

# A HEIGHT ADJUSTING TOOLPOST

By James Smith

**T**HIS DEVICE REPRESENTS a method of lathe tool height adjustment and though I do not claim originality, I cannot recall having seen the idea published before.

I have been using this tool holder nearly seven years, and it has not given me the slightest trouble. In fact, it has saved me considerable time in tool setting. The holder itself is simply an improvement on the Drummond split toolbox type, which clamps to a pillar, cast integral with the topslide.

This pillar on my lathe has a 1/2 in. Whit. tapped hole in the centre about 1 1/2 in. deep for what reason I am not sure unless it was for holding the slide in a jig, the pillar having been turned first while the vee-slides were machined. However, I thought that the tapped hole could be used for tool height setting, so the improved tool holder was evolved.

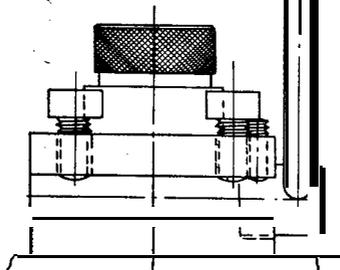
## Would not reach centre

The original toolbox had a square hole for the tool, which, when using a right- or left-hand cranked tool, meant bringing the cross-slide well out or turning the box almost through 90 deg. I did not like this at all. And when the toolbox was set with the square hole parallel to the bed for boring and the cross-slide was screwed in as far as it would go, the toolbox would not reach the centre unless I took off the whole topslide and put it in the farthest tee-slot.

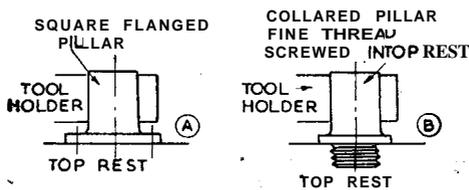
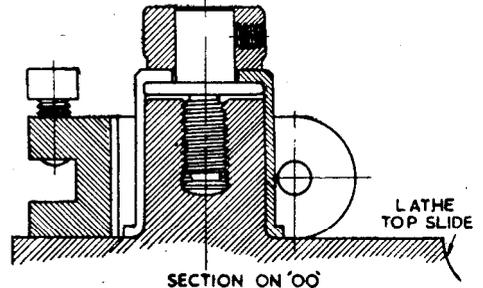
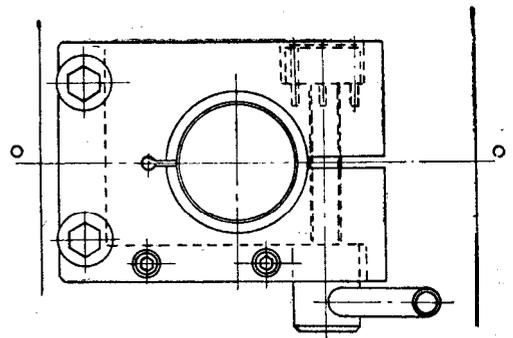
So I decided to make a new one with screw-height adjustment, and which would reach the centre without the necessity to change to another tee slot.

The modified toolbox is made out of a block of cast steel, but cast iron would do just as well. The split bush is made of mild steel and the ring of holes under the bolt head is for turning

Side elevation of the tool holder

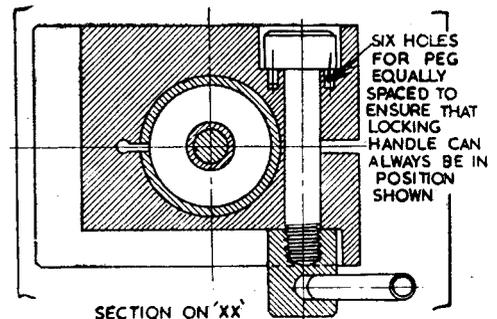
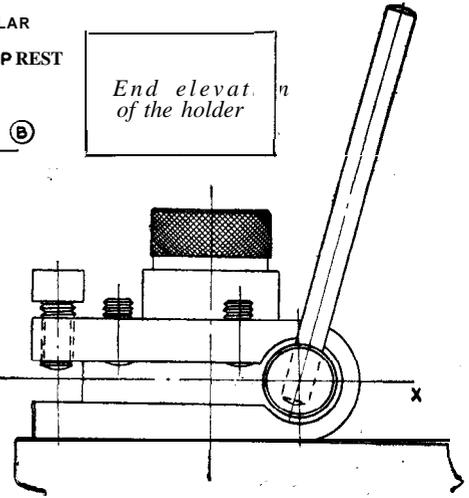


Top Right: Plan view  
Right: Sectional view



End elevation of the holder

Above: Adaptation of tool holder on other lathes  
Below right: Sectional plan



ing back the clamping-bolt should there be any thread stretching, thus the nut handle is always about 45 deg. off vertical. The drawing will show how simple the adjustments are. Personally, I do not like any tool holders in which the front and top rake angles are altered so as to obtain dead centre.

This improved tool holder is only adaptable at present to the Myford Drummond, but it would be easy to fasten a 1 1/4 in. dia. pillar either with a square flange or shouldered and screwed with a fine thread to many existing lathes.

I am surprised that this simple holder has not been thought of before. I can assure readers that it is quite solid when taking very heavy cuts.

SIX HOLES FOR PEG EQUALLY SPACED TO ENSURE THAT LOCKING HANDLE CAN ALWAYS BE IN POSITION SHOWN