

R. SCHWARZ.

WRENCH.

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1,018,347.

Patented Feb. 20, 1912.

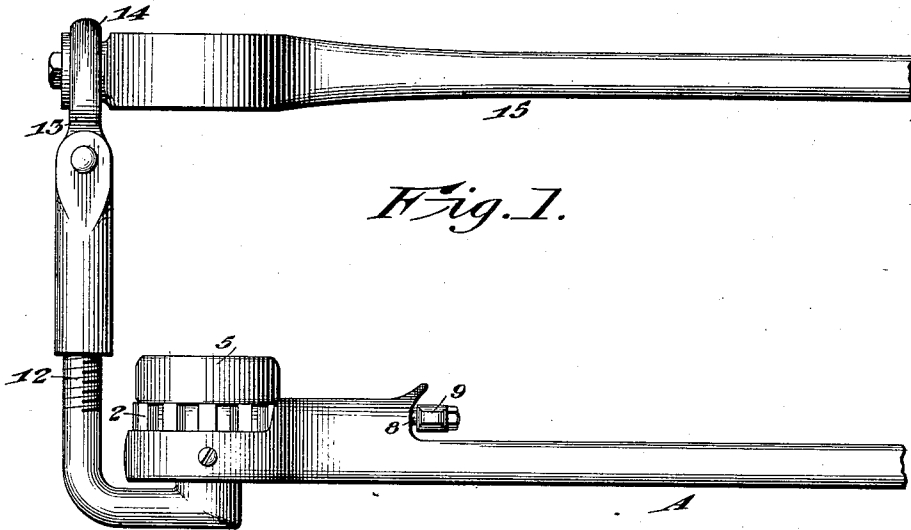


Fig. 1.

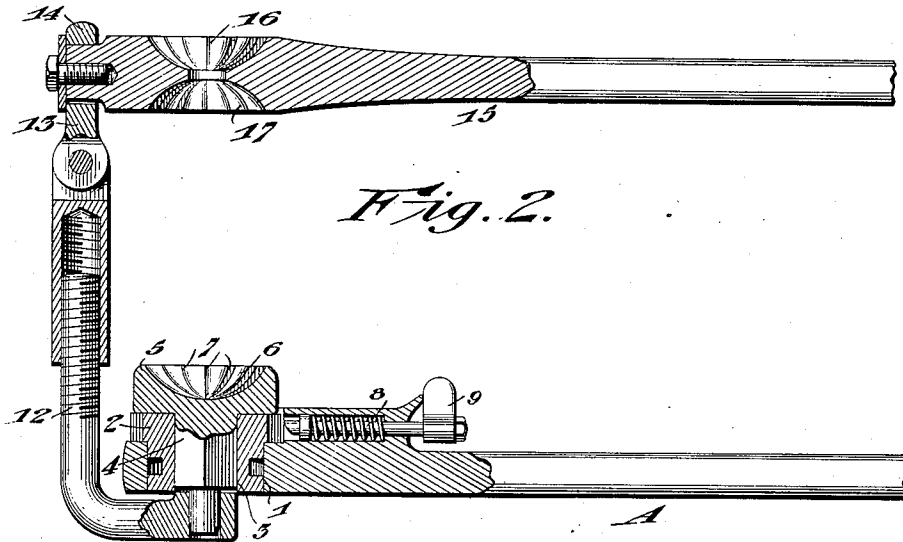


Fig. 2.

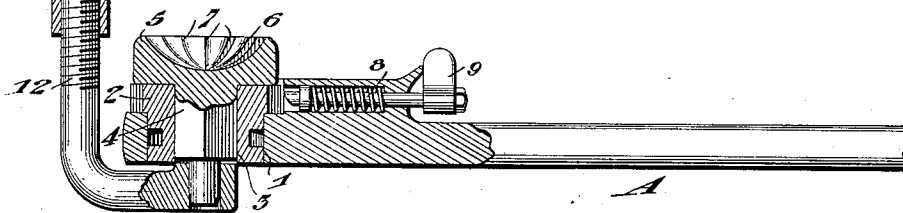
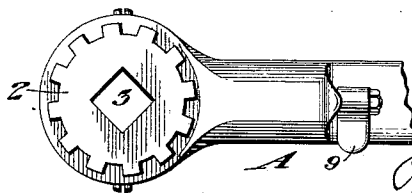


Fig. 3.



Inventor

Witnesses
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UNITED STATES PATENT OFFICE.

RUDOLPH SCHWARZ, OF PAYNESVILLE, MINNESOTA.

WRENCH.

1,018,347.

Specification of Letters Patent.

Patented Feb. 20, 1912.

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To all whom it may concern:

Be it known that I, RUDOLPH SCHWARZ, a citizen of the United States, residing at Paynesville, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to an improvement in wrenches, and more particularly to that class of wrenches where it is necessary to grasp both the head and nut in removing the nut from the bolt.

The invention consists in certain novel features of construction and combinations of parts which will be hereinafter fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation; Fig. 2 is a vertical sectional view; and Fig. 3 is a detail view.

A, represents the handle of the wrench, which is provided with a recess 1, in which is rotatably mounted a ratchet 2. The ratchet is preferably provided with a square bore 3 for receiving the shank 4 of the jaw 5. The jaw 5 is preferably provided with a cup-shaped socket 6, the walls of the socket being provided with teeth 7 for gripping the nut. A sliding pawl 8 is mounted on the handle, which is adapted to engage the ratchet. A cam knob 9 is mounted upon the pawl for reversing or turning the pawl so as to change its position so that the ratchet can be rotated in the opposite direction. In this way, the ratchet can be used for either a right or left hand nut, as the pawl can be reversed to permit of the ratchet rotating in either direction.

The outer end of the shank 4 of the jaw 5 is preferably rounded, and is received in an opening in the right angular end of a strap 12. The strap 12 is preferably made in two sections, which are adjustably connected together, one section being screwed into the other section. A link 13 is pivotally connected to one of the sections of the strap, and is provided with an eye 14 in which a lever 15 is loosely mounted. The lever is provided with toothed sockets 16 and 17, one being formed on each face or side of the lever, one socket being provided for left hand screw-threaded bolts and the other for right hand. The sockets in the lever

and in the jaws are preferably cup-shaped, so as to receive and surround the nuts or heads of the bolts, and the head of the bolt is preferably held by the lever 15. When a nut and bolt are to be operated upon, the strap 12 is adjusted and the right angular end is connected to the jaw 5, thereby connecting the handle and lever together. The handle is operated for turning the nut, while the lever is used for holding the head of the bolt against movement, and sufficient pressure can be exerted by the lever for holding the head for allowing for the removal or applying of a nut on the bolt. The jaw 5 being removable, allows for the insertion in the ratchet of a different jaw when occasion requires. For instance, it might be necessary to remove a left hand screw-threaded nut, and in that instance it would be necessary to provide a jaw having teeth therein for engaging such a nut, and when it is desired to remove a right hand screw-threaded nut, a jaw would have to be provided which would be capable of removing or applying such a nut. The lever being provided with two sockets for right and left hand bolts, can be readily adjusted by simply turning the handle in the eye of the link 13, so that it can cooperate with the jaw used.

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

1. In a wrench, the combination with a handle having a ratchet, of a jaw operated by the movement of the ratchet, a lever having a plurality of sockets, and a strap removably connected to the handle, said lever swiveled to the strap whereby the different sockets can be presented for operating upon a bolt.

2. In a wrench, the combination with a handle having a ratchet, of a jaw actuated by the ratchet, an adjustable strap connected to the handle, a link pivotally connected to the strap, and a handle swiveled to the link having a plurality of sockets.

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

RUDOLPH SCHWARZ.

Witnesses:

W. E. SCHUETZ,
E. A. SCHMITT.