W. Pirsson,

Wrench.

No. 52,444. Patented Feb. 6, 1866.

Fig. 1

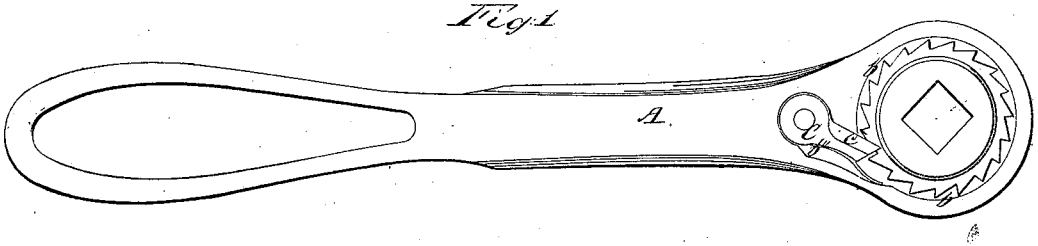


Fig. 2

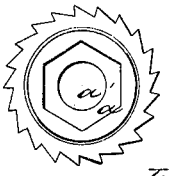


Fig. 3

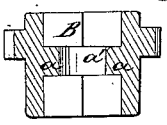
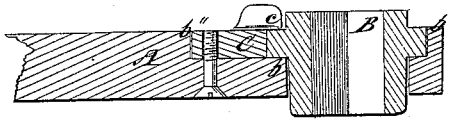


Fig. 4.



Witnesses.

Henry T. Brown

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UNITED STATES PATENT OFFICE.

WILLIAM PIRSSON, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN RATCHET-WRENCHES.

Specification forming part of Letters Patent No. **52,444**, dated February 6, 1866.

To all whom it may concern:

Be it known that I, WILLIAM PIRSSON, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Ratchet-Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of a complete wrench constructed according to my invention. Fig. 2 is a plan view of a detached portion of same. Fig. 3 is a central vertical section corresponding with Fig. 2. Fig. 4 is a central vertical longitudinal section corresponding with Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to ratchet-wrenches fitted with interchangeable ratchet-sockets of different sizes; and it consists, principally, in an improved mode of securing the said ratchet-sockets in the stock or handle of the wrench, whereby great facility is afforded for their removal and insertion when it is desirable to change one for another.

Others skilled in the art will be enabled to construct my invention and apply it to use from the following description, having reference to the drawings:

The stock or handle A is constructed of malleable, cast, or other iron, of suitable form, and has a cylindrical cavity provided in it on one side sufficiently large in its upper part to clear the teeth of the ratchet B. In the bottom of this cavity there is a circular hole of such diameter as to fit easily the lower cylindrical portion of the ratchet-socket B, which revolves in it. The stock A is also furnished with a spring-pawl, C, which vibrates in a recess, *b'*, in one side of the cavity in the stock and acts upon the teeth of the ratchet-socket B. The projecting rim, formed by the ratchet on the socket B coming in contact with the bottom or shoulder of the socket or cavity *b* in the stock A, prevents the ratchet-socket from moving or being displaced in that direction, and the pawl C has a projecting lip *c*, which projects over the upper part of the ratchet-teeth and prevents the ratchet-socket from falling out when held in an inverted position.

When it is desired to change the size of the socket-piece the pawl is pressed out of gear by applying the thumb to the thumb-piece or lip *c*, and the ratchet-socket can then be removed and another one of different size substituted therefor. The stop *a*, provided inside of the interchangeable socket B, prevents the nut or bolt from passing through the socket, and yet allows the screw to pass through its central opening, *a'*, when the wrench is used on a nut.

In Fig. 1 a ratchet-socket with a square hole is shown, and in Fig. 2 a socket with a hexagonal hole is represented.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the ratchet and pawl arranged in a cavity in one side of the stock, the lip on the pawl, substantially as and for the purpose herein specified.

2. The stop *a* in the ratchet-socket, substantially as and for the purpose herein specified.

WILLIAM PIRSSON.

Witnesses:

HENRY T. BROWN,

J. W. COOMBS.