No. 693,861. Patented Feb. 25, 1902.

J. H. HOBSON.

WRENCH.

(Application filed Oct. 16, 1901.)

(No Model.)

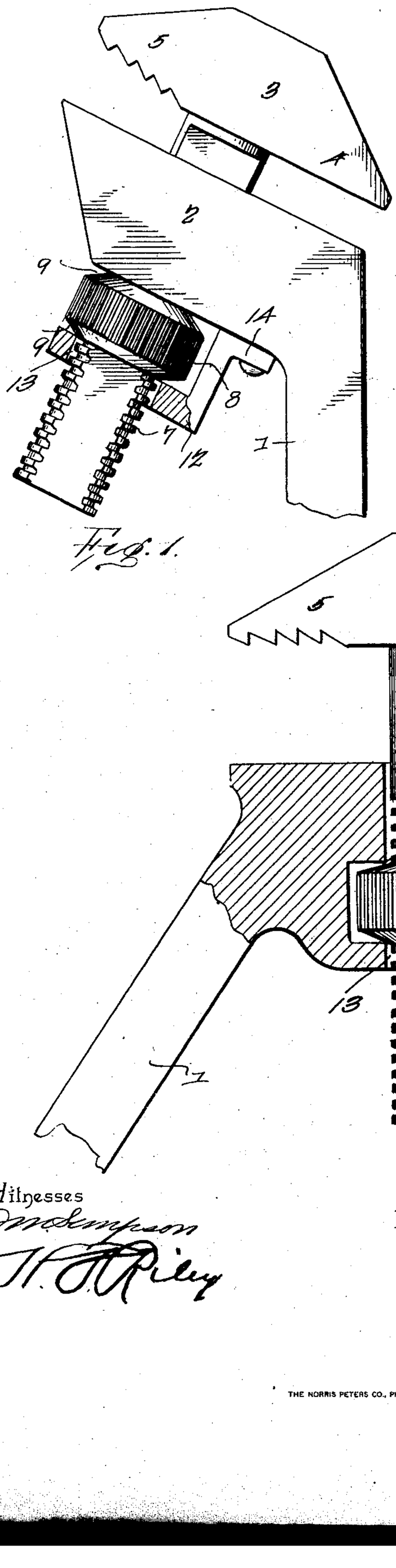

Fig. 1.

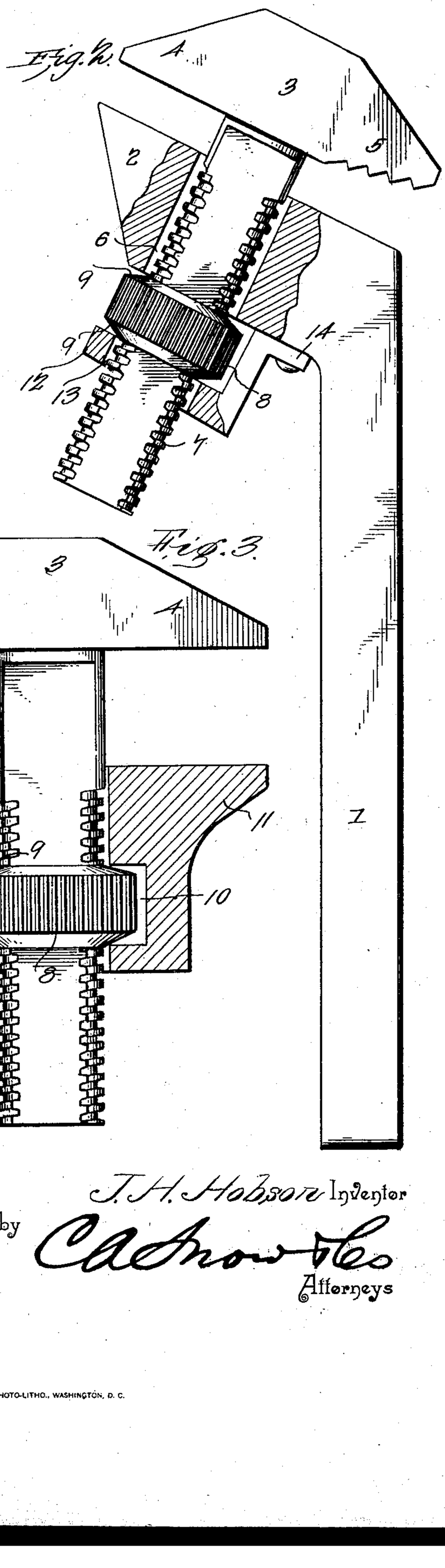

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

JOHN H. HOBSON, OF MATTOON, ILLINOIS, ASSIGNOR OF ONE-HALF TO CHARLES C. REDDING, OF MATTOON, ILLINOIS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 693,861, dated February 25, 1902.

Application filed October 16, 1901. Serial No. 78,862. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. HOBSON, a citizen of the United States, residing at Mattoon, in the county of Coles and State of Illinois, have invented a new and useful Wrench, of which the following is a specification.

The invention relates to improvements in wrenches.

The object of the present invention is to improve the construction of wrenches and to provide a simple, inexpensive, and efficient one of great strength and durability, adapted to be readily arranged for operating on a pipe or nut and capable of engaging the same from any position.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is an elevation of a wrench constructed in accordance with this invention, the parts being arranged to form a pipe-wrench. Fig. 2 is a similar view, partly in section, the wrench being arranged for operating on nuts. Fig. 3 is a sectional view, partly in elevation, illustrating the manner of mounting the nut within the stationary jaw.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a shank or bar provided at its outer end with a stationary jaw extending outward from the shank or bar approximately at an angle of forty-five degrees and coöperating with a movable member 3, which is provided with a nut-engaging jaw 4 and a pipe-engaging jaw 5 and which is capable of reversal to bring either of the jaws to the front in position for coöperating with the stationary jaw 2. The stationary jaw 2, which has a tapered outer end, is provided with an opening 6, arranged at right angles to the plane of its engaging face and receiving a threaded shank 7 of the movable member 3, and the said engaging face is located beyond the opening. The jaws 4 and 5 of the movable reversible member 3 are cut away at the outer sides to provide tapered portions, and the tapered outer portion of the jaw 2 and the tapered outer jaw of the movable member 3 are arranged to advantageously engage the part to be operated on, and they are capable of engaging the same with the same facility as an ordinary S-shaped wrench. This arrangement also adapts the wrench for use in places where an ordinary monkey-wrench cannot be employed. The threaded shank receives a nut 8, which engages the lower or inner face of the stationary jaw and which is adapted to be entirely removed from the threaded shank to permit the latter to be withdrawn from the opening when it is desired to reverse the movable member. When the movable member is disconnected from the stationary jaw, it may be replaced with either of its jaws to the front.

The opening of the stationary jaw is sufficiently large to permit the necessary play or movement of the jaws for enabling the wrench to properly grip a pipe or rod, and the nut 8 is provided with tapered upper and lower faces 9 to facilitate this rocking movement of the movable member. The upper and lower faces of the nut are beveled from the central opening to the milled periphery to provide the tapering ends, which are adapted to fit against the inner face of the stationary jaw.

Instead of providing the pipe-engaging jaw with the form of teeth illustrated in the accompanying drawings any other kind of teeth or any other corrugated or other form of pipe-engaging face may be used. The toothed pipe-engaging face is arranged at an angle to the smooth nut-engaging face of the other jaw, and it diverges outward slightly from the engaging face of the stationary jaw, as illustrated in Fig. 1.

The nut is adapted to move the adjustable jaw both inward and outward, and it may be mounted in a slot or opening 10 of the stationary jaw 11, as illustrated in Fig. 3 of the accompanying drawings, or, as shown in Figs. 1 and 2, the nut may be arranged between the stationary jaw and the keeper or support 12. The keeper or support 12, which is approximately L-shaped, is provided with an opening 13 to receive the shank 7, and it has a short arm 14, which is perforated for the reception of a screw or other suitable fastening

device for securing it to the stationary jaw. The opening 13 is formed in the outer portion of the keeper or support 12, such outer portion being arranged parallel with the adjacent face of the stationary jaw.

It will be seen that the wrench is simple and comparatively inexpensive in construction, that it possesses great strength and durability, and that it is capable of advantageously operating on pipes and nuts where there is but a small amount of space. It will also be clear that the movable member, which is provided with the oppositely-disposed jaws, is adapted to be detached and reversed to bring either of its jaws to the front.

What I claim is—

1. A wrench comprising a bar provided at its outer end with a stationary jaw extending outward from the shank at an obtuse angle and having a tapered outer end and provided thereat with an engaging face, said jaw being also provided between the engaging face and the bar with an opening arranged at right angles to the said engaging face, the reversible member composed of a threaded shank arranged in the said opening at approximately an acute angle to the bar, and the oppositely-disposed nut and pipe engaging jaws extending from opposite sides of the outer end of the threaded shank and tapered, either of the jaws of the reversible member being adapted to be arranged at the front when the shank is removed from the opening, and a nut engaging the shank, substantially as described.

2. A wrench comprising a bar or member having a stationary jaw extending outward at an obtuse angle and provided with an opening disposed at an angle to the bar or member, the reversible member having oppositely-disposed jaws and provided with a threaded shank removably arranged in the said opening and arranged at an acute angle to the bar or member, a nut engaging the threaded shank, and the L-shaped support or keeper mounted on the stationary jaw and supporting the nut, substantially as described.

3. A wrench comprising a bar having a stationary jaw provided with an opening, the reversible member provided with a threaded shank and having oppositely-disposed nut and pipe engaging jaws, the threaded shank being removably arranged in the said opening to permit the said member to be detached for arranging either of the jaws at the front, a nut arranged on the threaded shank and provided with a tapered face or end fitting against the stationary jaw and facilitating the rocking movement of the reversible member, and the approximately L-shaped support or keeper secured to the stationary jaw and receiving and supporting the nut and provided with an opening for the threaded shank, substantially as described.

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

JOHN H. HOBSON.

Witnesses:
EARL BARKER,
JOS. K. KEENEY.