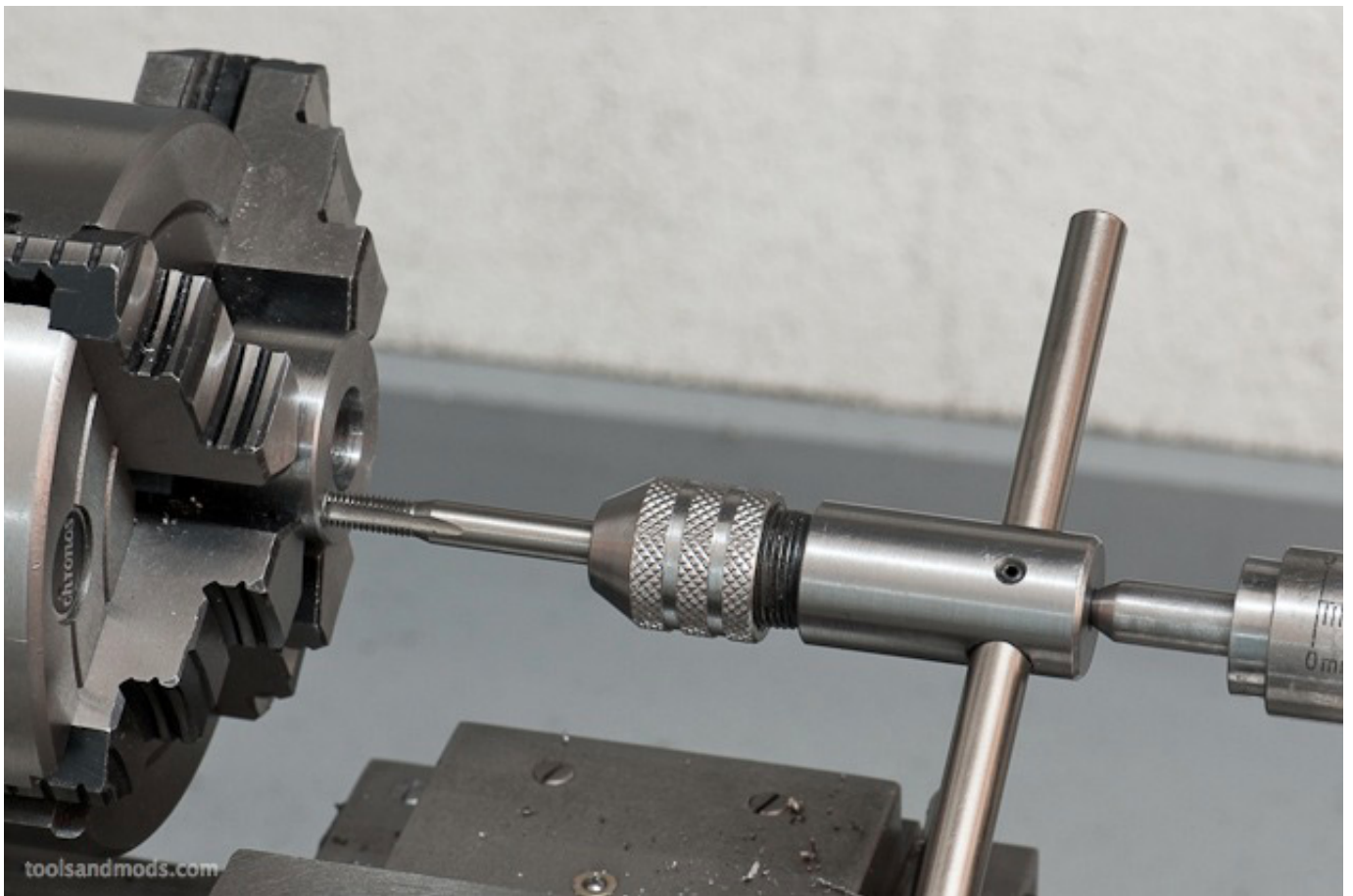
The MT2 center was drilled and reamed for the center shaft and bored larger in the front end for the collar to be pressed on. A strong spring does all the work. It is oil lubed inside and a 3mm hole was drilled on the rear end of the MT2 taper. This small hole is really needed for it to work, as without it vacuum will impede the center to move out again. The hole was useful now to disassemble it for pictures :-). The way it works as a center finder is very simple and the wiggler bar can be made with any length.



For centering a punch mark on work for precise drilling, as on picture, I use to first move the tailstock with the spring loaded center close to the part to roughly center the punch mark on the 4 jaws independent chuck.



Then move back the tailstock to add the center finder / wiggler bar for the final adjustments using the dial indicator to precisely center it on chuck.



For tapping, the spring center fit on the back of the tap holder and pushes the tap into the hole. It can also be used on the back of the tap, when using a different tap holder design. Suitable for hand reamers too.

Have made a new handle for the tap holder so it can be rotated on the mini-lathe having the compound set at 90°. The spring center, with this tap holder, can be used to tap on the end of stock protruding up to 200mm / 8" from the 100mm - 4" chuck. The main advantage is that, with the spring center travel, I don't need to feed the tailstock quill when tapping. To tap a deep thread may need to feed the tailstock quill once.

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