No. 676,669. Patented June 18, 1901.

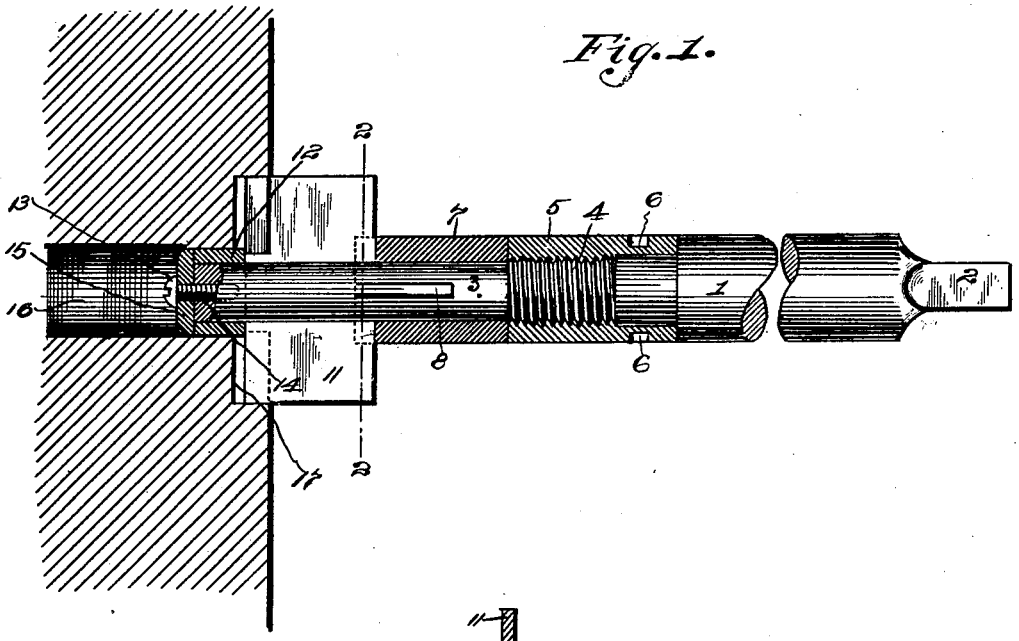
C. H. WACK.

ROTATABLE CUTTER BAR.

(Application filed Mar. 21, 1901.)

(No Model.)

Fig. 1.



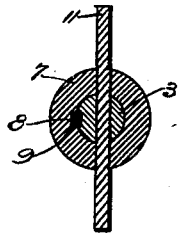


Fig. 2.

Fig. 4.

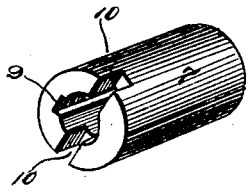
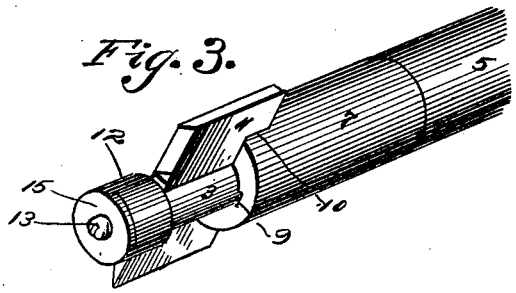


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES H. WACK, OF DUBOIS, PENNSYLVANIA.

ROTATABLE CUTTER-BAR.

SPECIFICATION forming part of Letters Patent No. 676,669, dated June 18, 1901.

Application filed March 21, 1901. Serial No. 52,234. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. WACK, a citizen of the United States, residing at Dubois, in the county of Clearfield and State of Pennsylvania, have invented a new and useful Rotatable Cutter-Bar, of which the following is a specification.

This invention relates to rotatable cutter-bars, and has for its object to provide improved means for detachably connecting a cutter to the bar, so that the device may be used for facing off uneven places around a bolt-opening and for counterboring such openings. It is furthermore designed to arrange for conveniently taking up the wear upon the cutter, so as to maintain a tight and durable connection between the same and the bar, and also to arrange for accommodating the outer bearing end of the bar to openings of different diameters.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a central longitudinal sectional view of a cutter-bar constructed in accordance with the present invention and shown in its operative position. Fig. 2 is a transverse sectional view taken on the line 2 2 of Fig. 1. Fig. 3 is a detail perspective view of the device. Fig. 4 is a detail perspective view of the outer end of the tubular cutter-holding member.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

Referring to the drawings, 1 designates the rotatable bar, which has one end flattened or made polygonal, as at 2, for connection with the means to rotate the bar, while the opposite end thereof is reduced, as indicated at 3. This reduced portion is screw-threaded adjacent to the inner end thereof, as indicated at 4, and upon the screw-threaded portion there is mounted an adjusting-nut 5, in the form of a tube or sleeve, which has external sockets 6 for engagement by an ordinary spanner-wrench to turn the nut. Lying against the outer end of the adjusting-nut is a sleeve 7, which is slidable longitudinally of the bar and is held against independent rotation thereon by means of a longitudinal rib or feather 8, carried by the bar, and of shorter length than the sleeve and also originally located at the outer end thereof, so as to permit of the maximum outward adjustment of the sleeve by the nut before the latter strikes the rib and stops the adjustment. It will be understood that the sleeve has a longitudinal groove 9 formed for the entire length of its inner side for the slidable reception of the rib, as shown in Figs. 2 and 4. Also the outer end of the sleeve is provided with a pair of diametrically opposite notches or recesses 10, with the groove lying substantially midway between the notches.

The cutter-head 11 is in the usual flat plate form and is passed longitudinally through the ordinary longitudinal slot in the bar and adjacent to the reduced terminal thereof, the back edge of the cutter being snugly received within the notches in the sleeve, whereby the cutter is braced and considerable strain is taken from the slotted portion of the bar. After the cutter has been applied to the bar a sleeve or ferrule 12 is fitted to the extreme outer end of the bar, and a screw-fastening 13 is set into a longitudinal screw-threaded opening 14 in the outer end of the bar, there being a disk or washer 15 applied to the terminal of the bar, so as to overlap the outer end of the ferrule, and thereby form a stop to prevent outward displacement thereof. The adjusting-nut is then rotated to slide the sleeve and the cutter outwardly, so as to press the cutter snugly against the inner end of the ferrule 12, whereby the cutter is firmly held between the sleeve and the ferrule to prevent endwise play thereof.

In the application of the device the outer terminal of the bar, having the ferrule, is inserted into a bolt-opening 16, formed in a metallic part 17, so as to form an outer terminal bearing for the bar with the outer active edge of the cutter against the outer face of the part 17, after which the bar is rotated, and the cutter will smooth off any projections

or unevennesses about the opening, or if a countersinking-cutter is employed the opening will be counterbored.

It will be understood that it is designed to provide a plurality of ferrules of different thicknesses, so that the outer bearing end of the bar may be adjusted to fit openings of different diameters.

From the foregoing description it is apparent that the ordinary plate-cutters may be employed with the present invention, or, in other words, the present invention is adapted to the usual form of cutters; also, as the cutting-face of the cutter becomes worn and is resharpened it becomes thinner, such wear being taken up by the adjustment of the parts 5 and 7 to maintain the cutter in a firm grip between the part 7 and the terminal ferrule.

What is claimed is—

A device of the character described, comprising a rotatable bar, having an intermediate screw-threaded portion, an adjusting-nut applied to the screw-threaded portion, a sleeve slidable longitudinally upon the bar, lying in frictional engagement with the outer end of the nut, and provided with an inner longitudinal groove, and outer terminal notches, a longitudinal rib or feather carried by the bar and slidably engaging the groove of the sleeve to interlock the latter against independent rotation upon the bar, a cutter fitted in a longitudinal slot formed through the bar, the rear face of the cutter lying against the outer end of the sleeve, and having portions thereof snugly received within the corresponding notches in the sleeve, a removable ferrule applied to the adjacent end of the bar and normally lying against the outer face of the cutter, and a headed fastening removably applied to said adjacent end of the bar and connecting the ferrule thereto, the cutter being held between the sleeve and the ferrule.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES H. WACK.

Witnesses:
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