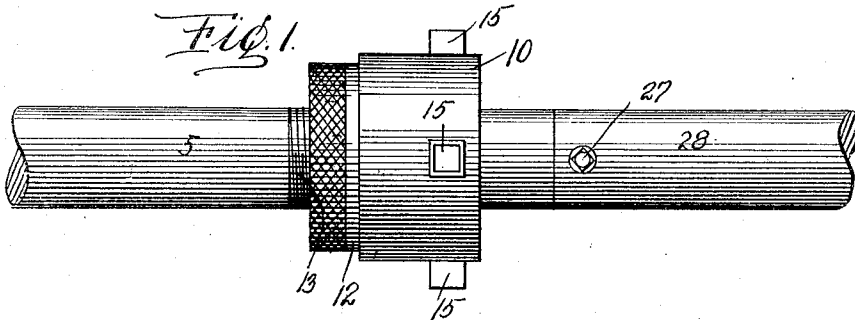
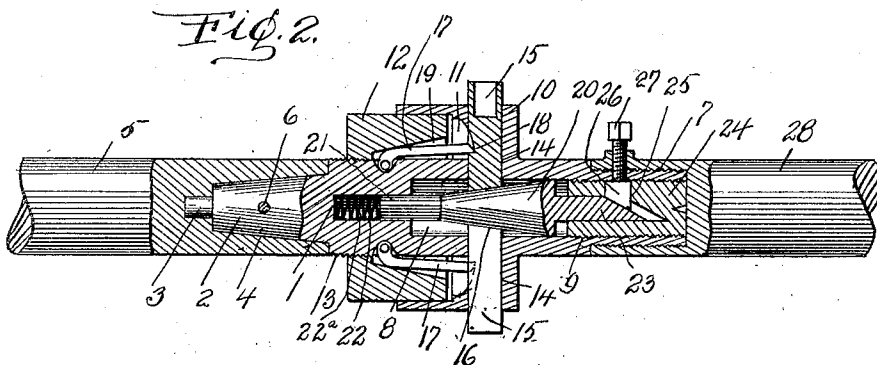


G. C. BARNES.
ADJUSTABLE BORING TOOL.
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914,328.

Patented Mar. 2, 1909.



Witnesses

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GROVER C. BARNES, OF TURTLE CREEK, PENNSYLVANIA.

ADJUSTABLE BORING-TOOL.

No. 914,328.

Specification of Letters Patent.

Patented March 2, 1909.

Application filed April 20, 1908. Serial No. 428,083.

To all whom it may concern:

Be it known that I, GROVER C. BARNES, a citizen of the United States of America, residing at Turtle Creek, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Boring-Tools, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to tool supports particularly designed for tools or tool holders.

The object of my invention is to provide a novel rotary tool support wherein simple and effective means are employed for adjusting tools or tool holders.

My invention aims to provide a rotary tool support, of simple, durable and inexpensive construction, the tool support being particularly designed for boring machines.

To this end, I have devised a rotary tool support for positively holding tools or tool holders, permitting of said tools or tool holders being easily and quickly adjusted. The tools or tool holders are held by pivoted latches and a nut serving functionally as a keeper, while the tools or tool holders are adjusted by a tapering member interposed between the confronting ends of the tools or tool holders.

The detail construction entering into my invention will be presently described and then specifically pointed out in the appended claims.

Referring to the drawing forming a part of this specification, Figure 1 is an elevation of my tool support, Fig. 2 is a similar view partly broken away and partly in section.

In the accompanying drawings 1 designates the body of the tool support, said body being cylindrical and provided at one end with a tapering plug 2 terminating in a pin 3 adapted to fit in a socket 4 provided therefor in the end of a driven shaft 5. The plug 2 is secured in the socket 4 by a pin 6 or similar fastening means. The opposite end of the body 1 is contracted and exteriorly screw threaded, as at 7 and provided with a bore 8 having its outer end threaded, as at 9.

The body 1 intermediate its ends is provided with an annular collar 10 having an annular recess 11 for a knurled nut 12 adapted to screw upon the threads 13 of the body 1. The collar 10 is provided with a plurality of radially disposed openings 14 communicating with the bore 8. Mounted

in the openings 14 are tools or tool holders 15 having their confronting or inner ends beveled as at 16. The tools or tool holders 15 are retained within the openings 14 by pivoted latches 17, carried by the body 1, said latches engaging in notches 18 provided therefor in the tools or tool holders. The latches 17 are retained in engagement with the tools or tool holders 15 by the nut 12, said nut being recessed as at 19 to provide clearance for the latches and at the same time serve as a keeper. It will of course be understood that a latch is used for each tool or tool holder, and that by adjusting the nut 12 upon the body 1, the tools or tool holders can be locked in their adjusted position.

For adjusting the tools or tool holders, I employ a mechanism comprising a tapering member 20 fitting within the bore 8, said member having a shank 21 at the inner end thereof for engaging in the socket 22 provided therefor in the body 1, while the opposite end of the tapering member 20 is formed with a beveled stem 23, this stem extending into a plug 24 screwed into the threaded end of the bore 8. The plug 24 is provided with an opening 25 for a beveled block 26, which engages the beveled stem 23. The block 26 is adjusted by virtue of set screw 27 adjustably mounted in the end of the shaft 28 and the contracted end of the body 1, the shaft 28 being screwed upon the contracted and threaded end of the body 1. It will thus be observed that the screw 27 serves as a lock for the body 1 within the end of the shaft 28. In the socket 22 is located a spring 22^a for forcing the member 20 outwardly.

To adjust the tools or tool holders 15, the nut 12 is unscrewed and the set screw 27 rotated to force the block 26 inwardly against the beveled stem 23 of the tapering member 20. This member will be forced inwardly and will consequently force the tools or tool holders outwardly a prescribed distance. The nut 12 is then tightened to bind the latches 17 in the notches 18, to firmly hold the tools or tool holders in engagement with the tapering member 20.

It is thought that the utility and the manner of adjusting my tool support will be fully understood, and I reserve the right to make such structural changes as are permissible by the appended claims.

Having now described my invention what I claim as new, is;—

1. In a tool and tool holder support, the

combination with shafts and tools, of a body mounted between said shafts, said body having a bore formed therein, a recessed collar carried by said body, said collar having a plurality of openings formed therein communicating with said bore and adapted to receive said tools, pivoted latches carried by said body for engaging said tools, a nut adjustably mounted upon said body for entering said recessed collar and engaging said latches, a tapering member movably mounted in the bore of said body for engaging the inner ends of said tools, a beveled stem carried by said member, a beveled block for engaging said stem, and a screw extending into said body and engaging said block for adjusting said member.

2. In a tool and tool holder support, the combination with shafts and tools, of a body mounted between said shafts, said body having a bore formed therein, a recessed collar carried by said body, said collar having a plurality of openings formed therein communicating with said bore and adapted to receive said tools, pivoted latches carried by said body for engaging said tools, a nut adjustably mounted upon said body for entering said recessed collar and engaging said latches, a tapering member movably mounted in the bore of said body for engaging the inner ends of said tools, and means carried by

said body for adjusting said tapering member.

3. A tool support comprising a body, said body having a bore formed therein, a recessed collar carried by said body, said collar having a plurality of tool-receiving openings formed therein, pivoted latches carried by said body and adapted to engage tools mounted in the openings of said collar, a nut adjustably carried by said body for locking said latches, a tapering member located in the bore of said body for engaging the inner ends of tools located in said collar, and means carried by said body for adjusting said member.

4. A tool support comprising a body, said body having openings formed therein, elements extending in said openings, latches carried by and arranged exteriorly of said body and adapted to engage said elements, a keeper for said latches, and an adjustable tapering member located in the bore of said body and engaging said elements for shifting them outwardly from the body.

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

GROVER C. BARNES.

Witnesses:

K. H. BUTLER,
A. J. TRIGG.