

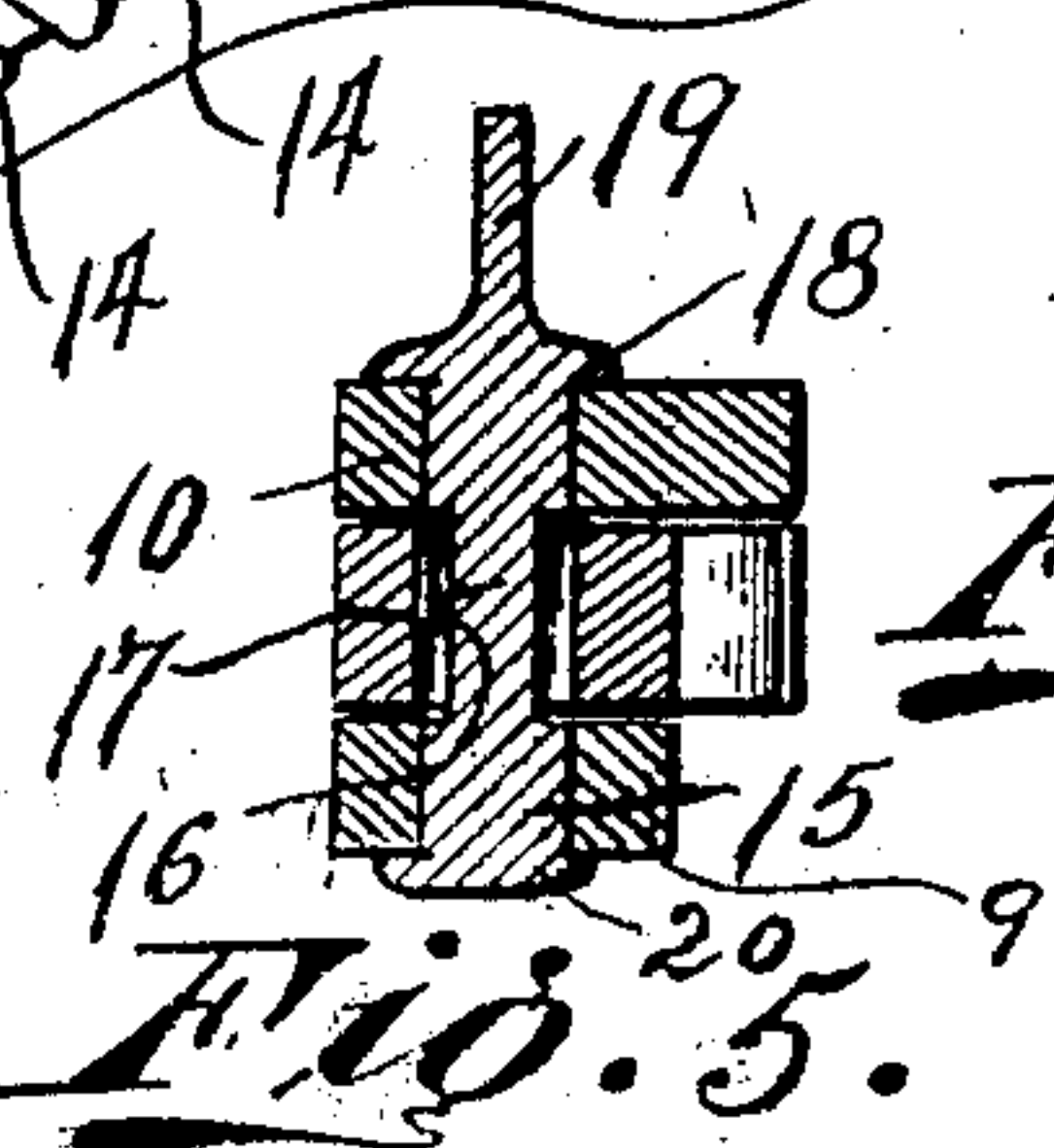
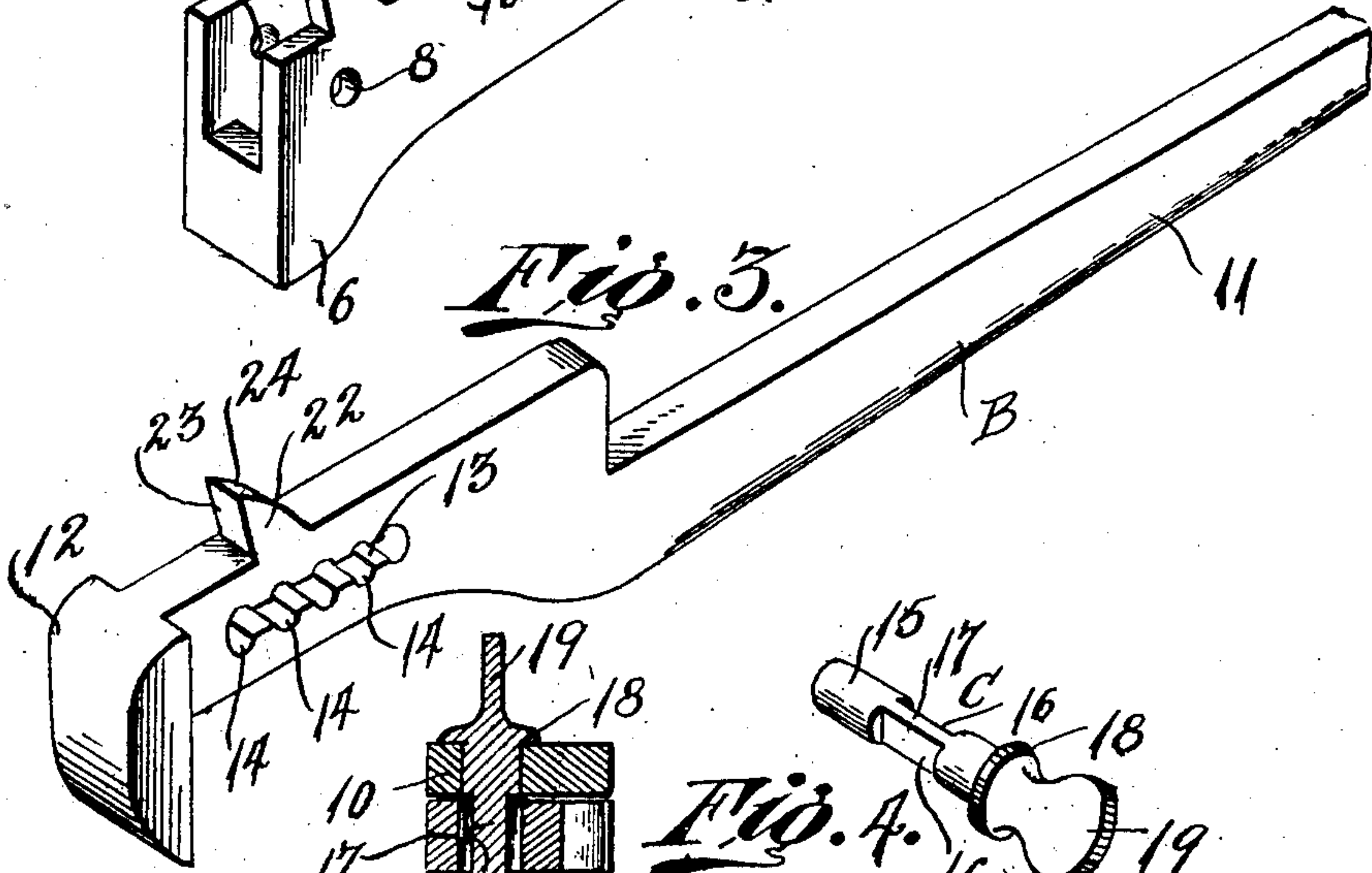
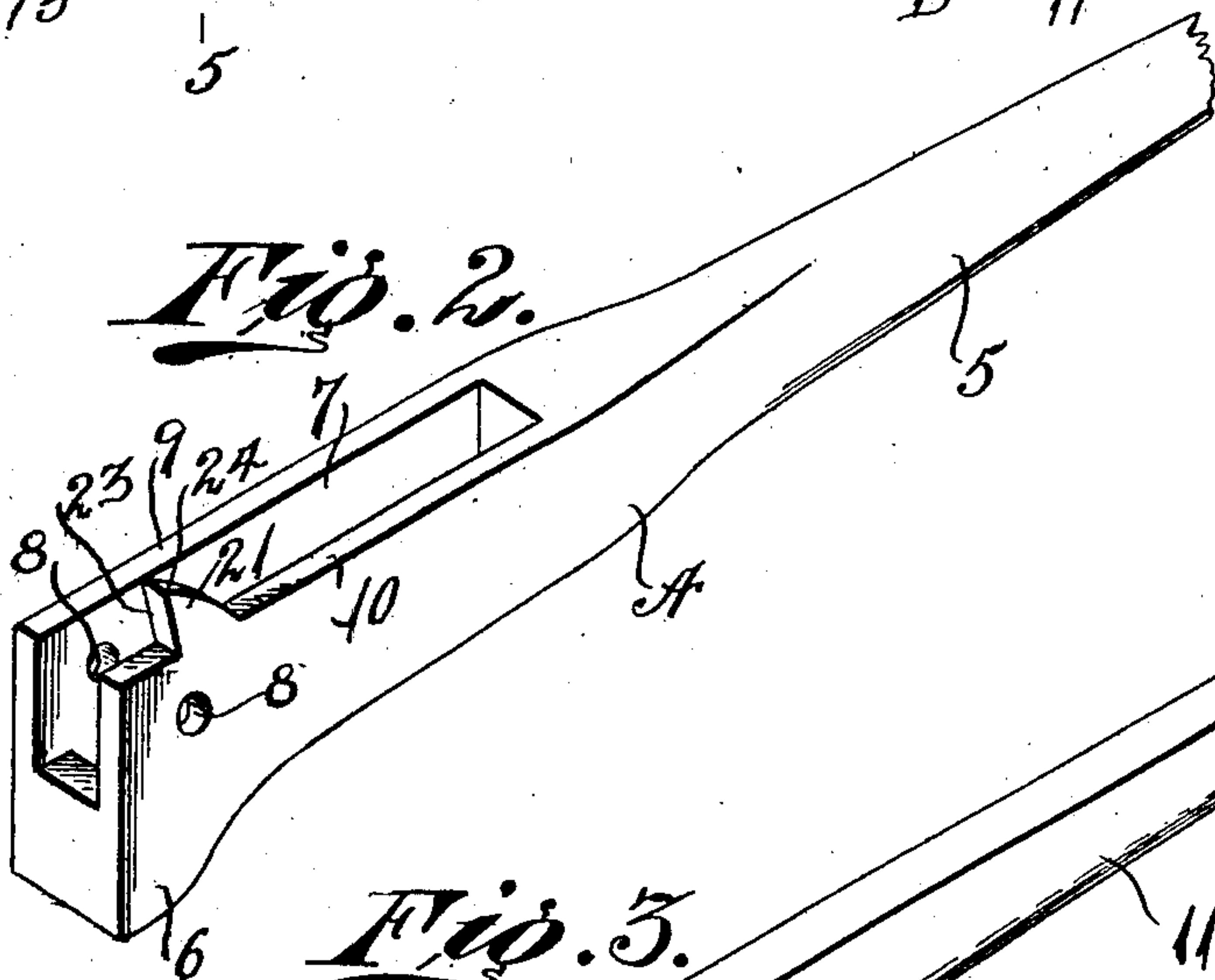
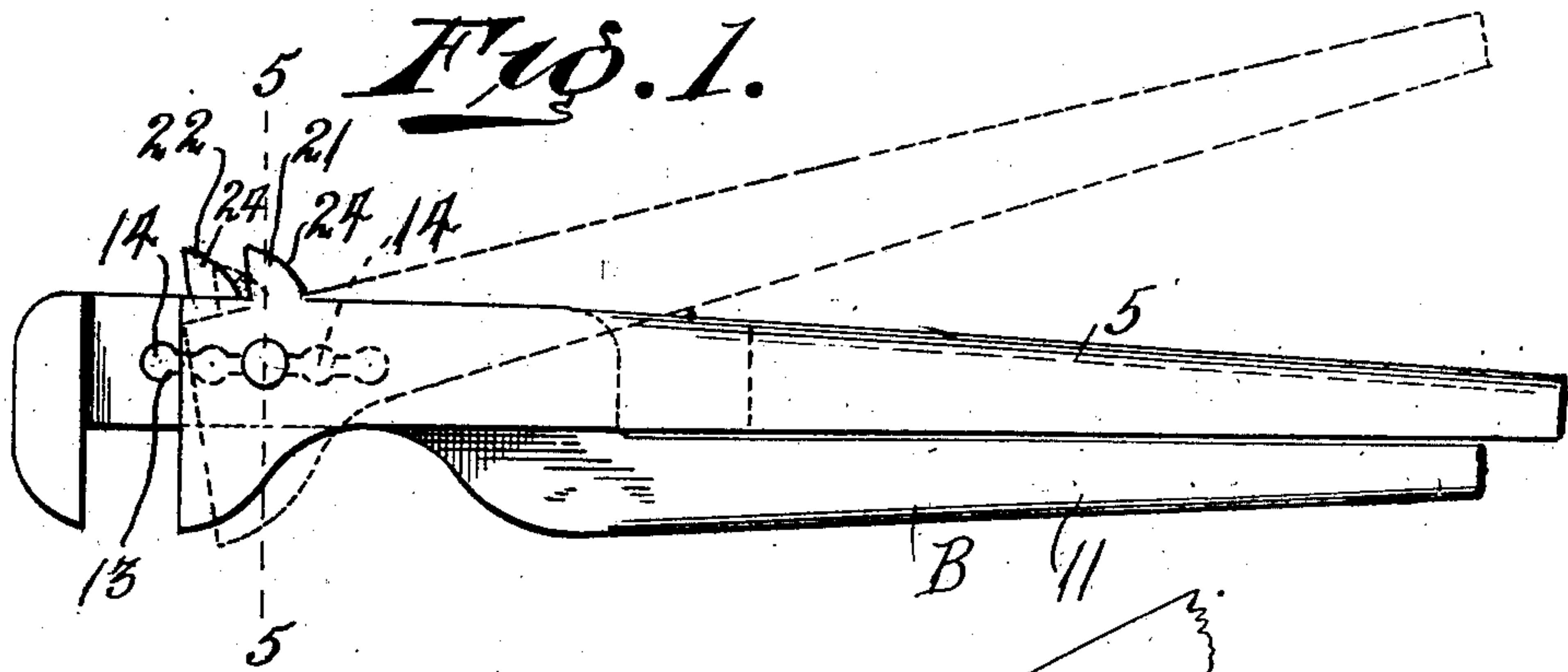
F. SMITH.

WRENCH.

APPLICATION FILED NOV. 2, 1908.

931,510.

Patented Aug. 17, 1909.



Witnesses
Jas Gregory
L. L. Buckel

Inventor
Frank Smith,
Wm Baggett
Attorneys

UNITED STATES PATENT OFFICE.

FRANCK SMITH, OF NORTHPORT, WASHINGTON, ASSIGNOR OF ONE-HALF TO FREDERICK Y. WILSON, OF NORTHPORT, WASHINGTON.

WRENCH.

No. 931,510.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed November 2, 1908. Serial No. 460,661.

To all whom it may concern:

Be it known that I, FRANCK SMITH, a citizen of the United States, residing at Northport, in the county of Stevens and State of Washington, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to wrenches, and it has for its object to provide a wrench of simple and improved construction which may be very easily and quickly adjusted to operate effectively upon nuts of various sizes.

A further object of the invention is to provide a wrench of the character described which shall be equipped with teeth or cutters suitable for cutting wire and the like.

Still further objects of the invention are to provide a wrench of the character described which shall possess superior advantages in point of simplicity, durability and general efficiency.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings—Figure 1 is a side elevation of a wrench constructed in accordance with the invention. Figs. 2 and 3 are perspective detail views of the two jaw-carrying handles or members of the wrench. Fig. 4 is a perspective detail view showing the pivotal pin or bolt by means of which the jaw-carrying members are connected or assembled. Fig. 5 is a transverse sectional view taken on the plane indicated by the line 5—5 in Fig. 1.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved wrench comprises in its construction two jaw-carrying handles or members A, B, which may be constructed of cast or wrought steel or other suitable material. The member A is formed with

a handle portion 5 at one end, the opposite end of said member being shaped to form a jaw 6. The jaw-carrying end of the member A, is provided with a longitudinal vertical slot 7, extending through the upper portion of the jaw, and the latter is provided with a transverse aperture 8, intersecting the slot 7, and extending through the sides 9 and 10, of the member A, which constitute the walls of the slot.

The member B, is provided with a handle portion 11, at one end thereof, and the opposite end of said member is shaped to form a jaw 12, the rear or inner face of which is adapted to cooperate with the front or outer face of the jaw 6 upon the member A. The member B is made of a width equal to that of the slot 7 in the member A, through which it may be inserted or projected until the faces of the jaws are opposed, as seen in Fig. 1 of the drawings. The member B is provided with a longitudinal transverse slot 13, having a plurality of spaced, widened portions or enlargements constituting key apertures 14, which are adapted to register with the transverse aperture 8 in the member A for the passage of the pivotal pin or key C. This key, as will be best seen by reference to Fig. 4 of the drawings, consists of a cylindrical stem or body 15, which is provided intermediate its ends, on diametrically opposite sides, with recesses 16, producing a reduced flat portion or shank 17. The key C is provided adjacent to one end with an annular flange or collar 18, and with a flattened handle or thumb piece 19, which latter is disposed in registry with the reduced flattened portion or shank 17.

It will be readily seen that the parts of the wrench may be assembled by simply inserting the handle portion of the member B through the slot 7, of the member A, until one of the key apertures 14 of the slot 13 is in registry with the transverse aperture 8, in the member A, after which the key C is inserted and secured by upsetting the end thereof, as will be best seen at 20, in Fig. 5 of the drawings. When the parts are thus assembled the members A and B will be pivotally connected by the key C, so that the jaws may be made to take a firm hold or grip upon a nut that is to be operated upon. It is evident that by turning the parts to a position where the flattened portion or shank 16 of the key C is in longitudinal alinement

with the slot 13, the members A and B are capable of slidable movement relatively to each other, thus enabling the wrench to be adjusted for engagement with nuts of various sizes. The flattened thumb piece or handle 19 of the key C, will serve as an indicator to show when the shank portion 17 is in longitudinal alinement with the slot 13, the latter being formed longitudinally of the member B.

One of the side walls 10 of the member A is provided adjacent to the head 6 with an upwardly extending shearing or cutting member 21 and a similar shearing or cutting member 22 is formed upon the member B; each of these shearing or cutting members is provided adjacent to the jaw carrying end of the member upon which it is formed, with a face 23 which is formed approximately at right angles to the body of the jaw carrying member; the faces 24 of the shearing or cutting members which are distant from the jaws are beveled or inclined substantially as shown. These shears or cutters may be effectively utilized for cutting wire and the like as will be readily understood, and it will furthermore be seen that they will cooperate at various adjustments of the jaw carrying members upon which they are formed; that is to say, each of the cutting members is provided with two effective cutting faces 23 and 24, the face 23 of one cutter being adapted to cooperate with the inclined face 24 of the other cutter. Thus, in the position shown in Fig. 1 of the drawings, the cutter 21 of the member A is positioned at a greater distance from the jaw of the member B than the cutter 22 of the latter member, and the inclined face 24 of the cutter 22 will cooperate with the face 23 of the cutter 21; if the member A should be moved forwardly a sufficient distance in

the direction of the jaw upon the member B, the inclined face 24 of the cutter 21 will obviously be in a position to cooperate with the face 23 of the cutter 22. Thus it will be seen that not only is the range of utility of the implement increased, but each cutter has two effective cutting edges or faces, and the life of said cutters will be correspondingly increased.

From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood.

The construction of the improved wrench is simple and inexpensive, and it forms an extremely convenient and useful tool, a particular advantage of which resides in the fact that it may be very quickly and conveniently adjusted to operate upon nuts of various dimensions.

Having thus described the invention, what is claimed is—

A wrench comprising a jaw carrying member having a longitudinal slot, one of the side walls of said member adjacent to the slot being provided with a cutter having two effective cutting faces, a second jaw carrying member slidable in the slot of the first jaw carrying member and provided with a cutting member having two effective cutting faces adapted to alternately engage and cooperate with the cutting faces of the cutter upon the first jaw carrying member, and means for pivotally connecting the two jaw carrying members at various adjustments.

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

FRANCK SMITH.

Witnesses:

F. G. SLOCUM,
E. L. BEADELL.