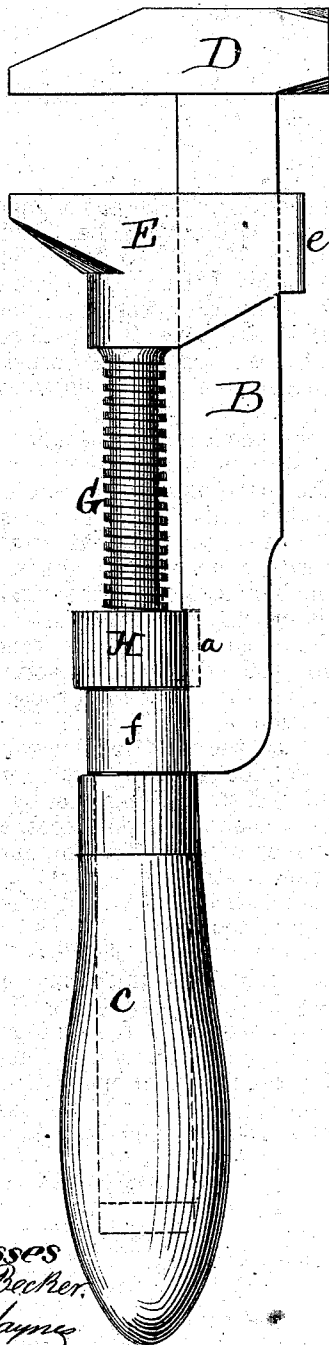


B. L. WALKER.
Wrenches.

No. 158,548.

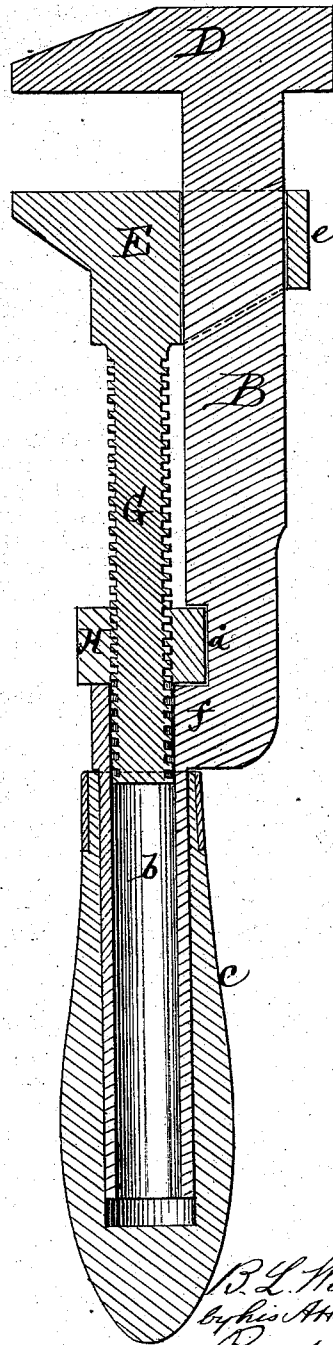
Patented Jan. 5, 1875.

Fig. 1.



Witnesses
John Becker.
Ans. Haynes

Fig. 2.



B. L. Walker
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

BENJAMIN L. WALKER, OF SING SING, NEW YORK.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. 158,548, dated January 5, 1875; application filed December 10, 1874.

To all whom it may concern:

Be it known that I, BENJAMIN L. WALKER, of Sing Sing, in the county of Westchester and State of New York, have invented an Improved Screw-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.

My invention relates to a novel construction of the parts in a screw-wrench, whereby it is simplified and strengthened; and it consists in forming the main or fixed bar with an offset or bend, and with a hollow shank, receiving the sliding or movable bar, and supporting the nut which works the screw on the latter bar, whereby the portions of the jaws which receive the greatest strain are brought in a direct line with the handle.

In the accompanying drawing, Figure 1 is a side view of my improved wrench. Fig. 2 is a central longitudinal section of the same.

The main or fixed bar B is constructed with a hollow or tubular shank, *b*, which forms the handle, and may be surrounded by a wooden covering, *c*, for the sake of convenience in handling. Instead of extending in a direction forming a continuous line with the handle, the bar B is bent laterally at a right angle a distance somewhat greater than the thickness of the movable bar, and then bent again at a right angle, so as to extend in a direction parallel with the line of the handle. The fixed jaw D is formed on the outer end of the fixed bar B. The movable jaw E is formed on the outer end of the movable bar G, the inner portion of which has a screw-thread formed on it for engagement with a milled nut, H, which rests upon the angular portion *f* of the bar B just above the shank *b*, and is prevented from displacement by means of a recess, *a*, in the long straight portion of the bar B, with which

recess the edge of the nut engages, as shown in Fig. 2. The movable bar G slides freely in the tubular shank *b* as it is moved in or out by the action of the nut H. The movable jaw E is formed with a keeper, *e*, which slides on the bar B, and keeps it in place, and the portion of the jaw opposite the keeper is so formed as to present a broad bearing-surface against the bar B.

In consequence of the peculiar construction of this wrench, the fixed bar being formed with the offset, and the movable bar sliding in the tubular handle, the portions of the jaws which receive the greatest strain when engaged with a nut are brought in a direct line with the handle, so that the strain upon the parts is entirely tensional, instead of lateral, and the wrench is thereby rendered much stronger and capable of resisting a greater strain upon the metal than those of ordinary construction.

If desired, the fixed bar B may be constructed of two pieces, which may be mortised and tenoned, and secured together by a rivet; but I prefer to make it in one piece, as it reduces the number of parts to a minimum, and secures greater strength.

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

The combination of the fixed bar B, offset from the tubular shank *b*, and carrying the fixed jaw D, the movable jaw E, having its screw-threaded shank G working in the tubular shank *b*, and the nut H, engaging with the threaded shank, and supported on the tubular shank at the offset *f* of said fixed bar, substantially as shown and described.

BENJN. L. WALKER.

Witnesses:

JOHN L. MILLER,
G. H. DEARING.