No. 782,592. PATENTED FEB. 14, 1905.

M. W. BRADY.

WRENCH.

APPLICATION FILED OCT. 21, 1904.

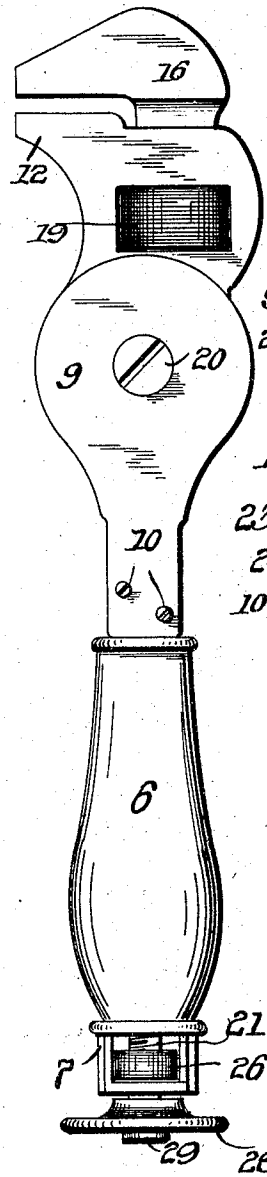


Fig. 1.

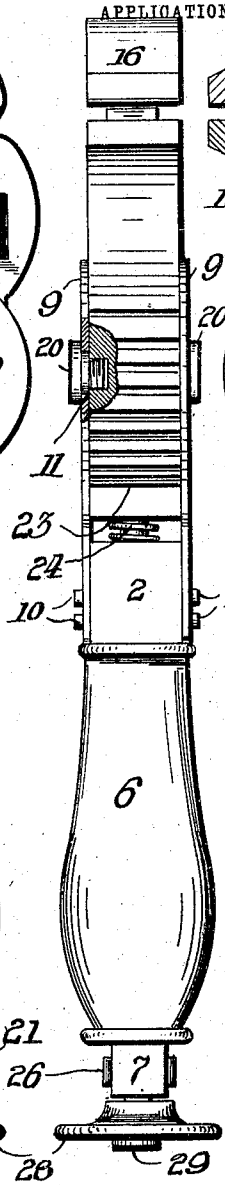


Fig. 2.

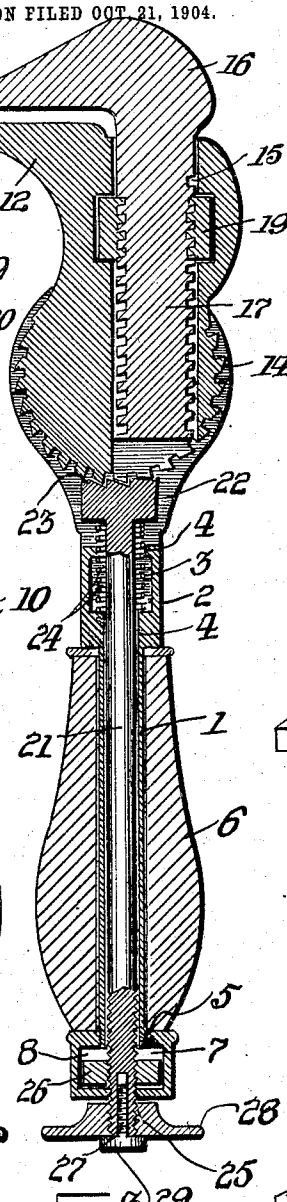
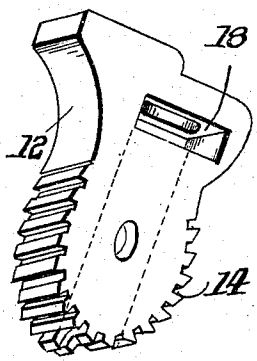


Fig. 3.

Fig. 4.



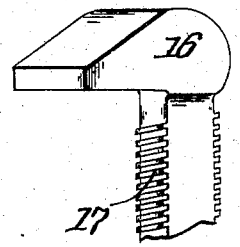


Fig. 5.

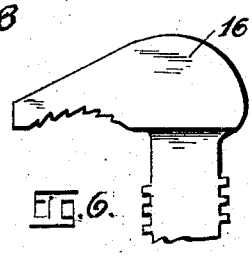


Fig. 6.

Fig. 7.

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No. 782,592. Patented February 14, 1905.

UNITED STATES PATENT OFFICE.

MYRL W. BRADY, OF CHESWICK, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO DAVID W. ALTHAUSER, OF CHESWICK, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 782,592, dated February 14, 1905.

Application filed October 21, 1904. Serial No. 229,419.

To all whom it may concern:

Be it known that I, MYRL W. BRADY, a citizen of the United States of America, residing at Cheswick, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in wrenches, and more particularly to that type commonly known as "ratchet-wrenches."

The object of this invention is to provide a wrench which will in all respects resemble the ordinary type of monkey-wrench, and I have embodied novel means whereby the wrench may be manipulated as a ratchet-wrench or may be adjusted to be employed as a monkey-wrench.

Another object of this invention is to provide novel means, in connection with the above type of wrench, whereby the same may be easily manipulated when the wrench is being employed as a ratchet-wrench. To this end I have constructed a wrench which comprises a shank portion having an oscillating jaw pivoted therein, and in said jaw is slidably mounted the head of my improved wrench, which is adjusted by means carried within the oscillating jaw. The shank of the wrench is provided with novel means for governing the position of the oscillating jaw, and the construction of my improved wrench, together with the details entering into the same, will be hereinafter more fully described.

Reference will now be had to the accompanying drawings, wherein like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a side elevation of my improved wrench. Fig. 2 is an edge view thereof. Fig. 3 is a vertical sectional view of the wrench. Fig. 4 is a detail perspective view of the oscillating jaw, and Fig. 5 is a detail perspective view of the head carried by said jaw. Figs. 6 and 7 are detail views of jaws that may be employed in connection with my improved wrench.

To put my invention into practice I employ a hollow shank portion 1, which is annular in cross-section, and upon the upper end of said shank portion 1 is formed the enlargement, which will be hereinafter termed a "block." This block, as designated by the reference-numeral 2, is rectangular in cross-section and is provided with a recess 3, with which communicates the apertures 4 4. The lower end of the shank portion 1 is exteriorly screw-threaded, as indicated at 5, and upon said shank portion is adapted to be secured the handle 6. The handle is secured thereon by a nut 7, said nut being cut away, as indicated at 8. To the sides of the block 2 are secured the plates 9 9 by screws 10 10. These plates have their upper ends formed substantially semicircular, and centrally of these semicircular ends is formed an aperture 11.

Between the plates 9 9 is mounted an oscillating jaw 12, the lower end of which is of a substantially semicircular form, and the periphery is provided with teeth 14. The oscillating jaw, as illustrated in Figs. 3 and 4 of the drawings, is formed with an opening 15, which extends vertically within the jaw 12. In this opening 15 is mounted the threaded auxiliary shank 17 of the head or outer jaw 16. The jaw 12 is provided with a transverse opening 18, and in this opening is mounted a nut 19, the periphery of which is knurled, and this nut is adapted to engage and govern the movement of the auxiliary shank 17. The oscillating jaw 12 is mounted between the plates 9 9 by screws 20, which extend through the openings 11 of the plates 9 and engage in the auxiliary jaw 12. The movement of the auxiliary jaw is governed by a rod 21, which is mounted in the hollow shank 1, the upper end of said rod being provided with an enlarged portion 22, having teeth 23 formed on its outer face, which are adapted to engage the teeth 14 of the oscillating jaw. The rod 21 extends through the apertures 4 4 of the block 2, and surrounding said rod is a spiral spring 24, which is mounted in the recess 3 of the block 2. The lower end of the rod is exteriorly screw-threaded, as indicated at 25, and upon this end is secured a knurled nut 26,

this nut being mounted in the cut-away portion 8 of the nut 7. In the end of the rod 21 is formed a screw-threaded recess 27, and upon the end of said rod is threaded a thumb-wheel 28, this wheel being held thereon by a screw 29, secured in the screw-threaded recess 27 of the rod 21.

The operation of my improved wrench is as follows: The auxiliary shank 17 and the head 16 are adjusted by the nut 19 similar to the ordinary type of monkey-wrench commonly used. The ratchet feature of my wrench is manipulated by the thumb-wheel 28, and when the handle 6 of the wrench is gripped by the hand of a person the lower part of the hand can readily rest upon and depress this wheel, whereby the rod 21 will be moved downwardly, depressing the spring 24, at which time the handle, the shank, and the plates 9 9 may be swung around until the teeth 23 of said rod will take a fresh grip upon the teeth 14 of the oscillating jaw 12. The downward movement of the rod 21 is limited by the nut 26, and if it be so desired this nut can be adjusted upon the screw-threaded end 25 of the rod 21, whereby the teeth 23 will be locked in engagement with the teeth 14 and will be held there while it is desired to manipulate the wrench as the ordinary and well-known type of monkey-wrench. It is also possible by the nut 26 and the thumb-wheel 28 to lock the teeth 23 out of engagement with the teeth 14 of the oscillating jaw, whereby the oscillating jaw and head 15 may be swung within the plates 9 9 to any position desired.

It will be observed that the wrench as herein shown and described may be easily converted into a pipe-wrench by providing removable jaws and inserting the well-known gripping jaws of a pipe-wrench, or the pipe-wrench may be constructed on the plans of the wrench herein shown and described by providing gripping jaws that extend at an angle.

From the foregoing description, taken in connection with the drawings, it will be observed that I have embodied a ratchet-wrench in the ordinary form and type of monkey-wrench, and while I have herein shown the preferred manner of adjusting the oscillating jaw and locking the same in any desired position in relation to the handle or shank of the wrench it is obvious that other means than these may be employed and various changes may be made in the details of construction without departing from the general spirit and scope of the invention.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A wrench comprising a shank having an oscillating jaw mounted therein, a head or coacting jaw having a threaded shank extending into the oscillating jaw, a nut on the said shank extending through the openings in the sides of the oscillating jaw whereby the head may be adjusted, said oscillating jaw having a toothed inner end, a spring-pressed rod mounted in the shank, and having an enlarged toothed outer end to engage the teeth of the oscillating jaw, means on said rod for limiting the longitudinal movement thereof in the shank, and separate means for locking the rod in the desired position in the shank.

2. A wrench comprising a shank portion, an oscillating jaw mounted in said shank portion, a head or jaw mounted within said oscillating jaw, means carried by said shank to engage said oscillating jaw to operate the same, and means for locking said first-named means in a desired position in the shank, substantially as described.

3. A wrench comprising a hollow shank portion, an oscillating jaw mounted upon said shank portion, a head carried by said oscillating jaw, means carried within said shank portion to engage said oscillating jaw, and means carried by the end of said shank portion to lock said oscillating jaw, substantially as described.

4. A wrench comprising a hollow shank portion, an oscillating jaw mounted in said shank portion, a head carried by said oscillating jaw, means carried by said oscillating jaw to operate said head, means carried by said shank to engage said oscillating jaw, and means carried by the lower end of said shank to lock said oscillating jaw in any desired position, substantially as described.

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

MYRL W. BRADY.

Witnesses:
H. C. EVERT,
E. E. POTTER.