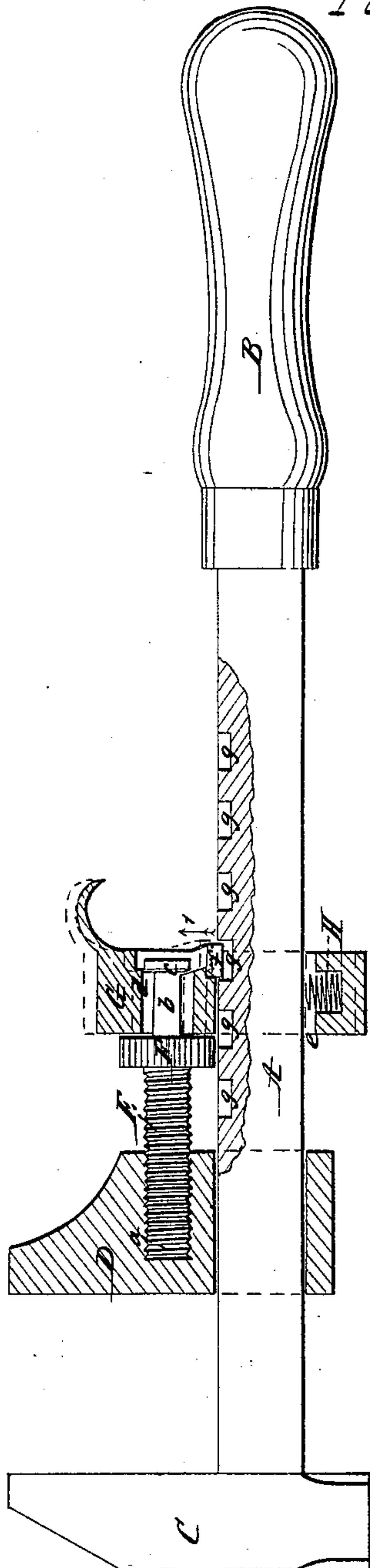


A. Y. McDonald,

Wrench.

N^o 47,067.

Patented Mar. 28, 1865.



Witnesses:
Wm. Brown
Geo. Tusek

Inventor:
A. Y. McDonald
Geo. Mumford
attorneys

UNITED STATES PATENT OFFICE.

A. Y. McDONALD, OF DUBUQUE, IOWA, ASSIGNOR TO HIMSELF AND JOHN MORRISON, OF SAME PLACE.

IMPROVED WRENCH.

Specification forming part of Letters Patent No. 47,067, dated March 28, 1865.

To all whom it may concern:

Be it known that I, A. Y. McDONALD, of Dubuque, in the county of Dubuque and State of Iowa, have invented a new and Improved Wrench; 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 make and use the same, reference being had to the accompanying drawing, making a part of this specification, said drawing being a side view of my invention, partly in section—

This invention relates to an improved screw-wrench of that class in which an adjusting movement is allowed the movable or sliding jaw independently of the screw which is employed for firmly clamping the nut between the jaws.

The object of the invention is to obtain a simple means whereby the sliding jaw may be liberated from the shank of the wrench without straining the screw or affecting it in any way, as hereinafter set forth.

A represents the shank of the wrench, which may be of quadrilateral form, and has a wooden handle, B, on one end and a jaw, C, at the other. D is a sliding jaw, which is fitted on the shank A, and is allowed to slide freely thereon, and E is a screw, which works in an internal screw, *a*, made in the inner or under side of the sliding jaw D. This screw E has a thumb-wheel, F, upon it, and at the inner or outer side of said wheel the shaft of the screw is of plain cylindrical form, as shown at *b*, and has a head, *c*, at its end. This plain portion *b* of the screw-shaft passes through an elongated slot, *d*, in a bar, G, which is fitted on the shank A, the opening *e*, through which the shank passes, being elongated so as to admit of a certain degree of play of the bar G in a transverse direction with the shank A. The bar G, has a projection, *f*, which may be fitted in any of a series of holes, *g*, in the shank A, and this projection is retained in the holes by means of a spring, H, as will be fully understood by referring to the drawing.

The head *c* of the screw-shaft is greater in diameter than the width of the slot *d*, and this

head *c*, in connection with the thumb-wheel F, secures the bar G to the screw-shaft.

From the above description it will be seen that by shoving the bar G in the direction indicated by arrow 1 the projection, *f* of said bar will be freed from the hole *g* in the shank in which it is fitted, and that said bar, as well as the jaw D, may be shoved forward on the shank and brought in contact with the nut. The latter being between the two jaws and the bar G, being then relieved from the pressure of the thumb of the operator, the spring H will draw the projection *f* into a hole, *g*. The operator by then turning the thumb-wheel F, and consequently the screw E, may firmly clamp the nut between the two jaws C D. Thus the wrench may be quickly adjusted to its work, the comparatively slow movement of the screw to adjust the jaw D being only used to cause said jaw to bind firmly against the nut.

By having the shaft *b* of the screw fitted in an oblong slot *d* in the bar G the latter may be moved or adjusted in a direction transversely with the shank A without affecting the screw E. If the shaft *b* were fitted snugly in G, the latter when moved as above specified in order to free the projection *f* from the holes *g*, the screw would be strained and soon become injured. This is the difficulty attending wrenches of this class, and which my improvement fully obviates.

I do not claim, broadly, the screw E and bar D, for they have been previously used in connection with the holes *g* in the shank; but,

Having thus described my invention, what I do claim as new, and desire to secure by Letters Patent, is—

The elongated slot *d* in the bar G, in combination with the screw E, sliding jaw D, projection *f* on bar G, spring H, of spiral or other form, and the holes *g* in the shank A, substantially as and for the purpose set forth.

A. Y. McDONALD.

Witnesses:

JOHN M. BUCHHOLZ,
CHARLES MOTSCH.