H. J. MUNDAY.

WRENCH.

APPLICATION FILED OCT. 12, 1909.

966,698. **Patented Aug. 9, 1910.**

Fig 3

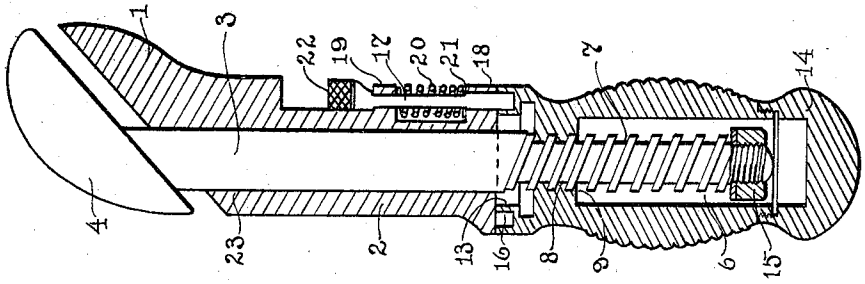


Fig 2

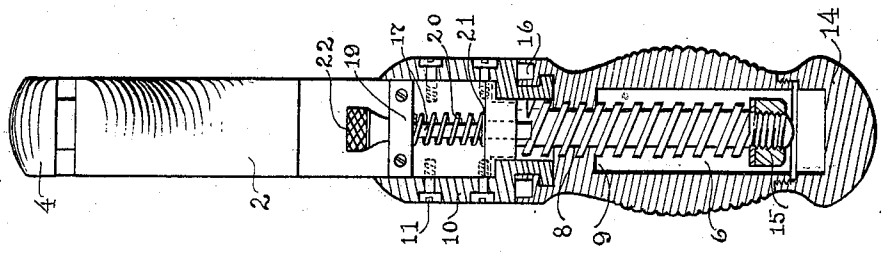


Fig 4

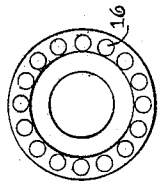


Fig 5

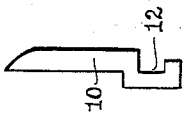


Fig 6

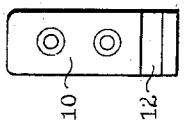
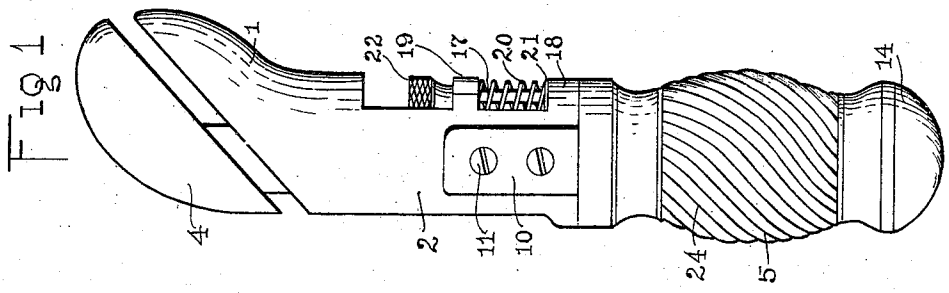


Fig 1



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UNITED STATES PATENT OFFICE.

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WRENCH.

966,698. Specification of Letters Patent. Patented Aug. 9, 1910.

Application filed October 12, 1909. Serial No. 522,293.

To all whom it may concern:

Be it known that I, HOMER J. MUNDAY, a citizen of the United States, residing at Carterville, in the county of Jasper and State of Missouri, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in wrenches and more particularly to that class adapted to be used for turning nuts or the like and my object is to provide means for readily adjusting the wrench to engage nuts of varying sizes.

A further object is to so arrange the jaws of the wrench as to permit of easy movement of the wrench in close places.

A further object is to provide means for attaching the jaw sections to the handle section and a further object is to provide means for holding the handle section against independent rotation from the jaw sections.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings forming part of this application, Figure 1 is a side elevation of the wrench. Fig. 2 is an edge view thereof partly in section. Fig. 3 is a longitudinal sectional view through the wrench. Fig. 4 is an end elevation of the handle section removed from the wrench. Fig. 5 is an edge elevation of a clip employed for securing the handle section to the jaw section, and Fig. 6 is a plan view thereof.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the stationary jaw of my improved wrench, the shank 2 of which is hollow to receive the solid shank 3 of the movable jaw 4, the meetings faces of said jaws being set at an angle to the axis of their respective shanks, whereby the end of the wrench may be introduced into a small space and engaged with the nut.

Positioned at the lower end of the shank 2 is a handle section 5, which handle is provided with an orifice 6 through which the threaded end of the shank 3 extends, the threads 7 upon the shank 3 engaging threads 8 adjacent the upper end of the section 5, the threads 8 being placed in an opening in a partition 9 formed integral with the handle section.

The handle section 5 is adapted to be rotated independently of the shank 2, thereby causing the shank 3 and jaw carried thereby to move inwardly or outwardly, said handle section being held in engagement with the shank 2 by means of clips 10, the upper ends of which engage the outer faces of the shank 2 and are attached thereto by means of screws 11, while the lower ends of the clips are substantially channel shaped to form recesses 12, into which extends a circumferential rib 13 at the upper end of the handle section 5, said rib section extending inwardly.

The lower end of the handle section 5 is provided with a removable cap 14, whereby ready access may be had to the interior of the handle, so that a nut 15 may be readily applied to the lower end of the shank 3, said nut preventing the shank 3 from being entirely removed from the shank 2 by the nut 15 coming in contact with the lower face of the partition in the upper portion of the handle section, but should it be desired to remove the shank 3, the nut 15 may be removed and the handle section rotated until the threads 7 are disengaged from the threads 8, when the shank 3 may be drawn out of the shank 2.

After the jaws of the wrench have been moved into engagement with the nut or other object, they are securely locked against separating by providing a plurality of sockets 16 in the upper end of the handle section 5, into which is adapted to be introduced the lower end of a locking pin 17, said pin being introduced through keepers 18 and 19 on the shank 2, the keeper 19 being removably secured to the shank, whereby the pin may be readily attached to the shank. The pin 17 is normally held in its lowered position by means of a spring 20, the lower end of which engages a washer 21, carried by the pin 17, while the upper end thereof engages the keeper 19, whereby when said pin is raised, the spring will be compressed, and will exert tension against the pin and lower the same when the pin is released, a head 22 being provided at the upper end of the pin, whereby the pin may be readily grasped and elevated when desired.

In assembling the parts of the wrench,

the clips are engaged with the rib in the handle section and the shank 2 then entered between the upper ends of the clips and secured thereto by means of screws 11, thereby holding the handle section securely in engagement with the shank 2, and at the same time permitting said handle section to be rotated. The shank 3 is then introduced through the opening 23 in the shank 2 until the threads on the shank 3 come into engagement with the threads in the partition 9, when the handle section is rotated until the jaw 4 is moved into engagement with the jaw 1, thus bringing the lower end of the shank 3 adjacent the lower end of the handle section. The nut 15 is then turned onto the lower end of the shank 3 and the cap 14 introduced onto the lower end of the handle section 5, when the wrench is ready for use.

In applying the wrench to use, the pin 17 is elevated and the handle section 5 rotated until the jaw 4 is properly adjusted to receive the nut, when the pin 17 is released and permitted to enter one of the sockets 16, thereby holding the movable jaw in its adjusted position. When the handle section 5 is being rotated, the shank 2 is grasped in one hand and held in a fixed position while the handle section is rotated with the opposite hand and in order to provide a firm grip for the handle section, the exterior portion thereof is provided with a plurality of spirally disposed ribs 24 by which construction the handle section may be positively rotated even when the hand of the operator is covered with grease or when wearing a glove.

It will thus be seen that I have provided a very cheap as well as strong and durable form of wrench and one that can be quickly applied to use. It will further be seen that in view of the arrangement of the jaws of the wrench, the end of the wrench may be introduced into a small space and engaged with an object and be readily operated to turn the object and it will further be seen that the jaws of the wrench may be securely locked in their adjusted positions.

What I claim is:

1. In a wrench, the combination with a fixed jaw, a shank attached thereto and having an opening therethrough, a movable shank extending through said opening and a jaw on said movable shank, the lower end of said movable shank being threaded; of a handle section having an orifice therein, a partition adjacent the upper end of said handle section, having threads therein to engage the threads on the movable shank, a rib within the upper end of said handle section, clips secured to said hollow shank and having means at their lower ends to engage said rib whereby the handle section will be held in engagement with the hollow shank and permitted to rotate and means to lock said handle section against rotation.

2. A wrench, comprising a fixed jaw, a hollow shank carrying said jaw, a movable shank entering the hollow shank, a jaw at the outer end of said movable shank, the inner end of said shank being threaded, a handle section having a threaded partition adapted to receive the threaded portion of the shank, an interiorly disposed rib at the upper end of the handle section, clips having recesses in their lower ends adapted to receive said rib and means to attach the upper ends of the clips to the hollow shank.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HOMER J. MUNDAY.

Witnesses:

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BEULAH SCHOENHERR.