No. 684,508. Patented Oct. 15, 1901.

J. J. GRANT.

TOOL REST ADJUSTMENT.

(Application filed Jan. 14, 1901.)

(No Model.)

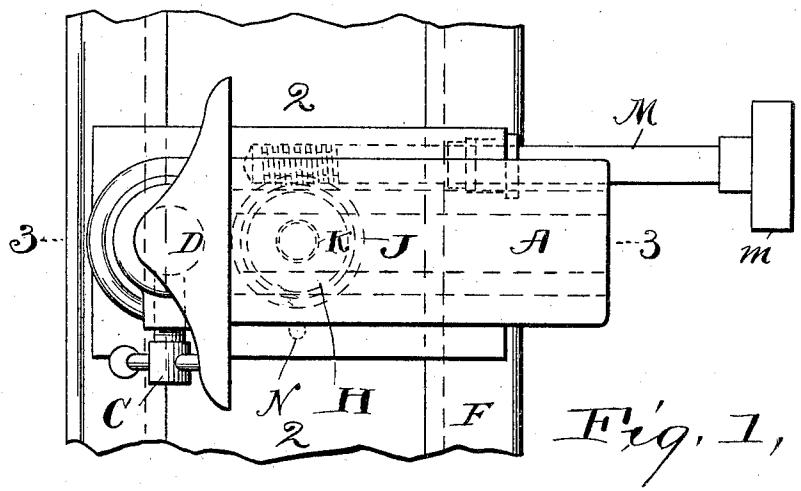


Fig. 1,

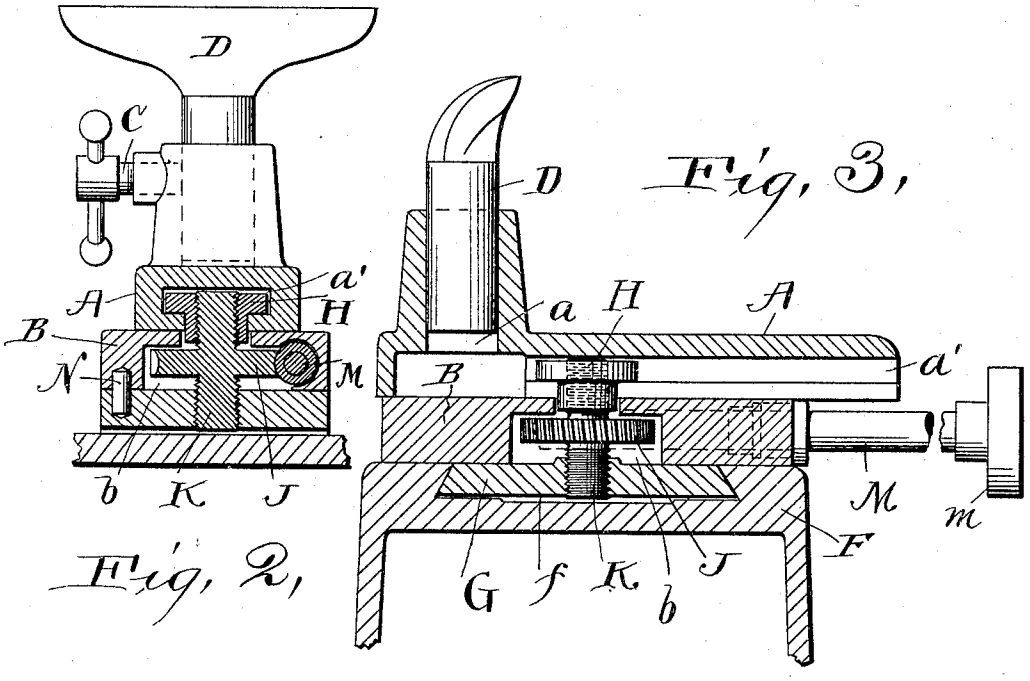


Fig. 3,

Fig. 2,

Witnesses,
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Inventor,
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THE NORRIS PETERS CO., PHOTO LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN J. GRANT, OF CLEVELAND, OHIO.

TOOL-REST ADJUSTMENT.

SPECIFICATION forming part of Letters Patent No. 684,508, dated October 15, 1901.

Application filed January 14, 1901. Serial No. 43,184. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. GRANT, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Tool-Rest Adjustments, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The invention is applicable particularly to lathes; and the object is to provide novel means for quickly adjusting and securing the tool-rest in any desired position relative to the work.

The invention consists in the construction and combination of parts hereinafter described, and pointed out definitely in the claims.

In the drawings, Figure 1 is a plan view showing my invention. Fig. 2 is a sectional view on the line 2 2 of Fig. 1; and Fig. 3 is a sectional view on line 3 3, Fig. 1.

Referring to the parts by letters, A represents the tool-rest plate, which has near one end and upon its upper side a socket *a*, in which the tool-rest D may be adjustably secured by means of the set-screw C. In the under side of this plate is a T-shaped groove *a'*. This plate A rests upon what may be termed a "worm-block" B, which block rests upon the bed F of the machine. Lathes and other machines in which this invention may be used very commonly are provided with a slide which supports the tool-rest and by means of which it may be moved to the right or left. Such a slide is indicated by G in the drawings, and it is mounted in a dovetailed way *f* in the bed of the machine. The worm-block lies over this slide, resting, as before stated, upon the bed of the machine.

K represents a vertical screw, which is oppositely threaded at its ends. Its lower end screws into the slide G, and its upper end screws into a flanged nut H, which lies in the T-shaped groove *a'* in the tool-rest, the body of said nut projecting a short distance into the worm-block. Secured to or formed upon this screw K is a worm-wheel J, which lies in a recess *b* in the worm-block. A worm M is mounted in this worm-block so as to engage with this worm-wheel, and it has a milled head *m* secured to its projecting end. By turning this worm in one direction the parts are loosened up and the slide A may be turned upon the nut H as a pivot and may be moved in the direction of its slot to any extent desired. The slide G may also be moved as desired, the result being that the tool-rest D may be brought into any desired position relative to the work. Now by turning the worm in the opposite direction all of the parts described are firmly clamped together and to the bed-plate of the machine—that is to say, the plate A is clamped by the nut H upon the block B, the slide G is drawn up against the overhanging edges of the dovetailed way in which it moves, and the block B is drawn down against the bed, thereby, as before stated, immovably fixing for the time being all the parts described, with the tool-rest in the desired position.

For convenience it is preferable to prevent the worm-block from turning upon the screw K as a pivot, and to that end a dowel-pin N is set into two recesses in the slide G and the block B, respectively, as shown in Fig. 3.

Having described my invention, I claim—

1. The combination of a tool-rest plate having a T-shaped groove in its under side, and a worm-block upon which it rests, combined with a clamping-nut having a flange which lies in said T-shaped groove, a screw oppositely threaded at its ends, the upper end screwing into said nut, and the lower end into a part of the machine below said block, a worm-wheel secured to said screw, and a worm mounted in the worm-block and engaging the said worm-wheel, substantially as and for the purpose specified.

2. The combination of a supporting bed-plate, a slide movable therein in a dovetailed way, a worm-block resting on the bed-plate over said slide, and a tool-rest plate resting upon the worm-block and having a T-shaped groove in its under side, with a screw having oppositely-threaded ends of which the lower end screws into said slide, a flanged clamping-nut which lies in said T-shaped groove and screws onto the upper end of said screw, a worm-wheel rigid with said screw, and a worm mounted in the worm-block and engaging with said worm-wheel.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN J. GRANT.

Witnesses:
ALBERT H. BATES,
E. B. GILCHRIST.