W. A. JOHNSON & C. H. KNOTHE.

ADJUSTABLE STOP FOR MACHINE TOOL HOLDERS.

APPLICATION FILED DEC. 17, 1909.

1,000,011. Patented Aug. 8, 1911.

Fig. 1.

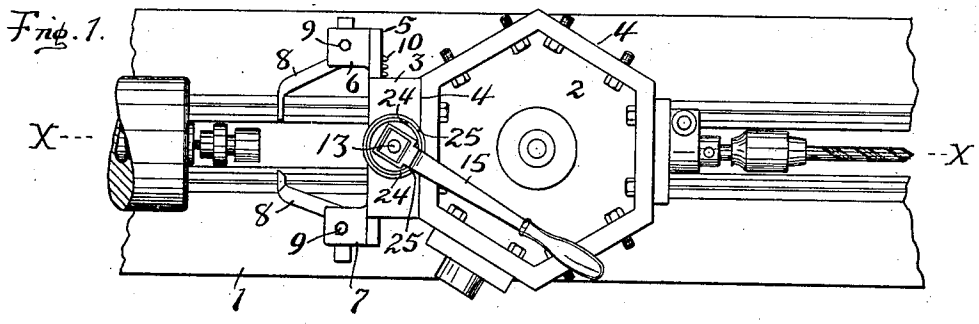


Fig. 2.

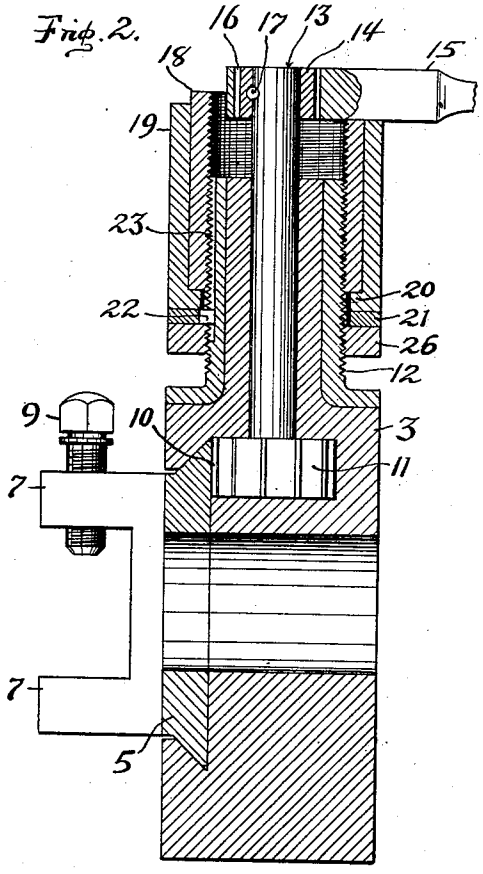
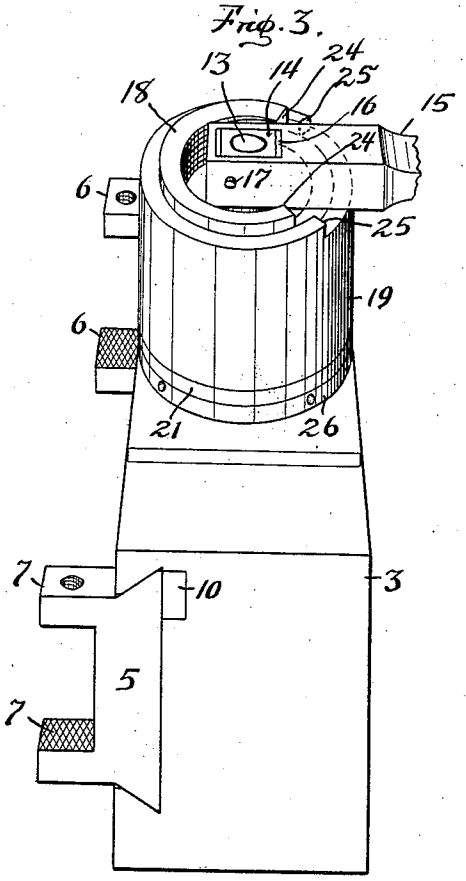


Fig. 3.



WITNESSES:

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ADJUSTABLE STOP FOR MACHINE-TOOL HOLDERS.

1,000,011. Specification of Letters Patent. Patented Aug. 8, 1911.

Application filed December 17, 1909. Serial No. 533,658.

To all whom it may concern:

Be it known that we, WALTER A. JOHNSON and CHARLES H. KNOTHE, citizens of the United States of America, and residents of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Adjustable Stops for Machine-Tool Holders, of which the following is a specification.

This invention relates to improvements in adjustable stops for machine tool holders, and the objects thereof are to provide a series of stops to regulate the movements of one or more tools used on machines such as lathes, especially of the turret type, and to afford means of adjusting the stops severally.

A further object is to arrange the operating handle in such relation with the several stops that the handle may be manipulated so as to engage any of the stops as may be desired without releasing hold thereof.

These objects are accomplished by the construction illustrated in the accompanying drawings, in which—

Figure 1. is a plan view showing a portion of a turret lathe with this invention in position thereon; Fig. 2. is a vertical central section of the tool holder and adjustable stops, the section being on the line X—X of Fig. 1; and Fig. 3 is a perspective view of the same.

Similar numerals of reference indicate corresponding parts throughout the several views, and referring now to the same:

1 is a lathe, and 2 is its turret.

The tool holder comprises a base 3 which is rigidly fastened against one of the facets 4 of the turret, and a slide 5 having oppositely disposed jaws 6—6 and 7—7 respectively arranged at its ends. A tool 8 is adapted to be secured between each pair of jaws, the same being held therein by means of set screws 9. The slide has a rack 10 upon its rear side, that is engaged by a pinion 11 contained within the base, and thereby the slide is adapted to be shifted transversely respecting the lathe centers.

The base has a vertical, threaded stem 12 projecting from its top, and an operating shaft 13 extends centrally therethrough, its lower end being connected with the pinion 11 and its projecting upper end having a block 14 fixed thereon. A handle 15 having a slot 16 therein fits about the block and is pivoted thereto by means of a pin 17 that engages also the shaft 13 so that when the handle is swung to and fro, the shaft and block will be likewise moved. The slot 16 is of sufficient endwise dimension as to afford clearance between the ends of the block and corresponding adjacent walls of the handle, so that the handle may be swung upon the pin in a vertical direction.

Upon the stem 12 are two cylindrical sleeves 18 and 19 respectively, the former extending partly within the latter, and having threaded relation with the stem, and the latter sleeve having an internal flange 20 that extends under the lower end of the inner sleeve but clear of the stem. Upon the stem, and immediately beneath the lower end of the outer sleeve 19, is a washer 21 that has a tongue 22 which extends into a key-way 23 made longitudinally in the stem, the tongue serving to prevent the washer from turning upon the stem. A threaded collar 26 fits upon the stem immediately beneath the washer, and is adapted to be driven upward against the washer and thereby lock the sleeves in the positions to which they have been previously adjusted, the flange of the outer sleeve being bound against the lower end of the inner sleeve, and the effect being to hold the sleeves from turning upon the stem.

Each sleeve, 18 and 19, has at its upper end one or more stops 24 and 25 respectively, against which the handle is adapted to strike, severally, accordingly as the handle is manipulated. Thus, the handle may be lifted so as to pass over one stop and brought into contact with the next stop, and so on, selectively.

In the operation of this invention, the tools 8 are fixed between the jaws of the slide in position suitable to engage the work in the lathe, and the sleeves are adjusted and locked on the stem in such positions thereon as to locate their respective stops at suitable points to stop the swing of the handle as may be desired. The tools being moved by the handle will engage the work in the lathe to an extent accordingly as the handle is swung laterally, and the depth of cut made by the respective tools will be regulated by the stops accordingly as the handle is moved vertically. Thus it will be understood that the operating handle has a primary movement that actuates the sliding tool holder, and a secondary movement that effects the regulation of the primary

movement by selective engagement with a series of adjustable stops, both of which movements are effected entirely by manipulation of the handle without the necessity of the operator removing his hold thereon.

Having described our invention what we claim as new and desire to secure by Letters Patent, is:

1. In apparatus of the class described, a slide suitably mounted, a stop, and a handle operatively connected to the slide and arranged to have primary and secondary movements, the former to actuate the slide and the latter to engage the stop.

2. In apparatus of the class described, a base, having a projecting stem, a slide in connection with the base, a shaft extending through the stem and having means in connection with the slide to actuate the latter, a series of adjustable stops mounted on the stem and having locking means in connection therewith, and a handle pivoted to the shaft, and having two movements, one to actuate the shaft, and the other to selectively engage the stops.

3. In apparatus of the class described, a slide, a handle having operating connection with the slide, and a series of stops, the said handle having two movements, one to actuate the slide and the other to selectively engage the stops.

In testimony whereof we affix our signatures, in presence of two witnesses.

WALTER A. JOHNSON.
CHARLES H. KNOTHE.

Witnesses:
ROBERT BURNS,
W. G. BURNS.