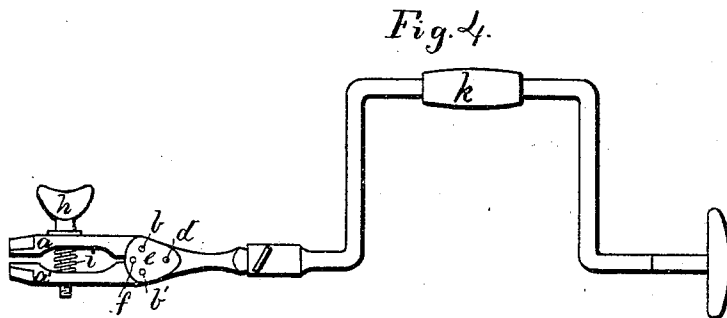
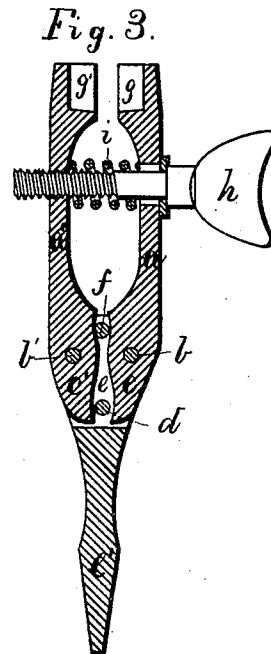
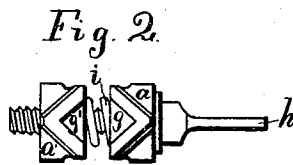
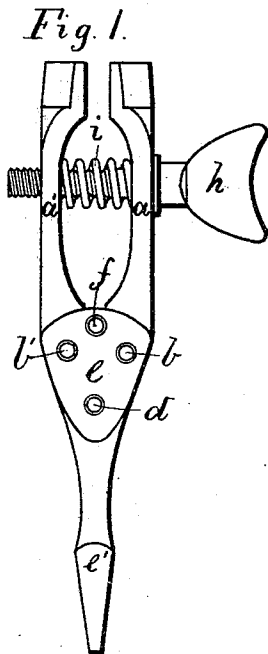


G. W. GREEN.
BITSTOCK WRENCH.

No. 181,574.

Patented Aug. 29, 1876.



Witnesses:

Henry Chadbourne
Walter S. Rogers

Inventor:

George Warren Green.

by
Alban Andrew,
his atty.

UNITED STATES PATENT OFFICE.

GEORGE W. GREEN, OF EXETER, NEW HAMPSHIRE.

IMPROVEMENT IN BIT-STOCK WRENCHES.

Specification forming part of Letters Patent No. **181,574**, dated August 29, 1876; application filed July 10, 1876.

To all whom it may concern:

Be it known that I, GEORGE WARREN GREEN, of Exeter, in the county of Rockingham and State of New Hampshire, have invented certain new and useful Improvements in Bit-Stock Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in wrenches for the purpose of removing and securing axle-nuts of carriages, &c., or any other nuts or screws, without soiling the operator's hands, and in such a manner that the nut or screw operated upon will be held or clamped to the wrench, if so desired, which is very desirable where such a nut or screw is liable to come in contact with axle-grease, or similar substances, for the purpose specified.

My improved wrench is provided with a suitable shank, that can be inserted into the socket of an ordinary bit-stock in a similar manner as a bit is secured to such bit-stock.

My invention consists of a pair of jaws hinged, in their lower ends, to a piece forming the extension of a shank made to fit into a bit-stock. Said jaws are provided with a regulating thumb-screw, passing freely through one of the jaws and screwed through the other one, and having a coiled or other spring interposed between both jaws, for the purpose of enabling them to open automatically as soon as the aforesaid thumb-screw is unscrewed.

On the accompanying drawings, Figure 1 represents a side view of my invention. Fig. 2 represents a top view of the same. Fig. 3 represents a central longitudinal section, and Fig. 4 represents a side view, of my improved wrench combined with an ordinary bit-stock.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

a a' represent a pair of jaws, movable on the rivets or hinge-pins *b b'*, and provided, in their lower ends, with extensions or stops *c c'*, which, in combination with the rivet or projection *d*, secured to the shank-plate *e*, through which the rivets *b b'*, as well as the upper guide or stop *f*, are inserted and secured.

The upper ends of the jaws *a a'* are made V-shaped, as shown at *g g'* in Fig. 2, so as to grasp and secure a square or other polygonal-shaped nut between them. *h* represents the thumb-screw passing freely through the jaw *a*, and screwed into the other jaw, *a'*, by which arrangement a nut can be held and secured firmly between the said jaws. *i* represents a coiled spring surrounding the screw *h*, and pressing against the inside of the said jaws. The shank-plate *e* extends downward as the shank *e'*, that is made to fit any ordinary socket of a bit-stock, *k*, as shown in Fig. 4.

To use my invention, secure the shank *e'* to a bit-stock, as shown in Fig. 4, and grasp the nut or screw that is to be operated upon between the V-shaped jaws *a g a' g'*, and turn the thumb-screw *h*, by which the said jaws are closed very firmly upon the nut or screw in question, and by turning the bit-stock *i* the operator is enabled to hold and turn any desired screw or nut without soiling his hands.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—

In combination with the bit-stock, the herein-described wrench, consisting of the movable jaws *a g a' g'*, screw *h*, spring *i*, shank *e'*, and shank-plate *e*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own invention I have affixed my signature in presence of two witnesses.

GEORGE WARREN GREEN.

Witnesses:

J. R. SMYTH,
J. H. STACY.