

No. 753,396.

PATENTED MAR. 1, 1904.

E. F. HOWARD.  
MONKEY WRENCH.

APPLICATION FILED JULY 7, 1903.

NO MODEL.

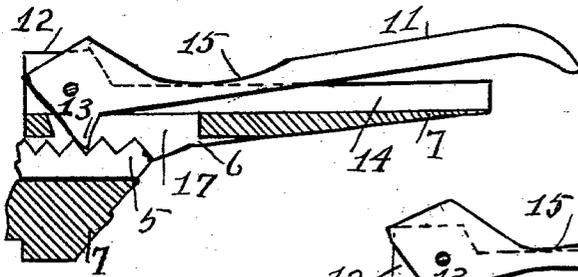
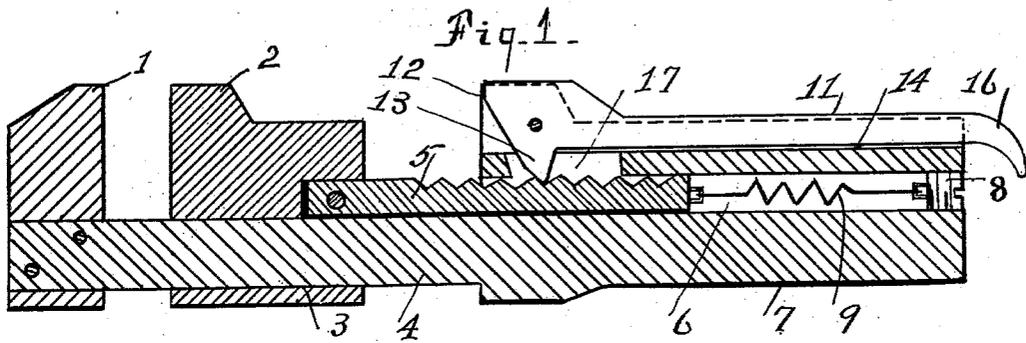


Fig. 2.

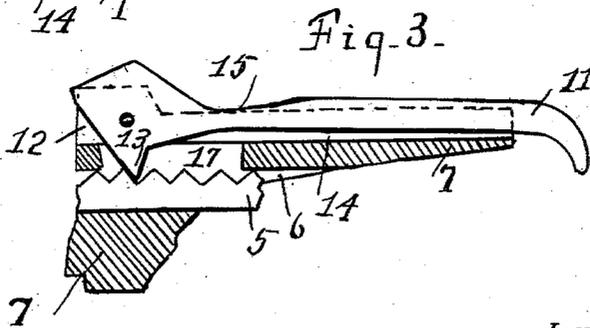


Fig. 3.

WITNESSES:

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## MONKEY-WRENCH.

SPECIFICATION forming part of Letters Patent No. 753,396, dated March 1, 1904.

Application filed July 7, 1903. Serial No. 164,620. (No model.)

*To all whom it may concern:*

Be it known that I, EDGAR F. HOWARD, a citizen of the United States, residing at Stillmore, in the county of Emanuel and State of Georgia, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to hand-grip wrenches of the claw-lever-and-rack type, and has for its object to increase the efficiency and simplify the construction of such wrenches.

The invention consists in the construction hereinafter described and pointed out.

In the accompanying drawings, Figure 1 is a central longitudinal section. Fig. 2 is a partial sectional view of a modification of the claw-lever and rack. Fig. 3 is a similar view showing the claw-lever handle sprung into the recess.

Numeral 1 denotes a fixed and 2 a sliding jaw. The latter has an opening 3 to receive the bar 4, to which jaw 1 is fixed.

5 denotes a rack detachably fixed, by preference, to the sliding jaw and movable in a recess 6, formed in the handle 7 in line with the surface of the bar 4, as shown. The recess 6 may, if desired, extend entirely through the handle. In some cases it can be stopped at its rear end by a plug 8 and can also be provided with a spring or springs 9, adapted to be put under tension by the forward movement of the rack, as in closing the jaws.

11 denotes a lever pivoted between the lips 12 of the handle and provided with a claw 13, cooperating with the rack to force and hold the sliding jaw against an object seized by the two jaws. The shape of the claw and the pivoting of the lever are substantially as indicated, whereby when the long arm of the lever is pressed toward the handle the claw engages a rack-tooth and crowds the rack and sliding jaw forward. A slot or recess 14 is formed in the handle to receive the lever 11 and in such manner that when the claw is in operation the external circumferential contour of the handle is continuous with that of the lever to afford a comfortable and efficient gripping-surface. In some cases to insure this effect the lever may be made of elastic material and preferably reduced in size at one part only, as indicated at 15 in Fig. 3, to provide that it may spring into the recess 14, though

the construction in the particular case may be such that the sliding jaw is forced home before the lever is fully depressed in the recess. The lever projects at 16 beyond the handle for convenience of manipulation, being easily thrown up by the forefinger to allow the handle to be grasped when the claw is not in operation and preparatory to a preliminary closing of the jaws. The opening 3 and recess 14 communicate at 17 to provide for the operation of the claw.

9 denotes a jaw-retracting spring fixed to the plug 8 and to the rack. It serves to retract the rack and connected jaws and frees the rack.

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

1. In a wrench, a bar, a jaw fixed to the bar, a jaw sliding on the bar, a rack fixed to the sliding jaw, a handle having an opening to receive the rack, a claw pivoted in the handle and provided with an actuating-lever, and a retracting-spring, said lever being operable to force the claw against a rack-tooth and said spring operable to move the rack and claw and release the rack.

2. In a wrench the jaw fixed to the bar, the jaw sliding on the bar, the rack fixed to the sliding jaw, the handle and the claw-lever pivoted in the handle, the handle having an opening to receive the rack and a recess to receive the lever, said lever being elastic, and a retracting-spring, said lever extending beyond the outer end of the handle.

3. In a wrench the jaw fixed to the bar, the jaw sliding on the bar, the rack fixed to the sliding jaw, the handle and the claw pivoted in the handle, the handle having an opening to receive the rack and a recess to receive the lever, said lever being elastic, and a retracting-spring, said lever extending beyond the outer end of the handle, the handle-opening for the rack and the screw for the claw-lever communicating adjacent the claw.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDGAR F. HOWARD.

Witnesses:

W. B. HEATH,  
A. G. HEATH.