W. L. BESSOLO.

FLEXIBLE CHAIN WRENCH.

APPLICATION FILED FEB. 12, 1921.

1,415,772. Patented May 9, 1922.

Fig. 1.

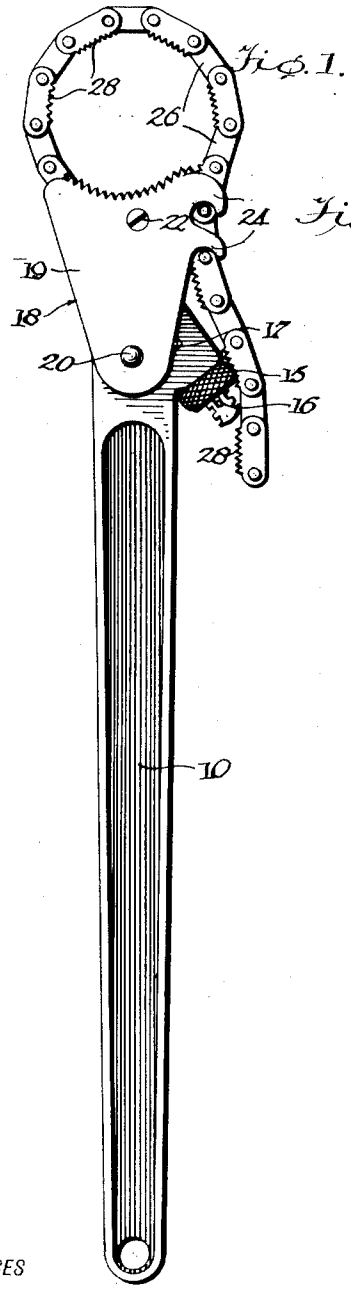


Fig. 2.

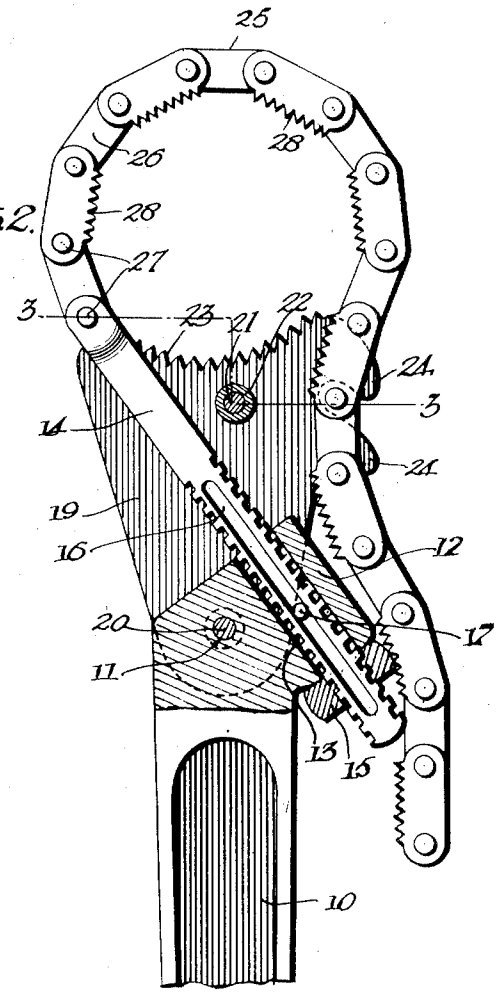
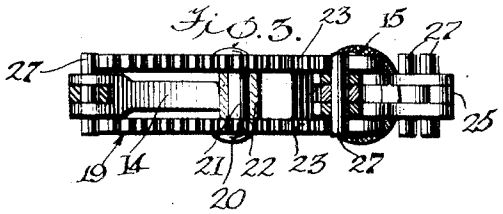


Fig. 3.



WITNESSES

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FLEXIBLE CHAIN WRENCH.

1,415,772. Specification of Letters Patent. Patented May 9, 1922.

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To all whom it may concern:

Be it known that I, WILLIAM LOUIS BESSOLO, a citizen of the United States, and a resident of San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Flexible Chain Wrenches, of which the following is a specification.

My present invention relates generally to wrenches, and more particularly to a flexible or chain wrench which may be utilized for various purposes including its application to pipes, rods and the like. The primary object of my invention is the provision of an arrangement in which quick adjustment under ordinary circumstances is allowed and in which adaptability to final adjustment is at the same time created.

A further object is the provision of a wrench of this nature by means of which maximum leverage may be applied and utilized both against the work and to tightening the gripping chain in use.

In the accompanying drawing which illustrates my invention and forms a part of this specification,

Figure 1 is a side elevation of my improved wrench complete,

Figure 2 is a sectional side view of the head of a wrench, and

Figure 3 is a transverse section taken on line 3—3 of Figure 2.

Referring now to these figures the handle of my improved wrench is indicated at 10 and may be of a length depending upon the size of the remaining parts and the work in hand, this handle preferably enlarging in a gradual manner toward its head end where it is provided with a transverse aperture 11 and an angular extension 12 as best seen in Figure 2, the extension having a bore 13 inclined at an angle with respect to the longitudinal axis of the handle for the reception of the rear end of a forwardly projecting shank 14 the rear end of the latter of which is threaded along its edges for the reception of an adjusting nut 15 abutting the outer face of the extension 12. The threaded portion of the shank 14 has an elongated slot 16 through which a cross pin 17 extends, this pin projecting transversely through the angular extension 12 so as to prevent displacement and loss of the shank 14 in use.

To the head end of the handle 10 is pivoted a powell 18 consisting of a pair of tapering side plates 19 whose inner portions lap opposite sides of the handle head and are spaced apart thereby and pivoted thereto by a pivot pin 20 extending through the head opening 11. The outer portions of this powell in respect to which the handle is thus swingable, are spaced apart by a spacing bolt, screw and the like 21 extending through a sleeve 22 between the side plates 19, and the extreme outer edges of these side plates are concaved and serrated or toothed as at 23.

The outer portion of the shank projects angularly beyond the outer end of the powell 18 adjacent to one side thereof, and the opposite side of this powell has inner and outer spaced hooks 24, the said outer end of the shank 14 being pivoted to one end of a chain 25 the other end of which is adjustably engageable with the hooks 24 of the powell owing to the chain construction as now described.

The chain 25 consists of a series of links 26 pivoted to one another and to the shank 14 by pivot pins 27 which project laterally beyond the side faces of the chain so that when selected links are slipped between the side plates 19 of the powell at one side the ends of selected pivot pins are engageable by the hooks 24 and the chain as a whole is thus quickly and readily adjustable as to its effective length link by link.

The several links 16 may have inner toothed faces and it is believed sufficient for practical purposes that alternate links be so toothed as indicated at 28, it being obvious that finer or smaller adjustments of the effective length of the gripping chain may be effected through co-operation of the adjusting nut 15 with the shank 14.

It is thus obvious that my invention provides a simple effective arrangement and construction which is well adapted to the carrying out of the objects first above stated and constitutes an improvement and a refinement in the art to which it relates.

I claim:

1. A wrench comprising a handle having a head at one end provided with an angular extension having a bore therethrough at an angle to the handle, a powell consisting of spaced side plates in connected relation, whose inner portions extend upon and are pivoted to opposite sides of the said head, said plates being provided at one side with hooks, a shank extending angularly between the said side plates and having its inner

threaded portion projecting through the bore of the head extension, a nut engaging the threaded portion of the said shank and bearing against the outer face of the head, and a flexible chain connected at one end to the outer end of said shank, said chain consisting of a series of links having connecting pivot pins projecting laterally beyond the links for engagement by the hooks of the pivoted powell.

2. A wrench comprising a handle having a rigid angularly bored head at one end, a powell pivoted to the said head end of the handle and including spaced apart side plates projecting beyond the head, a shank extending angularly between the side plates and having its inner end adjustable through the bore of the head, a flexible chain pivotally connected to the outer end of the shank adjacent to one side of the powell, and chain link engaging means carried by the opposite side of the powell for adjustable connection of the free portion of the chain as described.

3. A wrench comprising a handle having a pivoted powell at one end, a flexible gripping chain adjustably connected at one end to the outer end of the handle for extension outwardly at one side of the powell, and chain link engaging means carried by the opposite side of the powell for adjustable engagement with the opposite end of the chain, whereby gripping strain in use will be applied lengthwise through the chain upon movement of the handle in angular relation to the powell.

WILLIAM LOUIS BESSOLO.