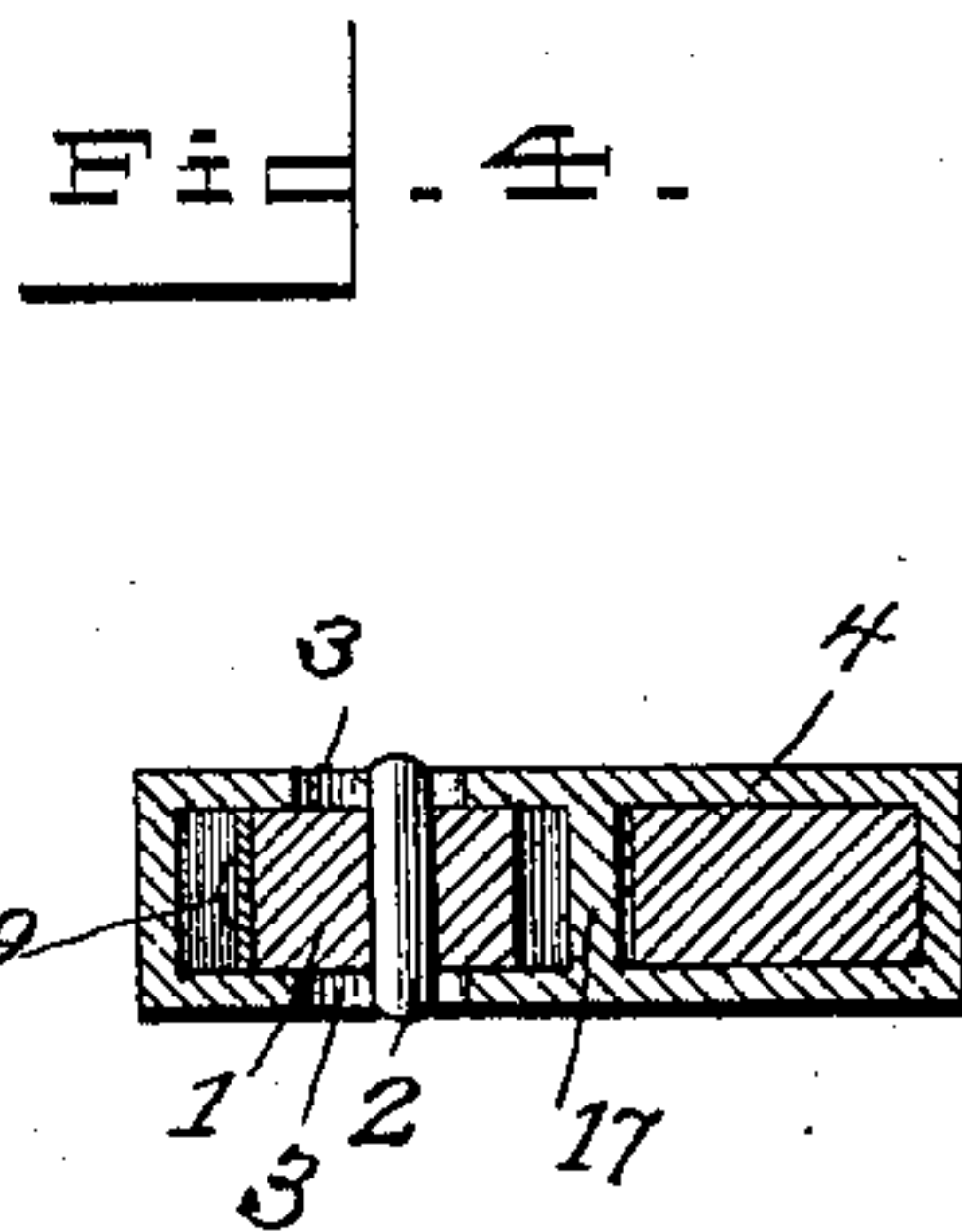
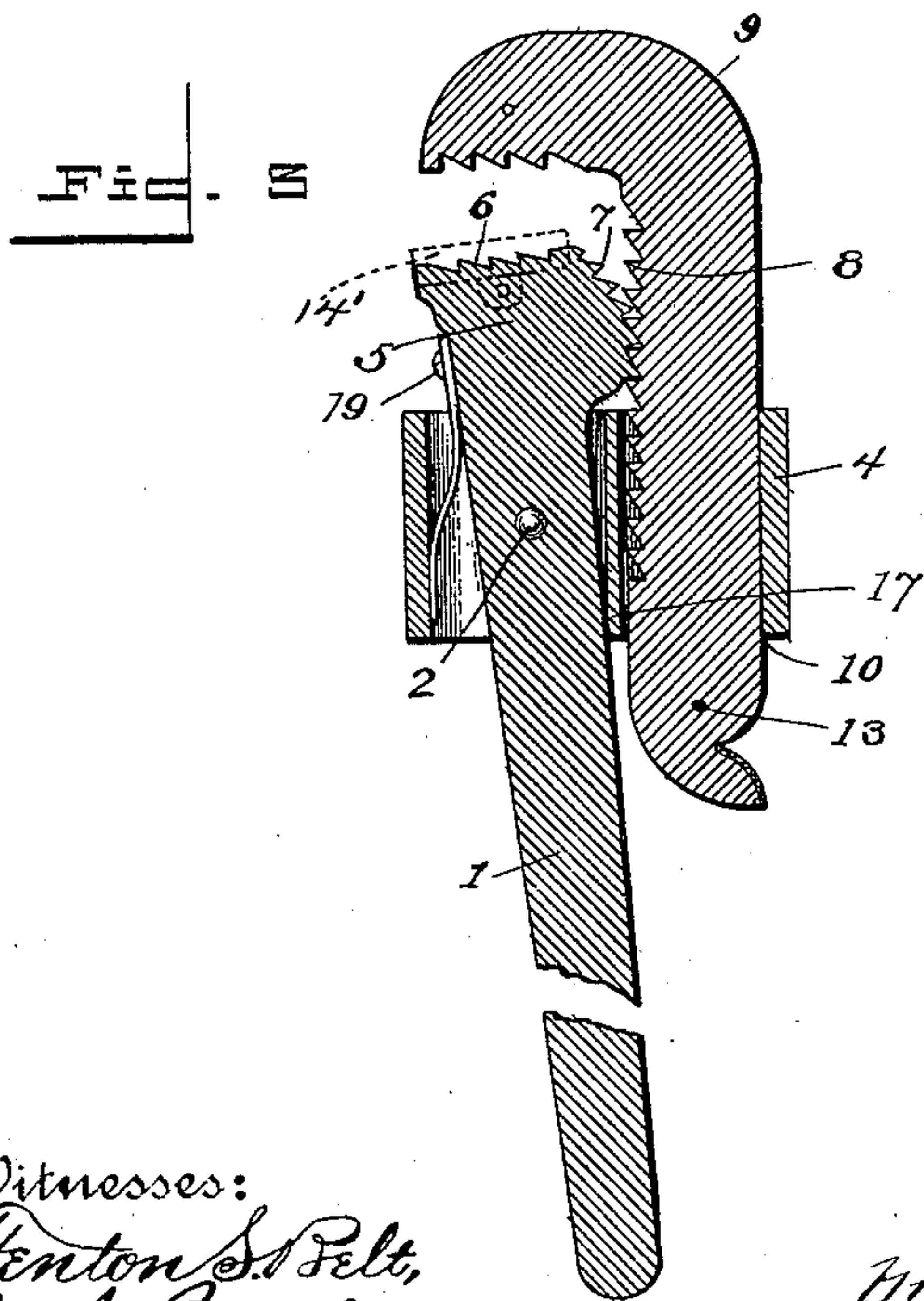
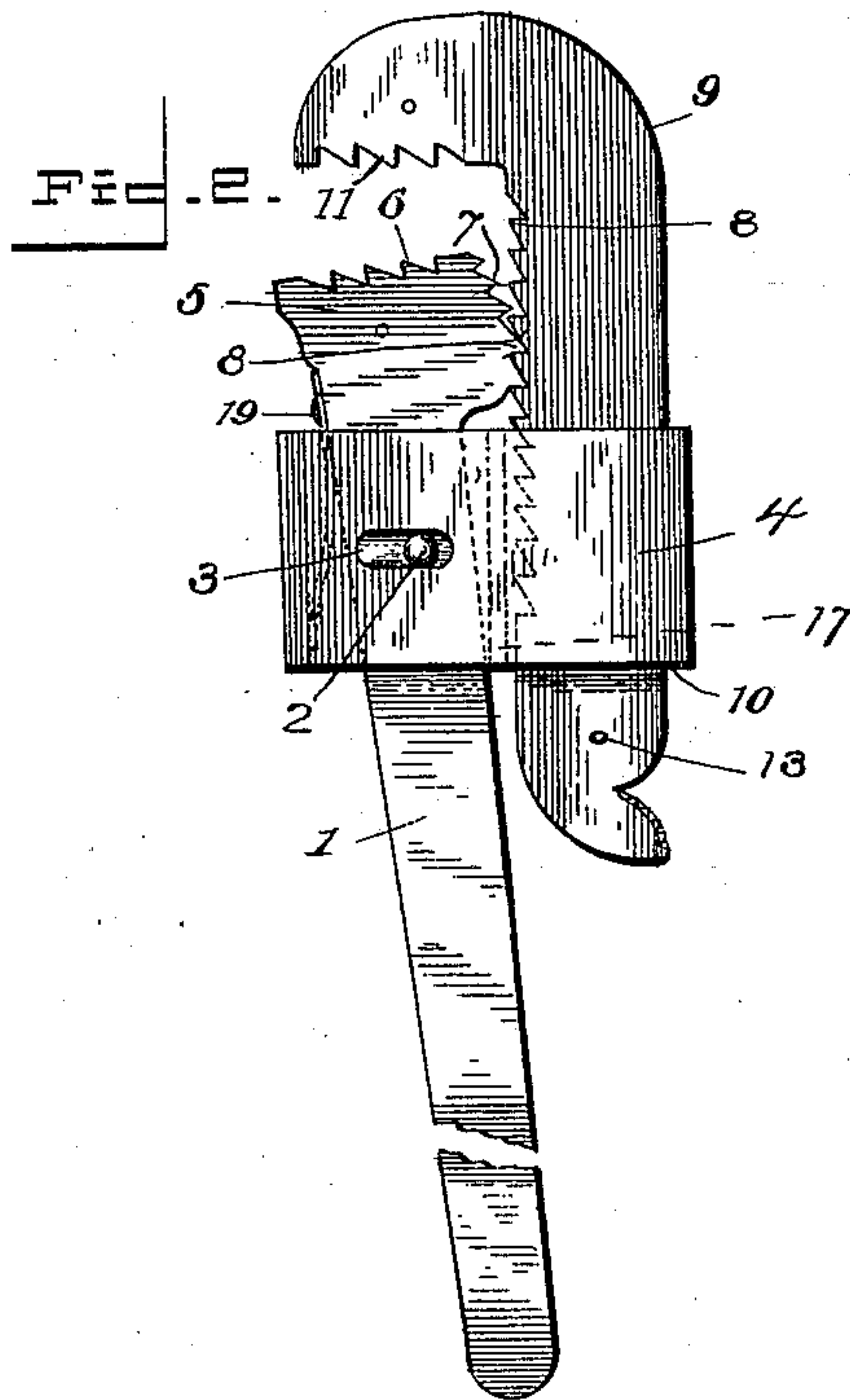
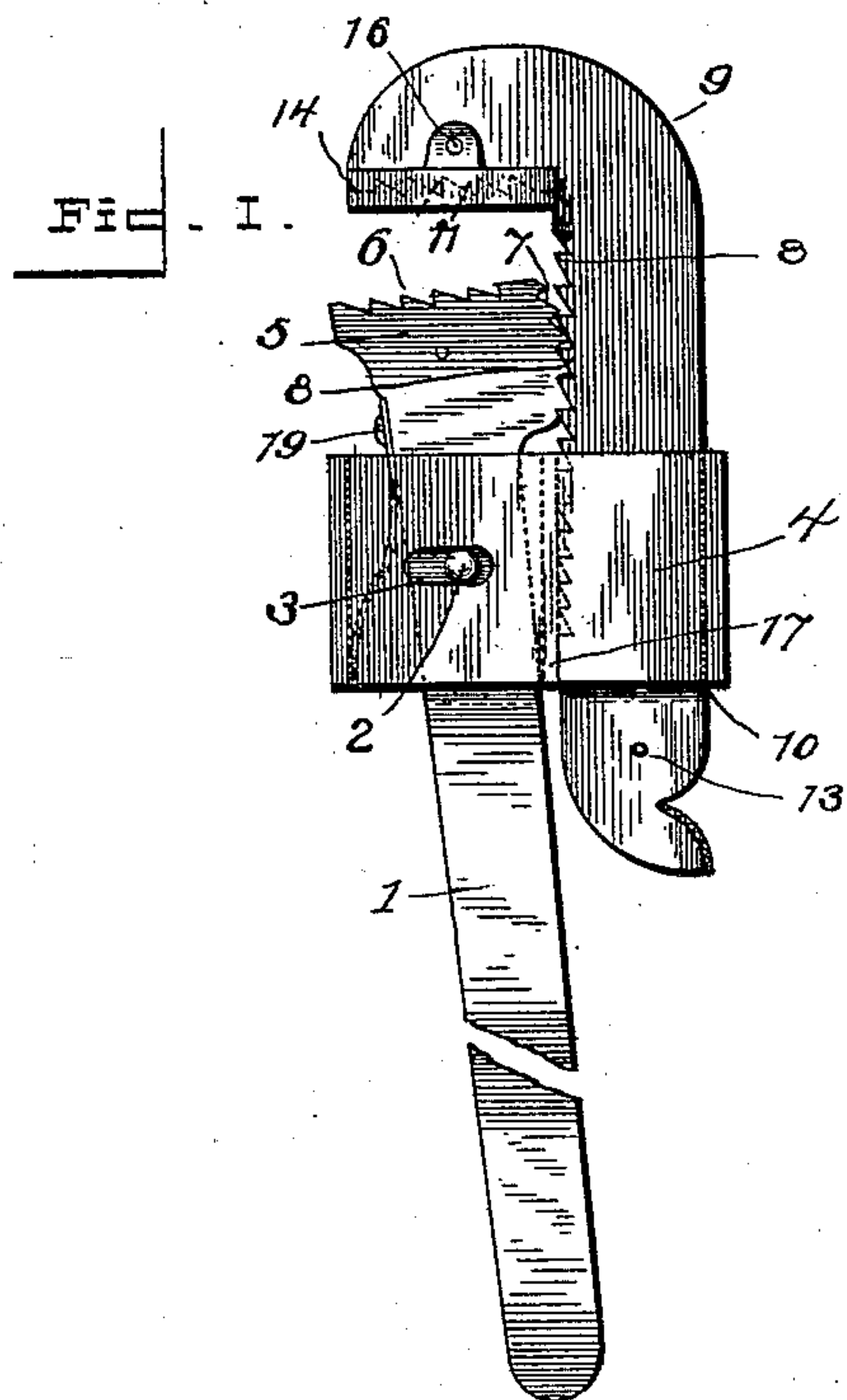


(No Model.)

J. G. NEWELL.
WRENCH.

No. 601,672.

Patented Apr. 5, 1898.



Witnesses:
Fenton S. Belt,
J. A. Bowen.

Inventor:
John G. Newell,
By *A. B. Wilson & Co.,*
Attorneys

UNITED STATES PATENT OFFICE.

JOHN G. NEWELL, OF NEW HAVEN, CONNECTICUT, ASSIGNOR OF ONE-HALF
TO LEVI T. SNOW, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 601,672, dated April 5, 1898.

Application filed July 22, 1897. Serial No. 645,601. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. NEWELL, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, 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.

My invention relates to a novel form of wrench; and the object is to provide a simple, inexpensive, and effective tool of this character.

To this end the invention consists in the construction, combination, and arrangement of the device, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings the same reference characters indicate the same parts of the invention.

Figure 1 is a side elevation of my improved wrench. Fig. 2 is a modified form of the same. Fig. 3 is a longitudinal section. Fig. 4 is a transverse section on the line 4 4 of Fig. 1.

1 represents the rectangular handle of a wrench which is provided with a transverse pin 2, having a bearing in the slots 3 3, formed in the opposite walls of the yoke 4. The forward end of the handle 1 is provided with an angular jaw 5, the transverse face of which is provided with a series of ratchet-shaped teeth 6, and the parallel face of this jaw is also provided with a series of rearwardly-projecting ratchet-shaped teeth 7, adapted to engage the oppositely-disposed series of teeth 8 on the contiguous edge of the movable jaw 9. This jaw 9 has a longitudinal movement in the guide-orifice 10, formed in the yoke 4, and the parallel face of the movable jaw is also provided with a series of gripping-teeth 11, oppositely arranged to those in the parallel face of the jaw 5.

The lower end of the movable jaw 9 is provided with a transverse limit-pin 13 to prevent the accidental detachment of said jaw from the yoke, and in adjusting the wrench the head 5 is bodily drawn away from the opposing jaw-shank, so as to separate the

teeth 7 and 8 and permit the adjustment of the jaws to correspond to the work to be performed.

An auxiliary jaw 14 is pivoted on a pin 16 to the parallel face of the movable jaw 9, and its operative face is preferably smooth for manipulating finished nuts in contradistinction to the teeth 11, which are intended to grasp a pipe, bolt, or similar cylindrical object.

In practice I also provide a second auxiliary jaw 14', (shown in dotted lines in Fig. 3,) which is removably secured to the fixed jaw, and either, neither, or both of these auxiliary jaws may be employed, as occasion requires.

An integral web 17 is formed in the yoke 4 to form a guideway for the movable jaw, and a leaf-spring is fixed by a screw or rivet 19 to the outer face of the handle 1, so that its free end impinges on the inner edge of the yoke to press the teeth 7 into engagement with the corresponding teeth 8 on the movable jaw 9.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

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

The combination with the slotted yoke 4, provided with the web 17, the handle 1 provided with the leaf-spring 18 and the pin 2 on which it is fulcrumed in said slotted yoke, and the movable jaw 9, longitudinally adjustable in said yoke, and provided with a series of teeth 11, adapted to engage the corresponding teeth 7, on the handle 1, substantially as shown and described.

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

JOHN G. NEWELL.

Witnesses:

LOUIS A. BABCOCK,
WOLCOTT G. HUNTINGTON.