

UNITED STATES PATENT OFFICE.

NORTON PORTER, OF YOUNGSTOWN, NEW YORK.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. 37,459, dated January 20, 1863.

To all whom it may concern:

Be it known that I, N. PORTER, of Youngstown, in the county of Niagara and State of New York, have invented a new and Improved 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 drawings, forming a part of this specification, in which—

Figure 1 is an edge view of my invention; and Fig. 2, a section of the same, taken in the line *x x*, Fig. 1.

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

This invention relates to an improved wrench of that class in which a sliding jaw is used in connection with a stationary one attached to a shank on which the sliding jaw works.

The object of the invention is to obtain a wrench of the class specified which will admit of the sliding jaw being readily adjusted in order to apply the wrench to the nut and to detach it therefrom.

A represents the shank of the wrench, and B a jaw, which is formed at one end of the shank or permanently attached to it. The jaw B may be of the usual shape, and the shank A of square or rectangular form.

C is the sliding jaw, which is formed on or attached to a socket, D, which is fitted and allowed to slide freely on the shank A. The jaw C is also of the usual shape, and the socket D has two lugs or ears, *a a*, projecting from it, between which a slide, E, is fitted. This slide passes through a rectangular recess, *b*, in the socket D, so that its inner surface may be brought in contact with the contiguous side of the shank A. (See Fig. 2.)

In the slide E there is fitted an eccentric, *e*, the axis *d* of which passes through the lugs or ears *a a*, and to this eccentric a thumb-piece, *e*, is attached by a short curved arm, *f*, which passes through a slot, *g*, in the outer part of the slide, said slot being of sufficient

length to admit of the arm *f* being moved sufficiently to enable the eccentric *e* to throw the slide E in contact with or out from the shank A. The inner surface of the slide E is serrated, as shown at *h*, and the contiguous side of the shank A is also serrated, as shown at *i*.

From the above description it will be seen that in order to slide the jaw C on the shank A all that is required is simply to press the thumb-piece *e* upward, as indicated in red in Fig. 2, and the eccentric *e* will throw the inner serrated surface of the slide E out from the serrated surface *i* of the shank A. This disengagement of the slide E from the shank and the sliding movement of the jaw C and socket D to adjust the jaw C to the nut may be performed simultaneously by the action of the thumb. When the nut is firmly grasped between the two jaws B C, the thumb-piece *e* is pressed down and the eccentric *e* forces the slide E inward, causing the serrated inner surface of the latter to engage with the serrated surface *i* of the shank, and therefore secures the jaw C in proper position on the shank. In order to slide back the jaw C from the nut the thumb-piece *e* is raised, as before stated.

The device is extremely simple and efficient. The shank A may be provided with a shoulder, *j*, to prevent the socket D being forced down below a certain point on the shank.

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

The slide E, fitted in the socket D of the jaw C, and provided with a serrated inner surface, *h*, and an eccentric, *e*, with a thumb-piece, *e*, attached, in combination with the serrated surface *i* of the shank A, all arranged as and for the purpose herein set forth.

NORTON PORTER.

Witnesses:

B. W. MOORE,
H. STINES.