(No Model.)

R. ALDRICH & J. V. CHAMBERLIN.

WRENCH.

No. 564,816. Patented July 28, 1896.

Fig. 1.

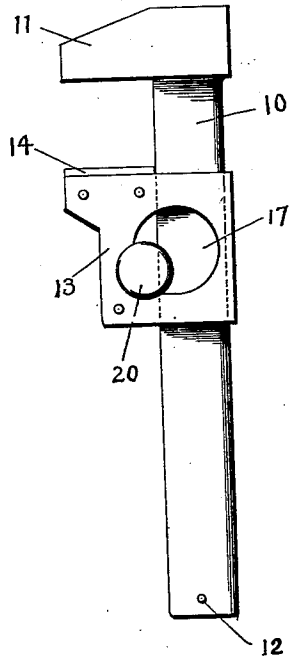


Fig. 2.

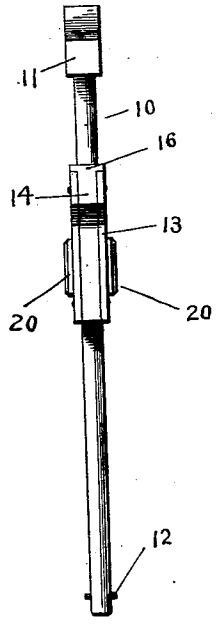


Fig. 3.

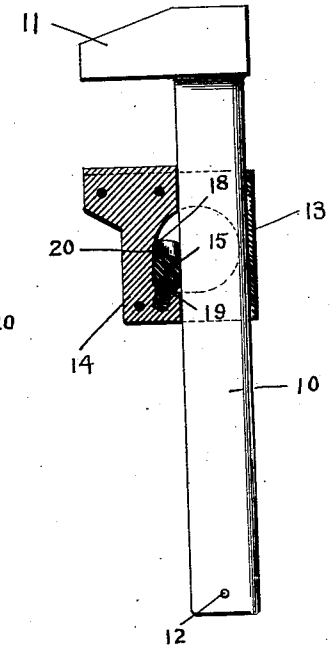


Fig. 4.

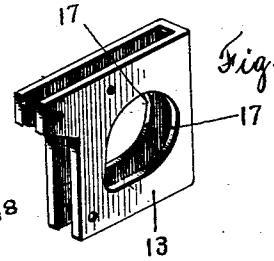


Fig. 5.

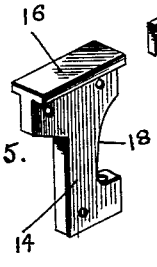
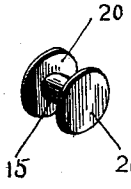


Fig. 6.



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UNITED STATES PATENT OFFICE.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 564,816, dated July 28, 1896.

Application filed November 18, 1895. Serial No. 569,249. (No model.)

To all whom it may concern:

Be it known that we, ROBERT ALDRICH, residing at Millville, and JOHN V. CHAMBERLIN, residing at Worcester, in the county of Worcester, State of Massachusetts, citizens of the United States, have invented a new and useful Improvement in Wrenches, of which the following is a specification.

The object of our invention is to provide a light, simple, and durable form of wrench which can be readily and quickly adjusted to fit objects of different sizes.

To these ends our invention consists of the parts and combinations of parts, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a side view of a wrench constructed according to our invention. Fig. 2 is a front view of the same. Fig. 3 is a side view, partially in section; and Figs. 4 to 6 are detail views of parts to be hereinafter referred to.

A wrench constructed according to our invention comprises a shank, a fixed jaw carried by the shank, a movable jaw, and a roller arranged to wedge or support the movable jaw in its adjusted position.

Referring to the drawings and in detail, 10 designates a shank of any ordinary or preferred construction having a fixed or rigid jaw 11. A movable jaw is mounted upon the shank 10. The shank 10 is provided with a pin 12 for limiting the motion of the movable jaw and for preventing the parts from becoming separated.

As illustrated, the movable jaw comprises a sheet-metal yoke 13 and a contact-piece or anvil 14, which is preferably made of hardened steel. The yoke 13 is provided with perforations 17 for receiving the wedging-roller 15, which wedges or supports the movable jaw in its adjusted position. The anvil or contact-piece 14 may be riveted in place in its yoke 13, or, if preferred, these parts may be brazed together, and the use of rivets dispensed with. The contact-piece or anvil 14 is provided with a T-shaped head or section 16, which forms the wearing-surface for the movable jaw, and with an inclined portion 18, which corresponds with the front edges of the perforations 17 in the sheet-metal yoke. A light spiral spring 19 fits into a socket in the contact-piece or anvil 14 and normally holds the roller 15 up in position to wedge between the front of the shank 10 and the inclined surface 18, to prevent the movable jaw moving away from the fixed jaw 11 when the wrench is in use. The wedging-roller 15 is provided with heads 20, which fit outside of the yoke 13 in position to be conveniently operated for the purposes of adjustment. By moving the roller 15 down against the tension of the spring 19, the movable jaw will be released, so that it can be shifted down or to any desired position. The movable jaw may be pushed up by simply pushing on any part of the same. It will be noted that the incline formed in the movable jaw, against which the roller bears, is inclined inwardly toward the fixed head 11. By this construction, when the movable jaw is adjusted to engage the nut or article to which the wrench is applied, the pressure on the movable jaw, due to the manipulation of the wrench, will cause the incline 18 of the movable jaw to tightly wedge on the roller, and to thus tightly engage the nut or article.

We prefer to make the movable jaw of the construction shown, as the same is very cheap, and by hardening the piece 14 the bearing-surface 16 of the movable jaw is thus hardened, and the wearing-surface 18, which engages the roller 15, is also hardened. In some instances, however, we contemplate making the movable jaw solid or as one integral piece, and broaching and machining the same out. The roller 15 may be made of any desired contour.

It will thus be seen that we have provided a wrench which is very simple and cheap of manufacture, and one which is constructed without any screws or ratchet-teeth.

We are aware that many changes may be made in the construction of wrenches by those who are skilled in the art without departing from the scope of our invention as expressed in the claims, and while we have illustrated our improvements as applied to a monkey-wrench it is obvious that our adjusting mechanism may be employed in pipe-wrenches and other wrenches. We do not

wish, therefore, to be limited to the construction which we have shown and described; but

What we do claim, and desire to secure by Letters Patent of the United States, is—

1. In a wrench, the combination of a shank, a fixed jaw carried by the shank, a movable jaw comprising a perforated sheet-metal yoke surrounding said shank, a contact-piece or anvil fastened in said yoke, and a roller arranged in said movable jaw to wedge against the shank to support the movable jaw in its adjusted position, substantially as described.

2. In a wrench, the combination of a shank, an integral fixed jaw carried by the shank, a movable jaw comprising a sheet-metal yoke surrounding said shank, a contact-piece or anvil 14 having an inclined surface 18, a roller arranged in said movable jaw to wedge against the inclined surface 18 to support the movable jaw in its adjusted position, and a spring for holding said roller in place, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

ROBERT ALDRICH.
JOHN V. CHAMBERLIN.

Witnesses:
LOUIS W. SOUTHGATE,
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