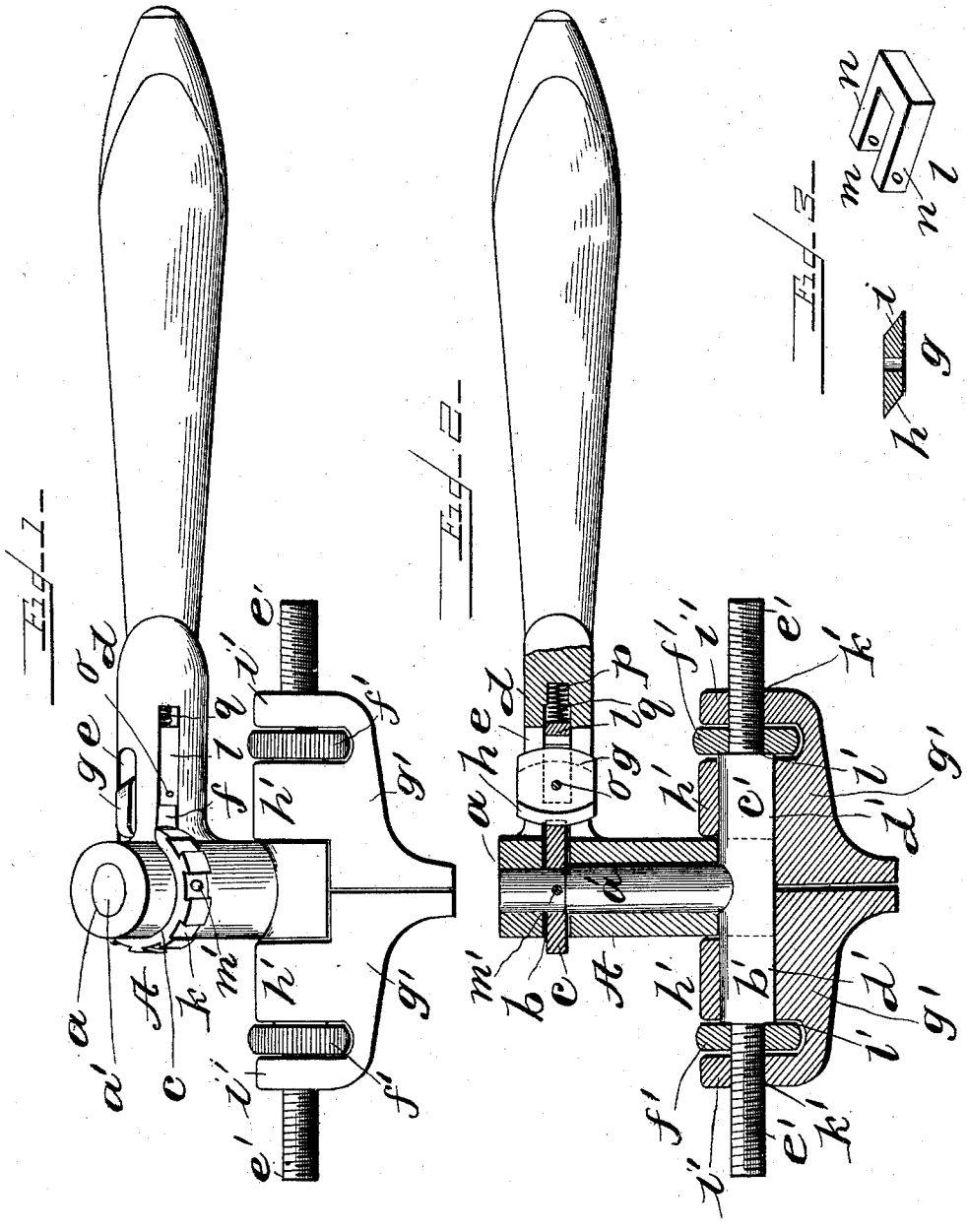
(No Model.)

B. B. LOWE.

WRENCH.

No. 474,477. Patented May 10, 1892.



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UNITED STATES PATENT OFFICE.

BRAXTON B. LOWE, OF KEY WEST, FLORIDA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 474,477, dated May 10, 1892.

Application filed January 12, 1892. Serial No. 417,780. (No model.)

To all whom it may concern:

Be it known that I, BRAXTON B. LOWE, a citizen of the United States, residing at Key West, in the county of Monroe and State of Florida, 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 present invention relates to wrenches, and has for its object certain improvements in construction, which will be fully disclosed in the following specification and claim.

In the accompanying drawings, which form part of this specification, Figure 1 represents a side elevation; Fig. 2, a vertical longitudinal section, and Fig. 3 details of the pawl and its carrier.

Reference being had to the drawings and the letters thereon, A indicates the head of the ratchet, in which is a vertical passage *a* to receive the shank of a bit, drill, wrench, or other device and a horizontal slot *b* to receive a ratchet-wheel *c*. On one side of the head *a* is a shank or handle *d*, in which is formed a vertical longitudinal slot *e* and a horizontal slot *f*, which extends through the shank transversely. In the slot *e* is inserted a pawl *g*, which is provided with oppositely-beveled ends *h i*, which engage the notches *k* in the wheel *c*, and in the slot *f* is placed a pawl-carrier *l*, which is provided with a slot *m* and side bars *n* and is of a width equal to or may be slightly wider than the shank *d*, so that the sides of the pawl-carrier may be readily pressed by the thumb and finger of a hand to retract the pawl out of engagement with the notches in the wheel *c*. The pawl *g* is inserted between the bars *n* and pivotally secured by a pin *o*, passing through the pawl and the bars. The shank is also provided with a recess or seat *p* to receive a helically or other coiled spring *q*, which bears against the rear end of the pawl-carrier to hold the pawl in engagement with the wheel *c* when the ratchet is in use.

The wrench consists of a bar having a vertical arm *a'*, which is cylindrical, and two laterally-extending arms *b' c'*, which are angular at *d' d'* and are provided with extensions *e' e'*, which are provided with opposite or right and left screw-threads, and nuts *f'*, which engage the screw-threads, and upon the bar are supported jaws *g' g'*, having an angular aperture *h' h'*, which engages the angular portion *d' d'* of the bar and prevents the jaws turning on the bar, and a vertical lug *i' i'*, through which is a round aperture *k'*, which surrounds the extensions *e' e'* and serves to keep the jaws in alignment and prevent lateral movement thereof. The jaws are separated and moved toward each other by the nuts *f'*, which bear against the shoulder *l'* and the lug *i'* on the jaws. The arm *a'* is inserted in the aperture *a* of the head A and secured to the ratchet-wheel by a cotter-pin *m'*.

Having thus fully described my invention, what I claim is—

The combination of a ratchet and a wrench, the latter provided with a bar having a vertical extension secured to the ratchet-wheel, lateral arms having angular portions and right and left screw-threaded extensions, jaws engaging said bar and provided with vertical lugs, and nuts between said lugs and shoulders on the jaws.

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

BRAXTON B. LOWE.

Witnesses:
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