

No. 739,316.

PATENTED SEPT. 22, 1903.

D. H. IRLAND.
PIPE WRENCH.

APPLICATION FILED FEB. 20, 1903.

NO MODEL.

Fig. 1.

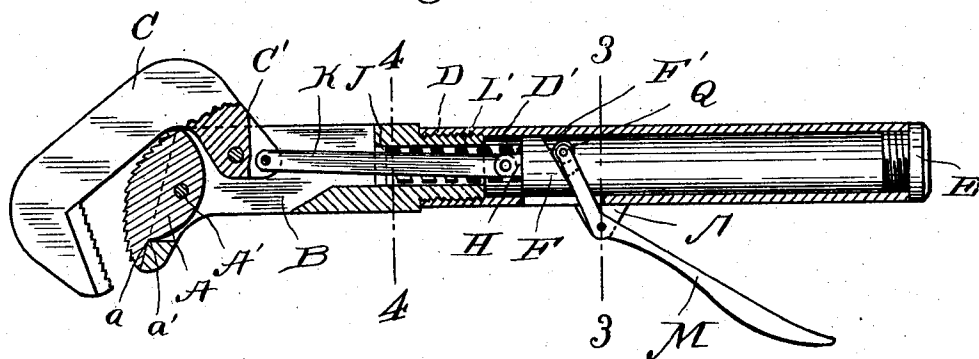


Fig. 2.

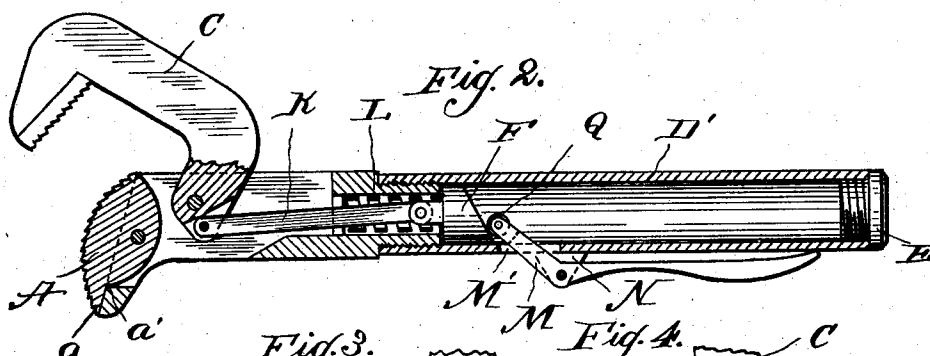


Fig. 3.

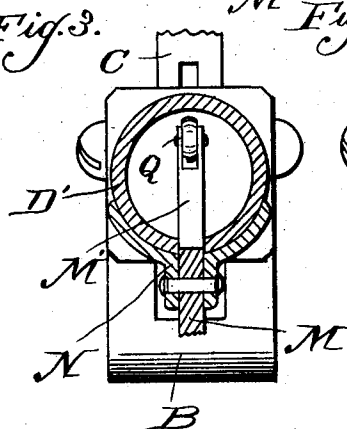
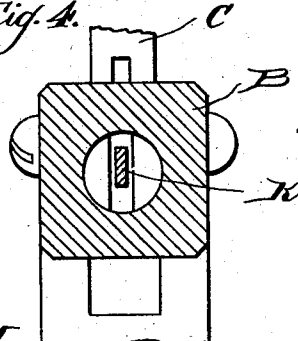


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

DAVID H. IRLAND, OF CHICAGO, ILLINOIS.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 739,316, dated September 22, 1903.

Application filed February 20, 1903. Serial No. 144,293. (No model.)

To all whom it may concern:

Be it known that I, DAVID H. IRLAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Pipe-Wrenches; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in wrenches, and especially in the provision of a wrench having two pivotal jaws, one of which is actuated in one direction by means of a spring and in the opposite direction by the action of a lever carrying an antifriction-roller, which acts upon a plunger which has pivotal link connections with one of the jaws.

In carrying out the present invention it is my aim to generally improve upon the construction of wrench upon which I have been allowed Letters Patent, Serial No. 134,510, thereby simplifying and rendering more practical certain features of the invention.

My invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings similar letters of reference indicate like parts in the views, in which—

Figure 1 is a central longitudinal section through my improved wrench, showing the jaws in closed positions. Fig. 2 is a similar view showing the jaws open. Fig. 3 is a cross-section on line 3 3 of Fig. 1, and Fig. 4 is a cross-section on line 4 4 of Fig. 1.

Reference now being had to the details of the drawings by letter, A designates a jaw, which has pivotal connection at A' with the handle B, and said jaw has a recessed portion α , which is adapted to contact with the shoulder α' on said shank portion for the purpose of limiting the throw of said jaw in one direction. A pivotal jaw C is provided, which is pivoted at C' to said shank portion, and pivoted to the threaded end of the shank portion is a hollow tubular handle D', which is closed by means of a plug E at one end. Mounted

within and adapted to have a longitudinal play in said tubular handle is a plunger F, the outer face F' of which is inclined or beveled, as shown clearly in the drawings, and projecting from the opposite face is a lug H, which has pivotal link connections K with said jaw C. Interposed between a shoulder J in the chambered end of said shank portion and the plunger F is a coil-spring L, which serves to normally hold the jaw C in a closed relation, as shown in Fig. 1 of the drawings.

Pivotaly mounted on a lug N, integral with the tubular handle D', is a handle M, one end of which passes through an aperture M' of the handle and carries at its end an antifriction-roller Q, which latter is adapted to bear against the inclined end of the plunger F when it is desired to throw the jaw C in an open relation, as shown in Fig. 2 of the drawings.

By the provision of a wrench embodying the construction shown in the drawings it will be observed that when it is desired to open the jaws the operator presses on the lever M, which causes the antifriction-wheel to push the plunger toward the jaws and open the jaw C under the tension of the spring L. After the pipe is gripped the operator by releasing the lever M will allow the spring to throw the jaw against the article being gripped.

While I have shown a particular construction of wrench embodying the features of my invention, it will be understood that I may make alterations in the detailed construction of the same without departing from the spirit of my invention.

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

1. A wrench comprising two pivotal jaws, a shank portion on which they are mounted, a tubular handle secured to said shank portion, a spring-actuated plunger mounted within said handle, link connections between said plunger and one of the jaws, a lever pivoted to the handle and having an antifriction-roller at its end adapted to actuate said plunger in one direction, as set forth.

2. A wrench comprising a shank portion, two jaws pivotaly mounted thereon, a tubular handle having threaded connection with said shank portion, a spring-actuated plun-

ger mounted within the tubular handle and having link connection between the same and one of said jaws, one end of said plunger being beveled, an angle-lever pivotally mounted on the handle, an antifriction-wheel pivotally mounted on the inner end of the handle and adapted to bear against said beveled surface, as set forth.

3. A wrench having a chambered shank portion, a jaw A pivotally mounted in said chambered portion and having a recess *a* adapted to contact with a shoulder *a'*, a jaw C pivotally mounted upon the shank portion, a tubular handle having threaded connection with said shank portion, a plunger F having a beveled end mounted to have a play

within the handle, a link pivotally connecting a jaw C with said plunger, a spring bearing at one end against the shoulder and at its other end against said plunger, and an angle-lever pivotally mounted on the tubular handle having an end extending into the hollow handle, an antifriction-roller on the end of the lever adapted to bear against the beveled end of the plunger, as set forth.

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

DAVID H. IRLAND.

Witnesses:

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JAMES ROTT.