H. O. SKJERVEM.

RATCHET WRENCH.

APPLICATION FILED APR. 24, 1915.

1,164,764.

Patented Dec. 21, 1915.

Fig. 1.

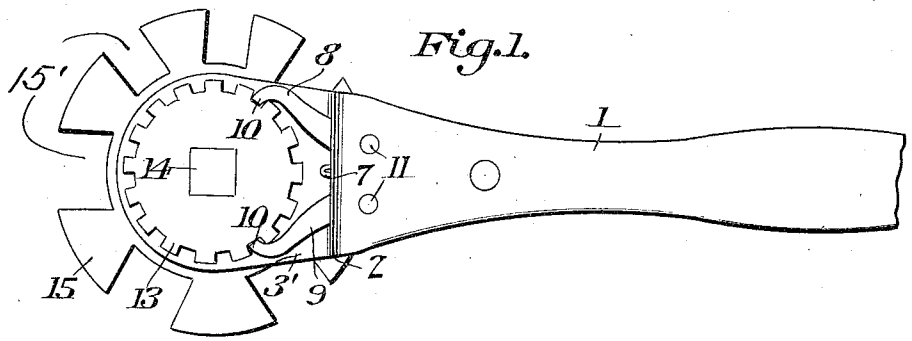


Fig. 2.

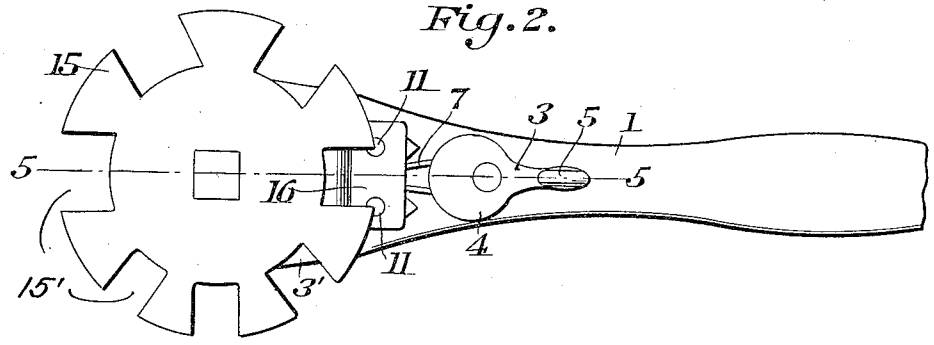


Fig. 4

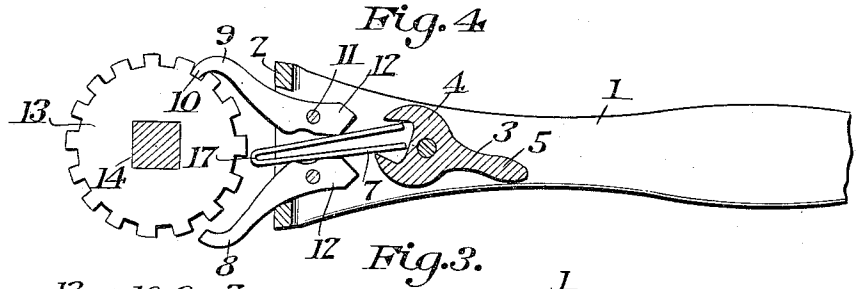


Fig. 3.

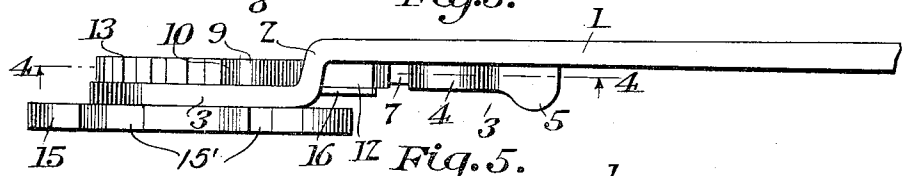


Fig. 5.

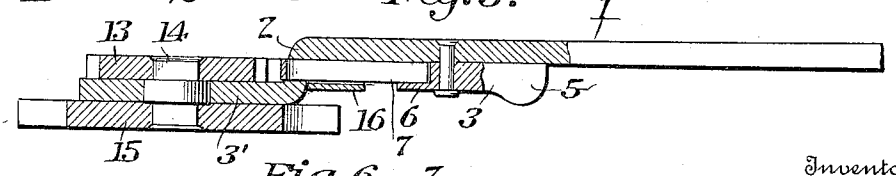
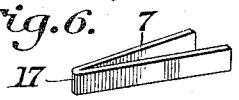


Fig. 6.



Witness

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RATCHET-WRENCH.

1,164,764. Specification of Letters Patent. Patented Dec. 21, 1915.

Application filed April 24, 1915. Serial No. 23,672.

To all whom it may concern:

Be it known that I, HENRY O. SKJERVEM, a citizen of the United States, residing at Petersburg, in the county of Nelson and State of North Dakota, have invented new and useful Improvements in Ratchet-Wrenches, of which the following is a specification.

The present invention relates to improvements in ratchet wrenches, and one of the objects of the invention is to provide a wrench or jaw in the form of a flat wheel having circumferential depressions of varying sizes so that the walls provided thereby may engage with nuts of varying sizes.

A further object of the invention is to provide a wrench of this character adapted to engage a nut disposed in position difficult of access by an ordinary wrench.

A still further object of the invention is to provide a wrench of this character having simple but effective means whereby the jaw may be revolved to bring one of its nut engaging ratchets in proper position thereon; to hold the jaw against rotation in either direction, and to permit of the rotation of the jaw in one of two directions.

With the above and other objects in view, the improvement resides in the construction, combination and arrangement of parts set forth in the following specification and falling within the scope of the appended claim.

In the drawing: Figure 1 is a side elevation of a wrench constructed in accordance with the present invention, Fig. 2 is a similar view looking toward the opposite side, Fig. 3 is an edge view of the wrench, Fig. 4 is a longitudinal sectional view approximately on the line 4—4 of Fig. 3, Fig. 5 is a longitudinal sectional view approximately on the line 5—5 of Fig. 2, and Fig. 6 is a perspective view of the two-arm spring.

Referring now to the drawing in detail, the numeral 1 designates the handle of the wrench, the same having one of its ends broadened and provided with an offset or angular portion 2 which is formed with an extension 3′ which is parallel with the handle 1.

Pivotally secured upon the handle 1, at a suitable distance from its offset or shoulder 2 is a reversing lever 3, the same including a preferably round head 4 and a handle 5. The head diametrically opposite the portion thereof formed with the handle 5 has a peripheral slot 6, the opposite or transverse walls provided by the slot receiving the opposite ends of a longitudinally arranged two-arm spring 7.

The numerals 8 and 9 designate reversely arranged dogs, the same having their ends provided with lateral inwardly extending prongs or lips 10—10 respectively, and the body portions of these dogs are pivoted, as at 11—11, and are provided with extending portions which I will term tails and which are indicated by the numerals 12—12. The tail portions of the dogs are contacted each by one of the arms of the spring 7.

The numeral 13 designates a ratchet wheel which is pivotally secured, as at 14, to the extension or head 3′ of the handle 1, and the pivot 14 is also connected with the jaw 15 of the wrench. The teeth of the ratchet wheel 13 are adapted to be engaged by the lips 10 of the dogs 8 and 9 and the jaw 15 is in the nature of a flat disk provided with peripheral depressions or notches 15′ which vary in size so that the walls provided by the notches may engage articles of varying diameters.

In order to sustain the spring 7 in proper position between the pawls and the ends of its arms within the pocket provided therefor in the head of the reversing lever, I provide a plate 16 which is secured to the handle 1 by the pivots 11.

When the handle 5 of the reversing lever is arranged centrally and parallel of the handle 1 the arms of the spring 7 both exert an equal tension against the inner faces as well as against the tails of the dogs 8 and 9, so that the lips 10—10 of the said dogs will engage each between the teeth on the opposite sides of the ratchet wheel 13. When the handle is swung toward either of the sides or edges of the handle 1, one of the arms of the spring will be swung against the tail 12 of one of the pawls, swinging the same upon its pivot to bring its lip into engagement between two of the teeth of the ratchet wheel 13, while the connecting member or what may be termed the head of the spring and which, for convenience, is indicated by the numeral 17 will bear against the body of the second dog, swinging its engaging lip away from between the teeth of the ratchet 13, as will readily be understood, and so it will

be noted that the jaw 15 may be held against rotation or may be rotated in either direction upon its pivot 14.

From the above description, taken in connection with the accompanying drawing, the simplicity of the device, as well as the advantages thereof will, it is thought, be perfectly apparent to those skilled in the art to which such invention appertains without further detailed description.

Having thus described the invention, what I claim is:

In a ratchet wrench, a handle having one of its ends widened and provided with an offset portion, a reverse lever pivotally secured to the handle, said lever including a head having a peripheral depression providing a pocket, a ratchet wheel pivoted to the widened extension of the handle, pawls pivoted to the said handle and projecting through an opening in the offset portion thereof, a double armed spring arranged between the pivoted pawls and having the ends of its arms received within the pocket of the reversing lever, and a jaw comprising a disk having peripheral notches connected with the pivot of the ratchet wheel.

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

HENRY O. SKJERVEM.

Witnesses:
A. H. JOHNSON,
CARL SKJERVEM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."