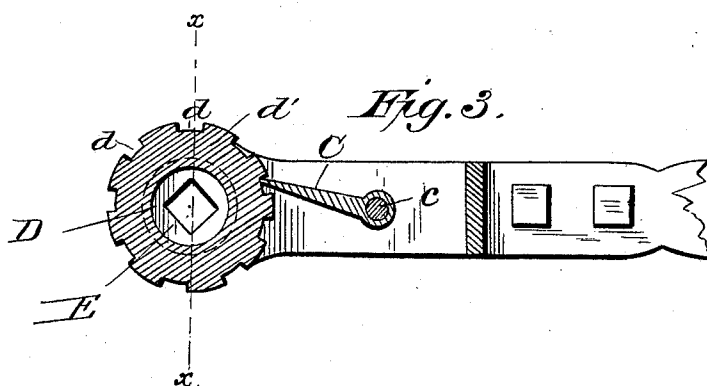
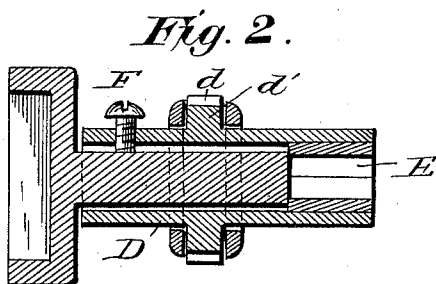
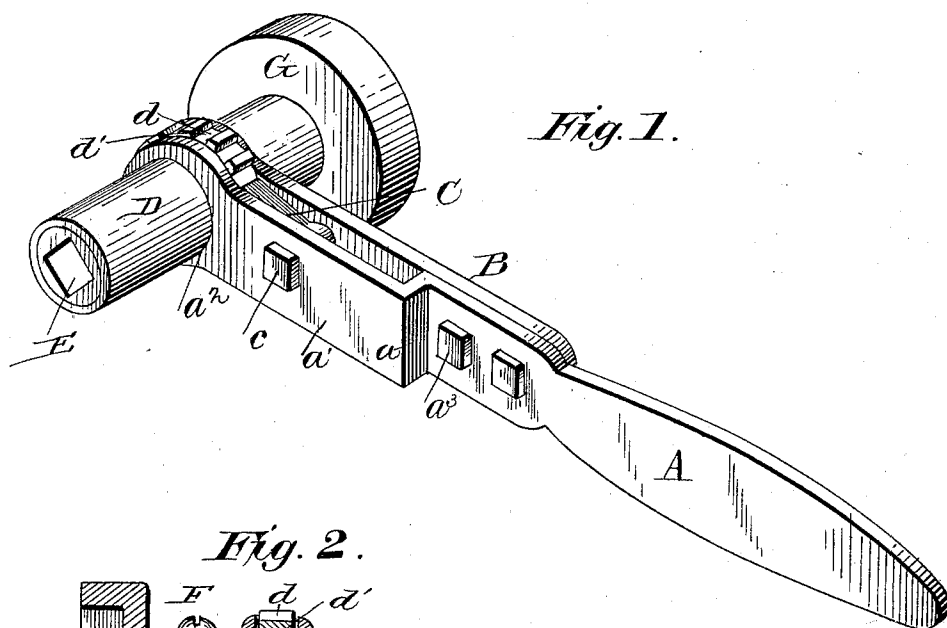


(No Model.)

J. C. & D. C. MORLEY.
RATCHET WRENCH.

No. 467,688.

Patented Jan. 26, 1892.



WITNESSES
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UNITED STATES PATENT OFFICE.

JAMES C. MORLEY AND DON C. MORLEY, OF HUDSON, MICHIGAN.

RATCHET-WRENCH.

SPECIFICATION forming part of Letters Patent No. 467,688, dated January 26, 1892.

Application filed April 2, 1891. Serial No. 387,351. (No model.)

To all whom it may concern:

Be it known that we, JAMES C. MORLEY and DON C. MORLEY, citizens of the United States of America, residing at Hudson, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Ratchet-Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to a ratchet-wrench; and the object of our invention is to provide a right and left handed ratchet-wrench designed principally for bolting carriage-tires, &c. We attain said object by a certain construction and arrangement of parts fully described in this specification and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of our invention. Fig. 2 is a transverse sectional view on the line *x x*. Fig. 3 is a longitudinal sectional view.

Referring to the drawings, the letter A designates the handle of the wrench, which is constructed with the right-angle offset *a*, terminating in the bar *a'*, in the lower end of which there is an orifice *a²*. To the handle A there is bolted at *a³* the bar B, which is parallel to the bar *a'*, and corresponds to the same in every particular. Between the parallel and corresponding bars *a'* and B there is pivoted upon the connecting bolt or bar *c* a ratchet or pawl C, which engages the notches *d* in the collar *d'* of the revolving cylinder D, by means of which said cylinder is held rigidly in position when it is desired to apply the wrench with a view of operating the same. It will be observed that the cylinder D has bearings and revolves in the orifices in the ends of the bars *a'* and B, and that the collar or raised portion *d'* of said cylinder, in conjunction with the pawl C, serves as a means of securely holding the cylinder in its normal position. In each end of the cylinder D there may be located the portion E, which corresponds in construction to the head of the

screw-tap to which the same is designed to be applied.

It is well to mention the fact that each wrench may be accompanied with several portions E, all of which differ in construction and are in accordance with the head of the screw-tap to which they are to be applied.

The part G in Figs. 1 and 2 represents a modification of the portion E, which is different in construction, but is the mechanical equivalent of same and performs the same functions.

F represents a thumb-screw used in rigidly securing the portions E and G respectively.

We attach special importance to the revolving cylinder D, in each end of which may be adjusted the portions E, which vary in size and construction and may be made to fit upon any screw-tap or bolt. These, in connection with the centrally-located raised and notched collar, by means of which the pawl rigidly holds the cylinder D in position, constitute the novel and valuable features of our invention.

What we claim is—

In a ratchet-wrench, the handle having upon the lower end of same two forked parallel bars provided with orifices in the lower end of each, in combination with a revolving cylinder provided centrally with a raised notched collar and having bearings in said orifices, the adjustable portions located in each end of said cylinder and adapted to engage the head of a bolt or screw-tap, and the pawl pivoted between said bars so as to engage and hold rigidly said cylinder in a stationary position, substantially as described, and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES C. MORLEY.
DON C. MORLEY.

Witnesses:

GEORGE WHITBECK,
BERT D. CHANDLER.