C. C. McCOY.

AUTOMATIC PIPE WRENCH.

APPLICATION FILED MAR. 31, 1921.

1,418,816. Patented June 6, 1922.

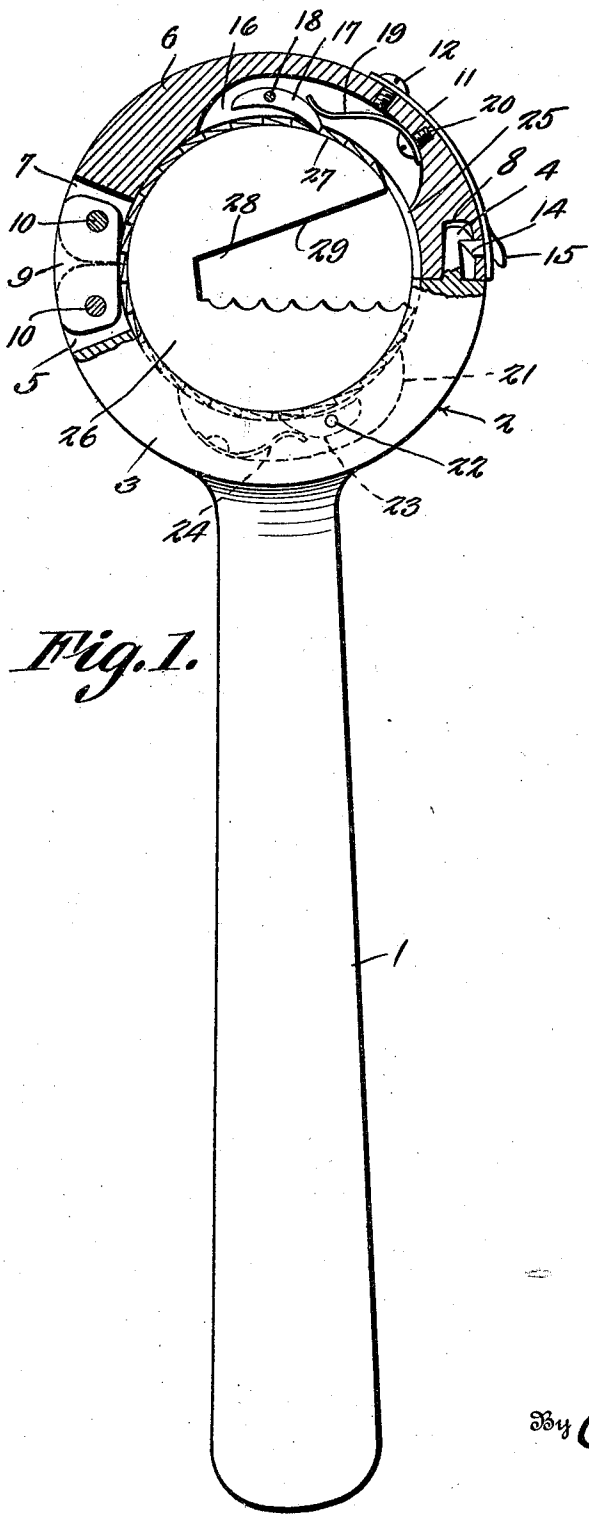


Fig. 1.

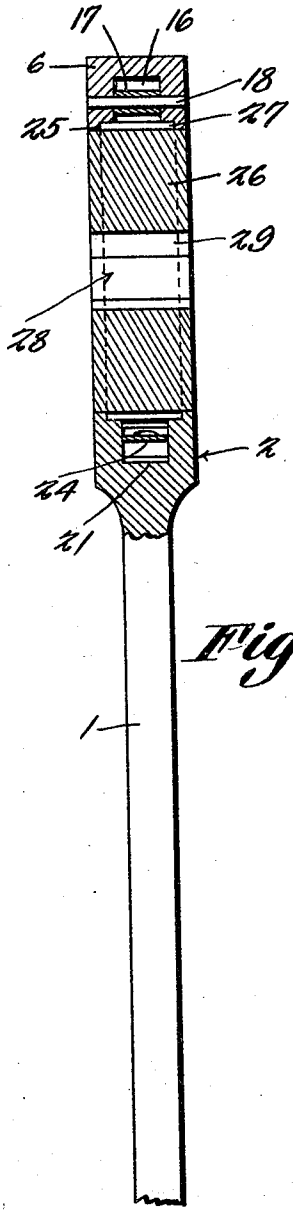


Fig. 2.

Inventor,

C. C. McCoy

By C. A. Snow & Co.

Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES C. McCOY, OF PORTLAND, OREGON.

AUTOMATIC PIPE WRENCH.

1,418,816. Specification of Letters Patent. Patented June 6, 1922.

Application filed March 31, 1921. Serial No. 457,364.

To all whom it may concern:

Be it known that I, CHARLES C. McCOY, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Automatic Pipe Wrench, of which the following is a specification.

The device forming the subject matter of this application is a wrench, adapted to turning pipes and other round objects and one object of the invention is to provide a tool of the sort mentioned which will be simple in construction and well adapted to withstand wear. Another object of the invention is to provide a wrench wherein the rotatable member may be changed readily to accommodate articles of different sizes or contours.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the drawings:—

Figure 1 shows in elevation, a wrench constructed in accordance with the invention, parts being broken away and parts appearing in section; Figure 2 is a section taken lengthwise of the wrench, a portion of the handle appearing in elevation.

The wrench forming the subject matter of this application includes a handle 1 carrying a socket 2. The socket is a composite structure and includes a U-shaped head 3 formed integrally with the handle 1. At one end, the head 3 is supplied with a projecting keeper 4. In the opposite end of the head 3, a notch 5 is formed.

The socket 2 includes, further a U-shaped jaw 6 supplied in one end with a notch 7 and having, in its other end, a recess 8 for the reception of the keeper 4. A link 9 is mounted in the notches 7 and 5. Pivot elements 10 connect the ends of the link with the head 3 and the jaw 6. A spring tongue 11 extends circumferentially of the jaw 6 and is secured at one end thereto as indicated at 12. The tongue 11 carries a latch 14 slidable in the jaw 6 adjacent to the free end of the jaw, and adapted to cooperate with the keeper 4, the keeper and the latch being beveled, so that the latch may engage automatically with the keeper, when the jaw 6 swings to a closed position. In order that the spring tongue 11 may be moved outwardly, thereby to disengage the latch 14 from the keeper 4, the spring tongue is equipped with an outwardly extended finger piece 15.

A recess 16 is fashioned in the jaw 6. A pawl 17 is located in the recess 16, the pawl being mounted to swing on a pivot element 18, extended across the recess and mounted in the jaw 6. One end of the spring 19, preferably in the form of a strip, is secured at 20 to the jaw 6, the spring being located within the recess 16. The other end of the spring 19 bears on the pawl 17 and tends to swing one end of the pawl inwardly.

A recess 21 is formed in the head 3 near to the handle 1. A pivot element 22 is mounted in the head 3 and extends across the recess. A pawl 23 is mounted to swing on the pivot element 22 and is located in the recess 21, the pawl being operated by a spring 24, and the construction being like that shown at 17—19. In the inner edge of the socket 2, that is, in the parts 3 and 6 of the socket, a circumscribing groove 25 is formed.

A rotatable member 26 is provided, the same being provided on its periphery with ratchet teeth 27. The ratchet teeth 27 exercise a two-fold office. First being received in the groove 25, they hold the rotatable member journaled in the socket 2. Secondly, cooperating with the pawls 23 and 17, they constitute means whereby rotation may be imparted to the member 26 from the handle 21. The rotatable member 26 is provided with a seat 28 of any desired shape, for the reception of the article which is to be turned. If desired, the seat 28 may be in the form of a blunted notch, one edge of which is smooth, as shown at 29, the other edge of which is supplied with teeth 30.

Clearly, the jaw 6 may be opened, and one rotatable member 26 may be substituted for another upon occasion. When the handle 1 is swung, the pawls 23 and 17 will impart forward rotation to the member 26. It is possible to swing the handle 1 in an opposite direction, whereupon the pawls 17 and 23 will click over the ratchet teeth 27, and secure a new hold on the member 26.

Having thus described the invention, what is claimed is:

1. A wrench comprising a handle having a head; a jaw pivoted at one end to the head; means for connecting the other end of the jaw releasably to the head; a rotatable member journaled in the head and in the jaw and having an open notch in its edge, the head and the jaw operating one at a time, directly, to form a closure for the notch when the jaw is in a closed position and when said member is rotated, the jaw being adapted to be swung to an open position, to give access to the notch in the rotatable member; and a pawl and ratchet means for imparting rotation to the rotatable member.

2. A wrench comprising a handle having a head; a jaw pivoted at one end to the head; means for connecting the other end of the jaw releasably to the head; a rotatable member journaled in the head and provided with a peripheral ratchet; a pawl located in the head and cooperating with the ratchet; a pawl located in the jaw and cooperating with the ratchet; and spring means for holding the pawls engaged with the ratchet.

3. A wrench comprising a handle having a head; a jaw pivoted at one end to the head; means for connecting the other end of the jaw releasably to the head; a rotatable member journaled in the head and in the jaw and having a ratchet; a pawl carried by the jaw and cooperating with the ratchet, and spring, means carried by the jaw for holding the pawl engaged with the ratchet, the jaw serving to put the spring means under tension when the jaw is moved to a closed position.

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

CHARLES C. McCOY.

Witnesses:
L. T. PEERY,
ESTES HILL.