

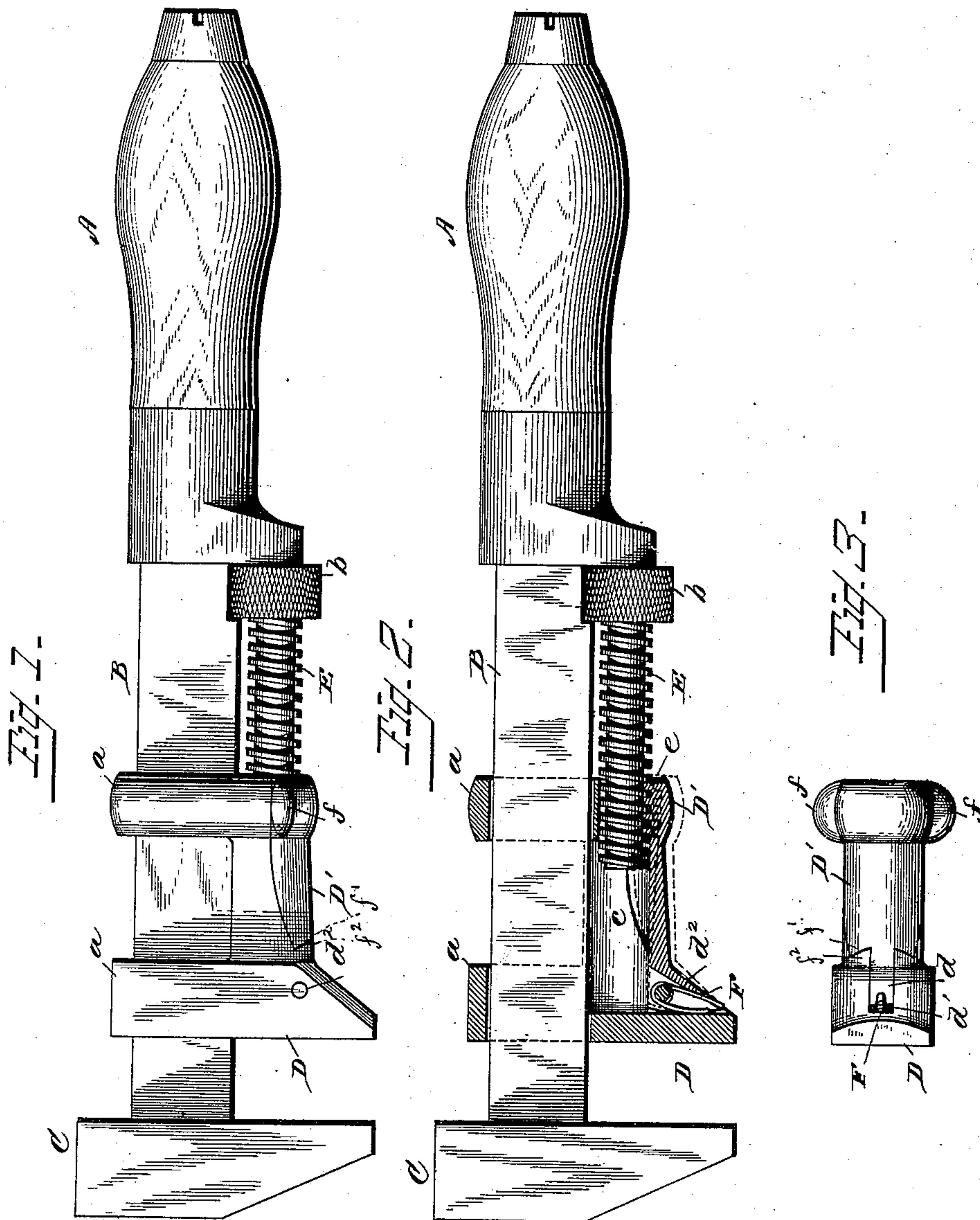
(No Model.)

J. H. MILLER.

WRENCH.

No. 333,963.

Patented Jan. 5, 1886.



Witnesses
James H. Durant.

Inventor
John Harris Miller
By his Attorney *Moses C. Johns*

UNITED STATES PATENT OFFICE.

JOHN HARRIS MILLER, OF LEWISTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO CHARLES ANDREW ZERBE, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 333,963, dated January 5, 1886.

Application filed August 1, 1885. Serial No. 173,264. (No model.)

To all whom it may concern:

Be it known that I, JOHN HARRIS MILLER, a citizen of the United States, residing at Lewistown, in the county of Mifflin and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain improvements in wrenches; and it has for its object to provide a screw-wrench with which both a rapid and fine adjustment can be made.

It consists in a certain novel construction and arrangement of the various parts, all of which I will now proceed to point out and describe, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a wrench provided with my improvement; Fig. 2, a vertical longitudinal section, and Fig. 3 a detail.

Referring to said drawings, A is the handle of the wrench; B, the bar; C, the stationary jaw, secured to the outer end of the bar B.

D is the sliding jaw, provided with the usual retaining and guiding loops, *a*.

E is the operating-screw, provided with a milled head, *b*.

c is a socket in the sliding jaw, in which the operating-screw enters.

D' is a movable section forming part of the sliding jaw, and is provided with a heel, *d*, which enters a slot, *d'*, in said sliding jaw, and is pivoted to the same at *d''*. The inner side of the movable section is grooved longitudinally and forms the upper portion of the socket *c*. One end of the movable section is screw-threaded on its inner side, and forms a half-nut, *e*, which engages with the operating-screw E.

F is a spring in the slot *d'*, which engages with the heel *d* at a point above the pivot, and serves to hold the half-nut *e* in engagement with the operating-screw.

f f are lugs on either side of the half-nut, for moving said nut out of engagement with the operating-screw. The inner end, *f'*, of the movable section is beveled, and engages with a beveled shoulder, *f''*, on the sliding jaw. As pressure is exerted on the sliding jaw, the

beveled shoulder, engaging with the end of the movable section, coacts with the spring to hold the half-nut in engagement with the operating-screw. The greater the pressure on the sliding jaw the firmer the half-nut holds on to the thread of the screw.

To use my invention, take hold of the lugs *f* and move the half-nut out of engagement with the operating-screw. Then slide the jaw along the bar until it engages with the nut to be turned, thus making a rapid adjustment. Then let go of the lugs, and the spring will throw the half-nut in engagement with the operating-screw, and by turning said screw a fine adjustment can be made.

My invention is simple and strong in its construction, and so arranged that it is almost impossible for the various parts to get out of order. It has all of the advantages of a screw-wrench, and at the same time admits of a very rapid adjustment.

I am aware that wrenches have been made with a movable section hinged to the sliding jaw, and having a half-nut on said movable section held normally in engagement with the operating-screw by a spring. This construction I do not claim, broadly, as my invention; but

What I claim is—

In the herein-described wrench, the combination of the bar B, having the stationary jaw C at one end, with the operating-screw E and the sliding jaw D, having loops *a*, surrounding the bar B, a movable section, D', hinged at one end to the sliding jaw, a socket, *c*, formed between the sliding jaw and movable section and adapted to receive the operating-screw, said movable section D' partially surrounding said operating-screw and forming the outer portion of the socket *c*, and having a half-nut, *e*, on its free end, engaging with the screw E, and a spring, F, holding the movable section to its place, all arranged and operating substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN HARRIS MILLER.

Witnesses:

LA FAYETTE WEBB,
S. J. BRISBIN.