

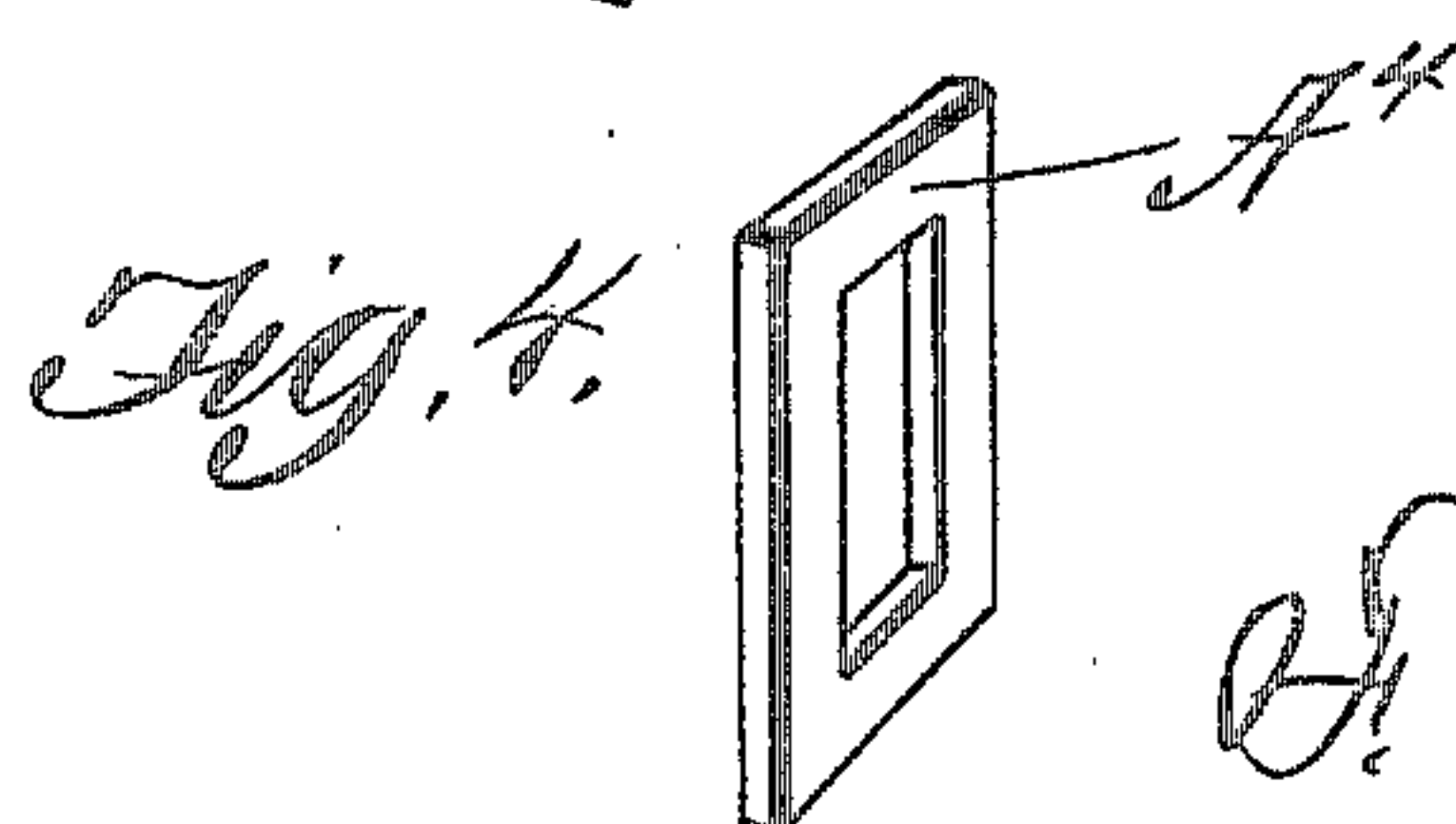
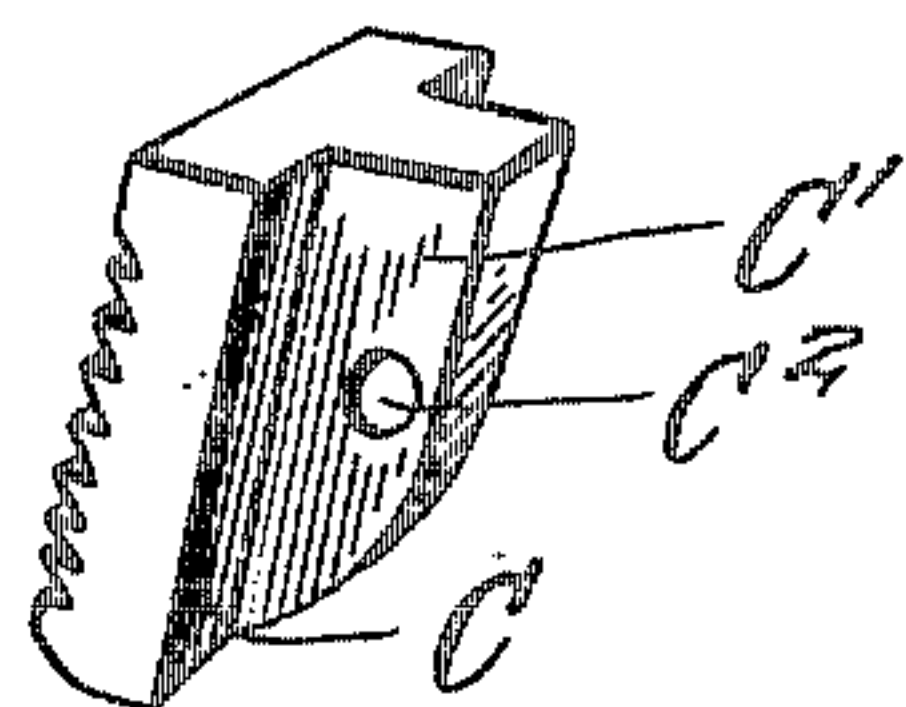
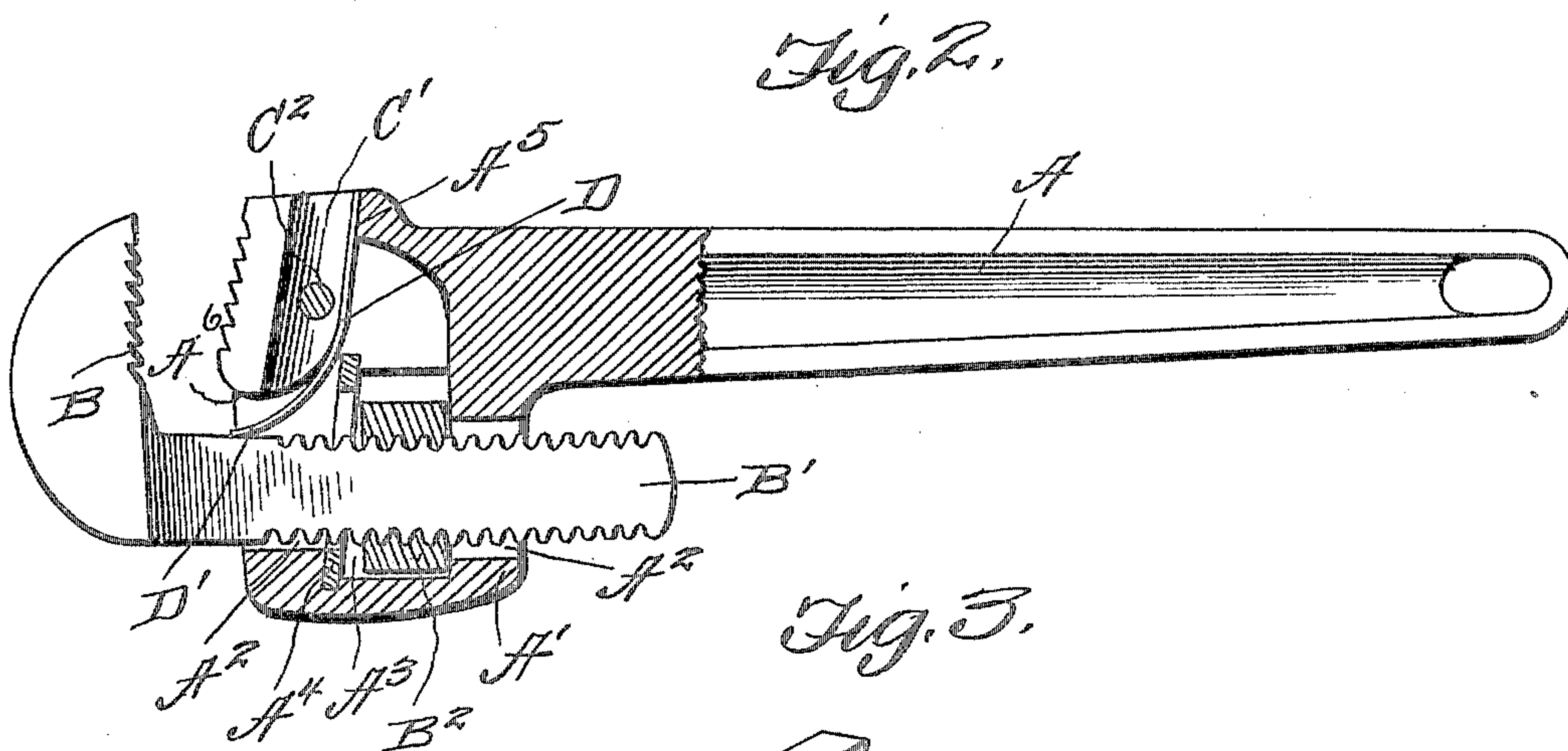
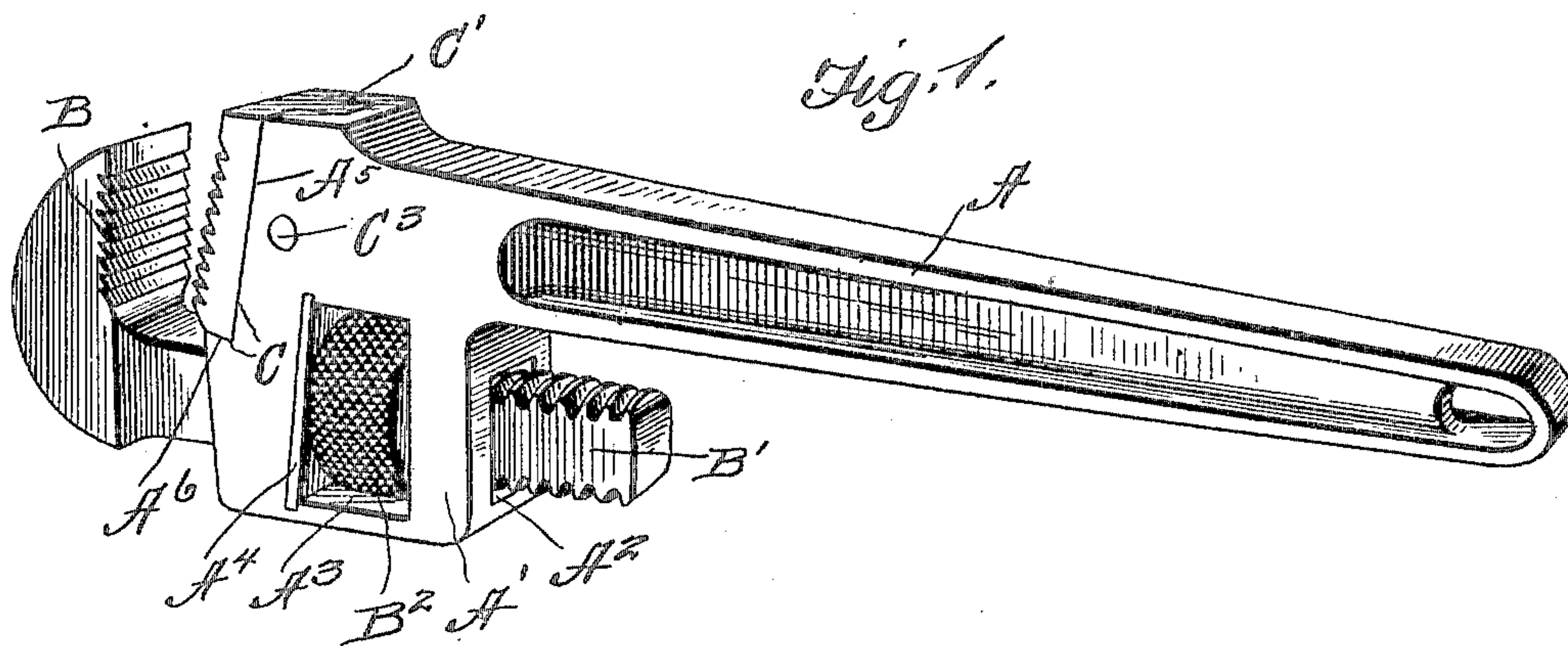
No. 804,433.

PATENTED NOV. 14, 1905.

F. L. ROBINSON.

WRENCH.

APPLICATION FILED APR. 1, 1905.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## WRENCH.

No. 804,433.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed April 1, 1905. Serial No. 253,331.

*To all whom it may concern:*

Be it known that I, FRED L. ROBINSON, a citizen of the United States, residing at Wayland, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Wrenches; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification,

This invention relates to a wrench, and particularly to a construction embodying a laterally-movable adjusting-jaw.

The invention has for an object to provide means for mounting this movable jaw so that it may travel into parallelism with the contact-face of the fixed jaw and be returned to its inward position in order to quickly release the wrench when desired.

Other and further objects and advantages of the invention will be hereinafter set forth, and the novel features thereof defined by the appended claim.

In the drawings, Figure 1 is a perspective view of the invention. Fig. 2 is a longitudinal section through the jaws, and Fig. 3 is a detail perspective of the removable contact-face or fixed jaw. Fig. 4 is a detail view of a wear-plate, which also serves to hold the spring in contact with the fixed jaw of the wrench.

Reference now being had to the details of the drawings by letter, A designates a handle which may be of any suitable size or configuration and is provided with an extension A' at one side thereof provided with a longitudinally-disposed aperture A<sup>2</sup>, through which the threaded shank B' of the movable jaw B passes. This extension is also provided with a transverse opening A<sup>3</sup> to receive the adjusting-nut B<sup>2</sup>, threaded upon the shank of the jaw B, which extends beyond the opposite sides of the extension, as is usual in this art. One wall of the aperture A<sup>3</sup> is provided with a wear-plate A<sup>4</sup>, disposed obliquely to the opposite wall of this aperture. The handle is also provided with a seat A<sup>5</sup>, terminating at the rear in a shoulder A<sup>6</sup>, against which the contact-face C, comprising the fixed jaw of the wrench, is adapted to abut. This face or jaw is mounted for removal and reversal by means of a depending rib C', provided with a securing-aperture C<sup>2</sup>, and is held in position

by a removable pin C<sup>3</sup> passing through the slots of the body and the aperture C<sup>2</sup>. It will be observed that the under face of this rib C' is curved or cut away at its inner end, and extending beneath the rib, so as to be held thereby, is a tension-spring D, which at its outer free end D' bears against the shank B' of the movable jaw, so as to force it into contact with the opposite wall of the aperture through which it passes. The seat for the plate or fixed jaw C is disposed at the same angle as the wear-plate, and the face of the jaw corresponds to that angle, so that when the parts are in normal position, as shown by full lines in Fig. 2, the tension of the spring holds the face of the movable jaw out of parallelism with the face of the fixed jaw, while when tension is once applied to the handle of the wrench these jaws are moved until their faces come into parallelism and this spring placed under tension. The result of this is to adapt the wrench for application either to a pipe or to a nut and also to secure a quick-gripping action when pressure is applied to the wrench-handle, and when this pressure is released the spring at once relieves this gripping action by throwing the movable jaw out of parallelism with the fixed jaw. Each of these jaws is roughened or toothed in the usual manner, and the direction of the teeth upon the fixed jaw may be varied by a reversal thereof. It will be apparent that this disposal of the wear plate or face of the aperture against which the adjusting-nut abuts in the lateral travel of the movable jaw relative to the inclination of the fixed jaw permits a greater extent of travel between the parts, by which a more efficient gripping action is secured and the movable jaw held out of parallelism with its cooperating member.

It will be obvious that changes may be made in the details of the construction and configuration of the device without departing from the spirit of the invention.

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

A wrench, comprising a movable jaw, having a threaded shank portion, a handle having a chambered end in which said shank portion is held, a nut mounted in said chambered portion of the handle and engaging the threads of said shank portion, the forward end of said chambered portion being recessed, a fixed jaw mounted in said recess, the inner end of said fixed jaw being convexed, a wear-plate mount-

ed in the chambered portion of said handle  
and seated against a shoulder therein, and hav-  
ing an elongated slot through which the shank  
portion of the movable jaw has a play and  
5 against which plate said nut is adapted to  
bear, a spring seated in said recess and held  
by said wear-plate against the rear edge of  
said fixed jaw at its inner end and bearing

yieldingly against the shank portion of the  
movable jaw, as set forth. 10

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

FRED L. ROBINSON.

Witnesses:

G. H. STANNARIUS,

C. B. ZIMMERMAN.