R. R. WILSON.

RATCHET WRENCH.

No. 183,736. Patented Oct. 24, 1876.

Fig. 1.

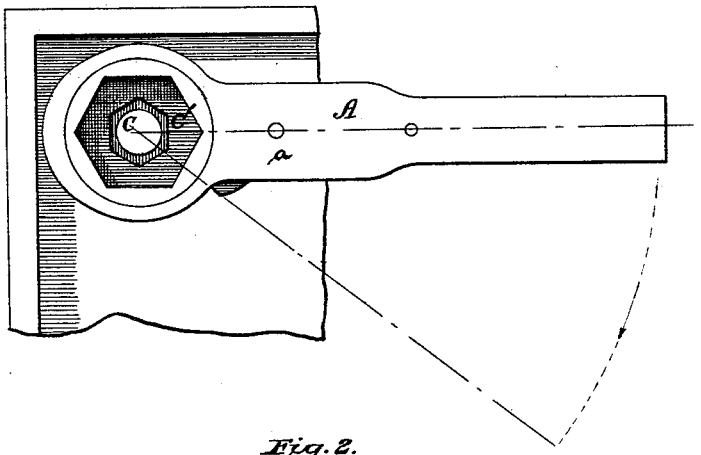


Fig. 2.

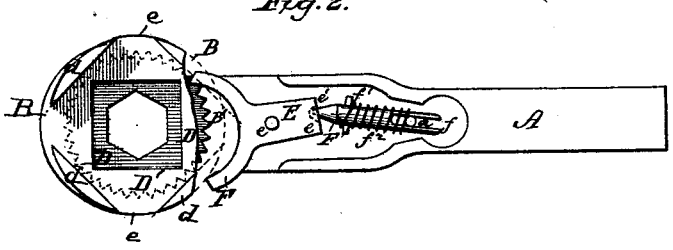


Fig. 3.

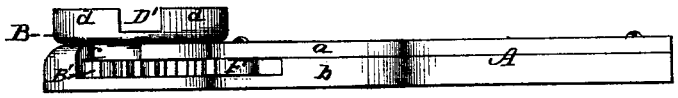
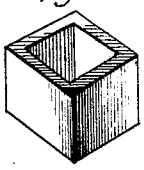


Fig. 4.



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ROBERT R. WILSON, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN RATCHET-WRENCHES.

Specification forming part of Letters Patent No. **183,736**, dated October 24, 1876; application filed August 22, 1876.

To all whom it may concern:

Be it known that I, ROBERT R. WILSON, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Ratchet-Wrench; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a plan view of one side of my compound wrench, as applied to a nut, H, in a corner; Fig. 2, a horizontal section, showing the internal parts; Fig. 3, a side elevation, and Fig. 4 is a detail perspective view of a bushing.

The invention contemplates the saving of time and labor in putting on or taking off nuts from a bolt or axle where they are inaccessible to the ordinary wrench.

The invention consists in the peculiar construction of a compound wrench provided with several nut-holders of different sizes, and made to turn in either direction with the handle by means of a two-armed pawl-lever held by a spring-pin, one of the said nut-holders being open at the vertices of its angles to turn nuts, one or more of whose sides may be close to some obstacle.

A represents the wrench-handle, which is formed in two parts—a cap-plate, *a*, and recessed base-plate *b*, the latter provided with lips *c*. The wheel B is fitted in the recess of said base-plate, and held therein by curved lips *c*, which enter its peripheral groove; also by the curved end of the cap-plate *a*. The wheel has two hexagonal nut-sockets, C C′, on one side, Fig. 1, and two square sockets, D D′, on the other side, Fig. 2. The respective hexagonal sockets C C′ differ in size, and also the square sockets D D′, so that the wrench is adapted for application to a variety of sizes and forms of nuts. The hexagonal sockets C C′ and also the inner and smaller square socket D are formed by recessing the wheel; but the larger square socket D′ is formed by means of isolated jaws *d* projecting from the wheel B, with openings *e* between them to receive the angles of the nut.

Between the parts of handle A is pivoted the two-armed pawl-lever E, in whose rear end *e* is formed a socket, e^1. Into the latter works the pointed end of pin F, having the open rear slot *f*, cross-pin f^1, and spiral spring f^2. In the slot *f* protrudes the stud *a* of handle, for the purpose of forming a pivot on which the pin F may both slide and turn. To whichever side of fulcrum e^2 the end *e* is turned the spring-pin will hold it, causing the wheel and nut-holder to move with handle in one direction, while, by lifting the pawl that is in action, the pin F will rise against its spring and allow the other pawl to be readily brought into working position on ratchet, thus allowing the wheel B to turn and work (whichever nut-holder may be used) in either direction. I also employ square and hexagonal bushings, as shown in the drawings, so as to adapt the compound wrench to any size of nut.

The simplicity and easy application of my invention to a nut, in whichever position it may be placed, give it a great advantage over those now known to the public.

Having thus described my invention, what I claim as new is—

The compound two-way ratchet-wrench, composed of a recessed and lipped base-plate, of a cap-plate of a wheel, B, having bearings on the base and cap-plate, an intermediate ratchet-flange and peripheral jaws, with a peripheral opening between two or more of the jaws, and of a spring-actuated two-way pawl, substantially as shown and described.

ROBERT R. WILSON.

Witnesses:

SOLON C. KEMON,

CHAS. A. PETTIT.