

(No Model.)

H. McELROY.
WRENCH.

No. 542,938.

Patented July 16, 1895.

Fig. 1

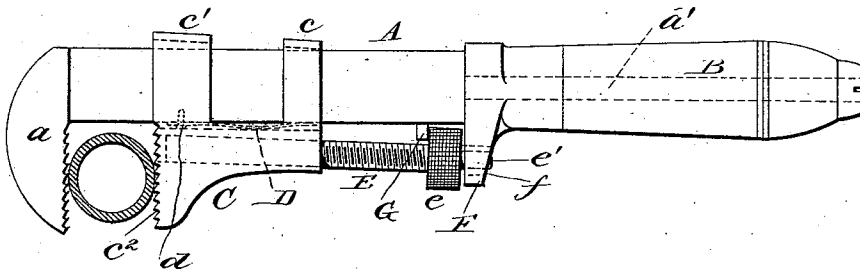


Fig. 2

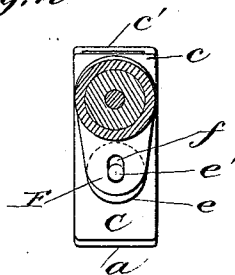
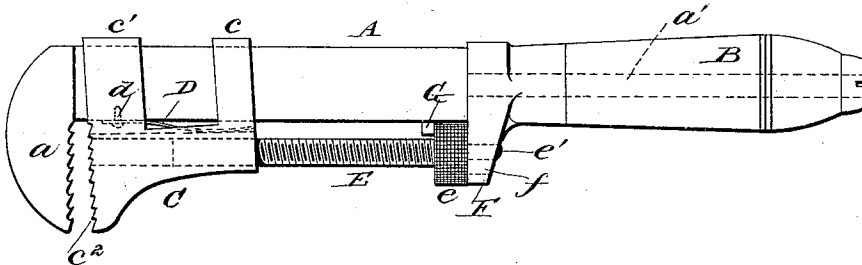


Fig. 3



Witnesses:

J. F. Coleman
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Inventor
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UNITED STATES PATENT OFFICE.

HARRY MCELROY, OF PALESTINE, TEXAS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 542,938, dated July 16, 1895.

Application filed January 30, 1895. Serial No. 536,634. (No model.)

To all whom it may concern:

Be it known that I, HARRY MCELROY, a citizen of the United States, residing at Palestine, in the county of Anderson, State of Texas, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in wrenches, and specially to pipe-wrenches.

The invention will first be described in connection with the accompanying drawings, and then particularly pointed out in the claim.

In the drawings, Figure 1 is an elevation of a wrench embodying my invention, the jaws being shown gripping a pipe. Fig. 2 is a detail sectional view of the same. Fig. 3 is a detail view illustrating the positions of the jaws when not in actual use.

Referring to the drawings, A is a shank having a stationary jaw *a* and a tang *a'*, which is riveted or otherwise secured to the handle B in any ordinary manner. On the shank A is mounted a movable jaw C by means of loops *c c'*, which are each provided with an opening through which the shank passes, the uppermost loop *c'* having an opening much wider than the shank in order to allow the movable jaw to swing laterally to a certain extent, the lower loop *c* being only enough larger than the shank to permit the movable jaw to swing on the said lower loop *c* as on a pivot. The movable jaw is recessed at the side next to the shank A and between the two loops *c c'* in order to receive a leaf-spring D, which is secured to the movable jaw preferably by a screw *d*, and has its free end bearing against the adjacent surface of the shank, whereby the top end of the movable jaw is normally held outward, the serrated or toothed surface *c''* of the said movable jaw standing at an angle to the similar surface of the stationary jaw *a* and not parallel thereto except when the strain of turning a nut or pipe is put upon the jaws, whereupon the movable jaw has its upper end crowded back until said movable jaw occupies a position with its serrated surface *c''* parallel with the corresponding serrated surface of the stationary jaw. Through an opening in the movable jaw is

threaded an adjusting-screw E, having a thumb-nut or milled collar *e*, by means of which the screw may be turned. The projecting lower end *e'* of the said adjusting-screw enters an opening *f* in a cap or ferrule F, secured to the top end of the handle. In order to permit the free movement of the top end of the movable jaw, as above described, the said opening *f* is elongated or made elliptical, as shown in Fig. 4, whereby the lower end of the adjusting-screw is free to move laterally.

To hold the adjusting-screw against longitudinal movement and at the same time to avoid the weakening of the shank by cutting it away to receive the collar *e*, as is customary, I provide the shank A with a pin G, secured to the front surface of the shank and flattened at its lower surface to engage the upper face of the said milled collar *e*.

The operation of my improved wrench is as follows: The jaws are adjusted to a pipe or nut in the usual way; but the adjusting-screw is not turned enough to force the movable jaw tightly against the nut, only the inner end of the upper surface of the movable jaw being brought in contact with the face of the nut, the outer end of said upper surface standing away from said face of the nut or pipe, owing to the fact that the spring holds the movable jaw with its top surface at an angle to the corresponding surface of the stationary jaw. If, now, a strain be put upon the handle in the direction necessary to turn the nut, the movable jaw will tend to crowd in toward the shank A and compress the spring, and in so doing will tend to clamp the nut or pipe tighter, as will be plain to those skilled in the art.

As soon as the nut has been turned as far as desired and the strain on the jaws is removed, the spring will force out the movable jaw and thereby enable the wrench to be removed from the nut and adjusted in a new position to take a fresh grip for another partial rotation of the nut.

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

In a wrench, the combination, with a shank having a fixed jaw, and a handle secured to the shank, of a movable jaw having two loops

through which the shank passes, the upper
loop being movable laterally on the shank, a
spring between the movable jaw and the
shank, a ferrule secured to the upper end of
5 the handle and having an elongated opening,
an adjusting screw threaded into the movable
jaw and having its lower end inserted in the
elongated hole in the ferrule, said adjusting
screw being provided with a milled collar and

a pin secured to the shank and engaging the
collar, all substantially as and for the pur-
pose described.

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

HARRY MCELROY.

Witnesses:

JIM CONAWAY,

P. H. HUGHES.