C. L. TOLLES.

TURRET TOOL POST.

APPLICATION FILED JAN. 19, 1916.

1,232,999.

Patented July 10, 1917.

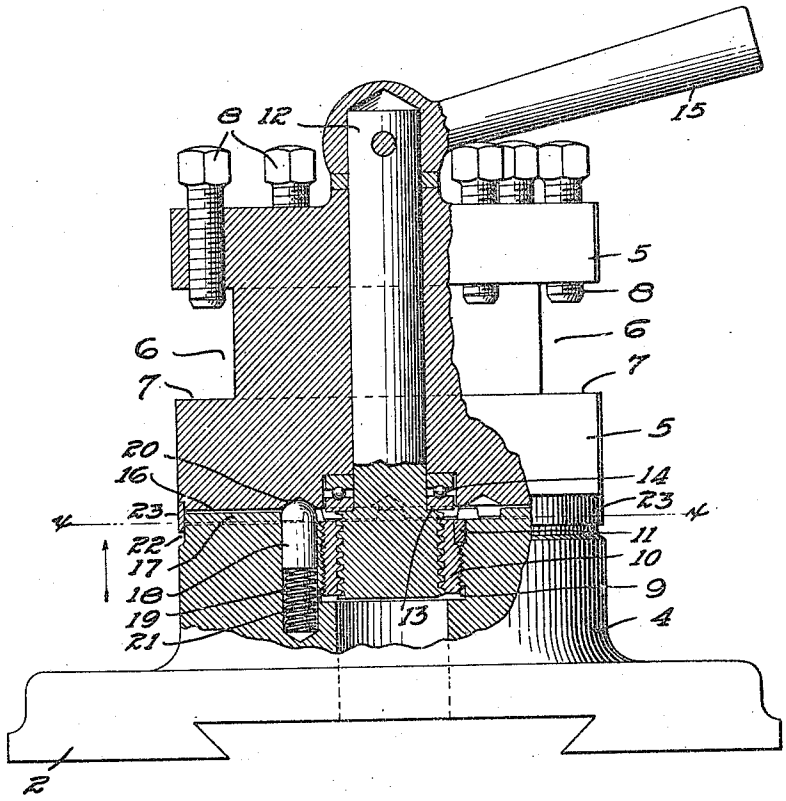


FIG. 1.

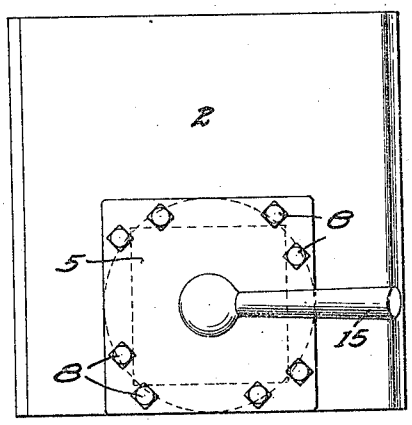


FIG. 2.

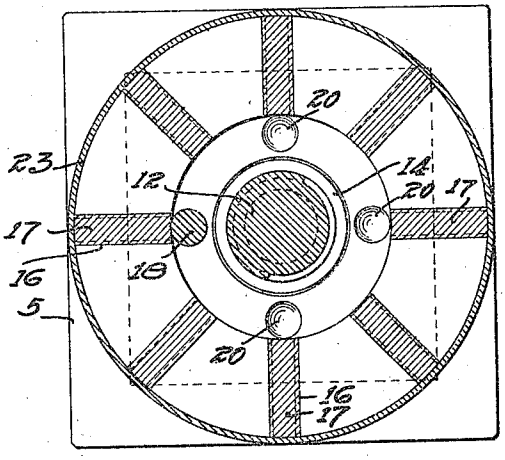


FIG. 3.

WITNESSES

M. R. McInnis

E. A. Paul

INVENTOR

CHARLES L. TOLLES

BY Paul & Paul

ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES LYMAN TOLLES, OF EAU CLAIRE, WISCONSIN.

TURRET TOOL-POST.

1,232,999. Specification of Letters Patent. Patented July 10, 1917.

Application filed January 19, 1916. Serial No. 73,051.

To all whom it may concern:

Be it known that I, CHARLES L. TOLLES, citizen of the United States, resident of Eau Claire, county of Eau Claire, State of Wisconsin, have invented certain new and useful Improvements in Turret Tool-Posts, of which the following is a specification.

The object of my invention is to provide a tool post adapted for use on a lathe carriage in place of the regular tool block and in which the ordinary lathe tools can be mounted for turning, threading, etc.

A further object is to provide a tool post in which the tools are always ready for use and can be brought into position for operation without re-adjustment.

A further object is to provide a tool post which can be easily and quickly operated.

Other objects of the invention will appear from the following detailed description.

The invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification,

Figure 1 is an elevation, partially in section, of a turret tool post embodying my invention,

Fig. 2 is a plan view of the same,

Fig. 3 is a sectional view on the line *x*—*x* of Fig. 1.

In the drawing, 2 represents a base, mounted to slide on the lathe, and having a post 4, preferably cylindrical in form, mounted thereon. Above this post 4 is a head 5 having an annular recess 6 formed therein, with a seat 7 for the tools. In the top of the head clamping bolts 8 are mounted to project down into the recess to engage and clamp the tools on the seat 7. The number and position of these bolts may be varied, according to the shape of the post and the number of tools it is desired to mount therein. The post 4 has a socket 9 formed centrally therein, into which an internally threaded sleeve 10 is tapped and locked therein by suitable means, such as a key 11. A spindle 12 is exteriorly threaded to engage the threads of the sleeve and extends up centrally through a socket in the head and is provided with a shoulder 13 on which the head 5 is seated, there being preferably a ball bearing 14 interposed between the said head and said shoulder. This bearing allows the head to be turned freely on the spindle when the spindle is raised to release the head. A lever 15 is mounted on the upper end of the spindle 12 by means of which the spindle may be revolved to raise or lower the head to release or lock it.

A system of indexing is provided, consisting of radial recesses 16 formed in the under surface of the head 5 and positioned to receive correspondingly shaped ribs 17 on the upper surface of the post and a pin 18 is mounted in a socket 19 in the post and held upward with a yielding pressure into a recess 20 in the underside of the head by means of a helical spring 21, arranged in a socket 19 below the said pin. A series of recesses 20 is formed in the underside of the head, opposite the recesses 16, and when the head is revolved, the yielding pin will serve to index or center the head, so that when it is locked, the ribs 17 will enter the recesses 16 and hold the head securely against premature movement. I prefer also to provide an annular recess 22 in the top of the post 4 to receive a depending dust guard or band 23 that is mounted on the lower portion of the revolving head.

The tool may be made in various sizes and its shape may be varied, according to the number of tools it is desired to mount therein.

I claim as my invention:

1. A carriage turret comprising a post, an internally threaded sleeve tapped into the center of said post, a head having an under surface for opposing the upper surface of said post, a spindle having its lower end externally threaded and fitting within said sleeve, said spindle having a shoulder formed thereon above said sleeve and an anti-friction bearing interposed between said shoulder and said head, said head having an indexing means on said post and provided with tool seats.

2. A carriage turret comprising a post, an internally threaded sleeve tapped into the center of said post, a head having an under surface for opposing the upper surface of said post, a spindle having its lower end externally threaded and fitting within said sleeve, said head having a bearing on said spindle, and provided with tool seats, and an indexing means on said post.

3. A carriage turret comprising a post, a spindle centrally tapped therein, a head having an anti-friction bearing on said spindle, said post and head having opposing ribs

and recesses for locking said head against premature rotation, and said post and head also having an opposing pin and recess therefor, and means for rotating said spindle to lock said head on said post or release it to allow its rotation and indexing.

4. A carriage turret comprising a post provided with a series of radially arranged ribs in its upper surface, a spindle centrally tapped into said post, a head having a corresponding number of radial recesses to receive said ribs and a central opening to receive said spindle, said spindle having an anti-friction bearing for said head thereon, said post having a spring pressed pin therein at the inner end of one of said ribs and said head having recesses to receive said pin and means for rotating said spindle to lock said head on said post or release it to allow its rotation and indexing.

In witness whereof, I have hereunto set my hand this 13th day of January, 1916.

CHARLES LYMAN TOLLES.

Witness:
COILA L. ROWAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."