

UNITED STATES PATENT OFFICE.

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WRENCH.

No. 889,581.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EARL C. CARPENTER, a citizen of the United States of America, residing at Braddock, 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 drawing.

10 This invention relates to wrenches, and the primary object of my invention is to provide a strong and durable wrench wherein positive and reliable means are employed for holding the adjustable jaw thereof in a position to which the same may be adjusted.

15 A further object of my invention is to provide a simple and inexpensive wrench having a movable toothed bar for gripping the movable jaw of a wrench, said bar being easily and quickly moved to grip or release the movable jaw of a wrench.

20 With the above and other objects in view, which will more readily appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be presently described and then specifically pointed out in the appended claims.

25 In the drawings, Figure 1 is an elevation of a wrench constructed in accordance with my invention. Fig. 2 is a vertical sectional view of the same partly in elevation, and Fig. 3 is a horizontal sectional view of a wrench taken on the line $x-x$ of Fig. 2.

30 To put my invention into practice, I provide a metallic channel shaped shank 1 with a fixed jaw 2 and a tubular metallic sleeve or handle 3 fitting upon the lower end of the shank 1. Prior to mounting the sleeve or handle 3 upon the shank 1, I place thereon a movable gripping jaw 4 having an opening 5 to receive said shank.

35 In the shank 1 and extending downwardly into the sleeve or handle 3 is a toothed bar 6 adapted to engage teeth 7 formed in the jaw 4. The sides of the toothed bar 6 are provided with oppositely disposed recesses providing webs 8. Pivotally mounted in said webs are rectangular links 9, these links being connected to webs 10 of an actuating rod 11, said rod extending downwardly in the

shank 1 and pivotally connected with a strap 12, which is also pivotally connected to the lower end of the handle or sleeve 3, as at 13. This strap is connected to a lid 14 for closing the lower end of the handle or sleeve 3, and is provided with a keeper 15 for engaging a spring latch 16 carried by the handle or sleeve 3. The spring latch 16 is moved out of engagement with the keeper 15 by a headed pin 17, carried by said spring latch and protruding through an opening 18 formed in the handle or sleeve 3. By opening and closing the lid 14, the rod 11 is raised or lowered, causing the toothed bar 6 to recede into the shank 1, or protrude therefrom to engage the teeth 7 of the jaw 4. When the toothed bar 7 is retracted, the jaw 4 can be easily adjusted upon the shank 1, between the upper end of the handle or sleeve 3 and the jaw 2. I reserve the right to use as many links as desirable for connecting the rod 11 to the toothed bar 6, and to make any other changes in my wrench as are permissible by the appended claims.

75 Having now described my invention what I claim as new, is:—

1. A wrench comprising a channel shaped shank, a fixed jaw carried thereby, a sleeve or handle mounted upon the lower end of said shank, a toothed bar movably mounted in said shank, a movable jaw adjustably mounted upon said shank and adapted to be engaged by said toothed bar, a rod movably mounted in said shank, links connecting said rod and said toothed bar, a strap pivotally connected to said handle and to said rod, a lid carried by said strap for closing the lower end of said handle, and means carried by said handle for engaging said strap and retaining said lid in a closed position.

2. A wrench comprising a shank, a fixed jaw carried thereby, a handle mounted upon said shank, a toothed bar movably mounted in said shank, a jaw adjustably mounted upon said shank and adapted to be engaged by said toothed bar, a rod arranged in said shank for moving said bar, a lid pivotally carried by the lower end of said handle for moving said rod, and means for locking said lid in a closed position.

3. A wrench comprising a shank, a fixed

jaw carried thereby, a toothed bar movably
mounted in said shank, an adjustable jaw
arranged upon said shank and adapted to be
engaged by said bar, a rod arranged in said
5 shank for moving said toothed bar, and a
pivoted lid arranged at the lower end of said
shank for shifting said rod.

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

EARL C. CARPENTER.

Witnesses:

MAX H. SROLOVITZ,
K. H. BUTLER.