No. 643,061. Patented Feb. 6, 1900.

H. HUKRIEDE.

WRENCH.

(Application filed May 8, 1899.)

(No Model.)

Fig. 1.

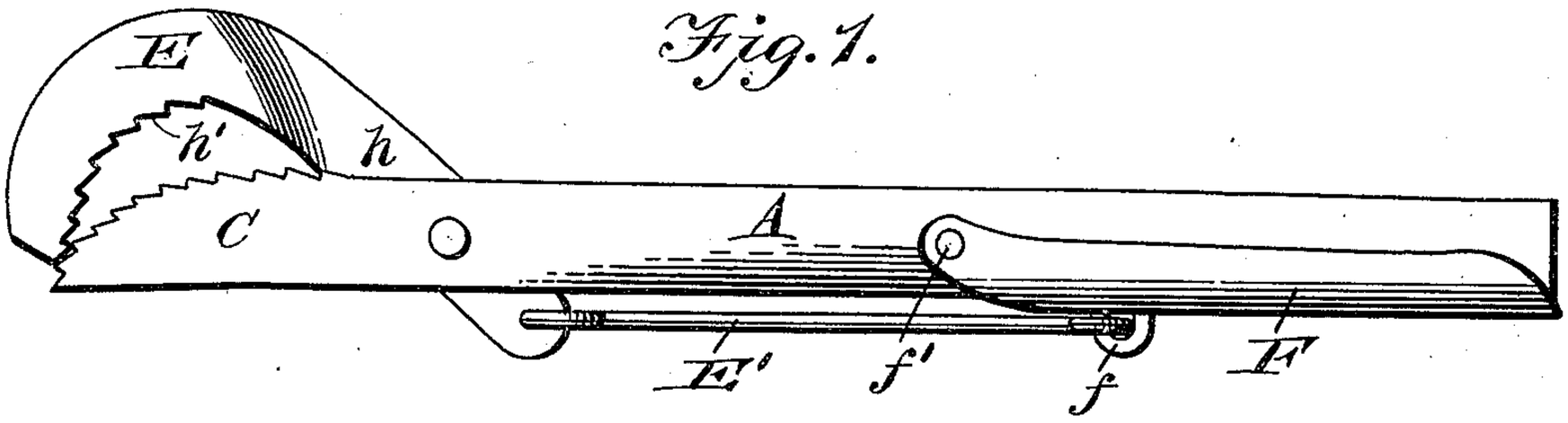


Fig. 2.

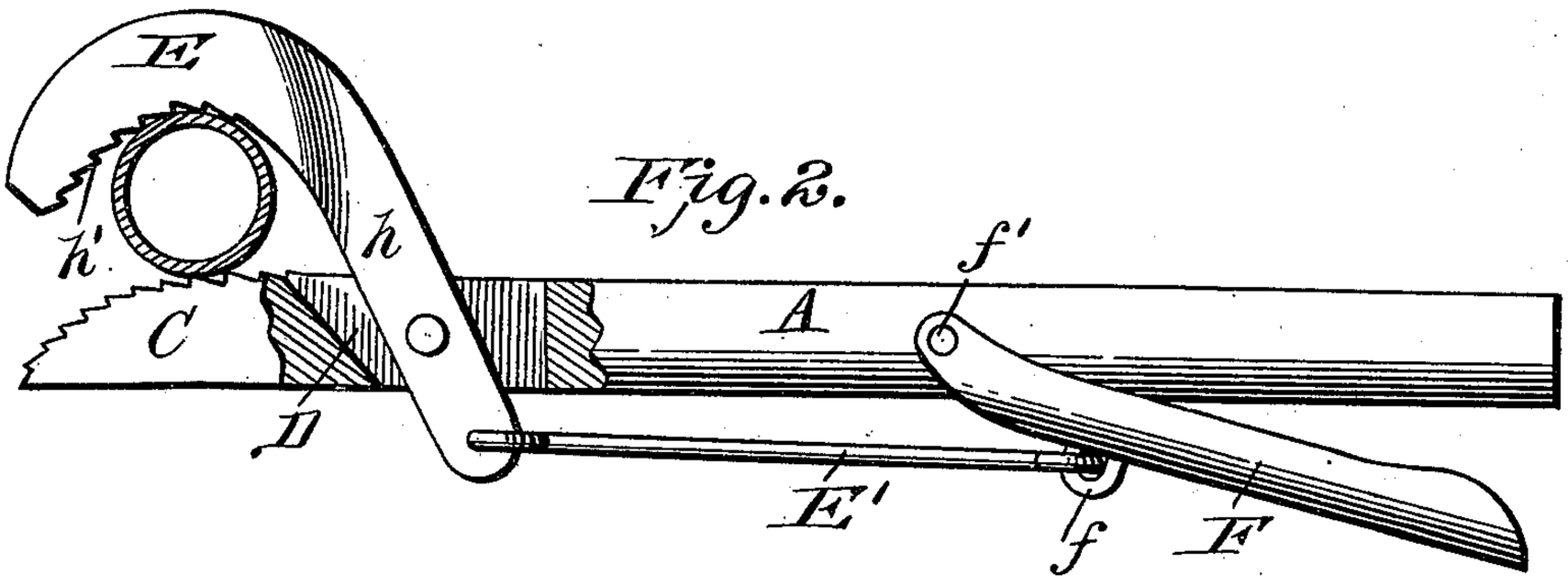
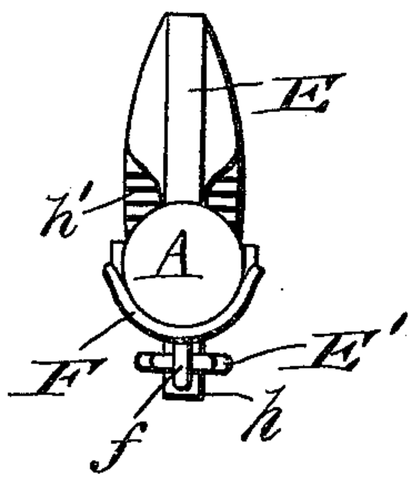


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY HUKRIEDE, OF EDEN VALLEY, MINNESOTA, ASSIGNOR OF ONE-HALF TO JOHN H. REEVES, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 643,061, dated February 6, 1900.

Application filed May 8, 1899. Serial No. 716,013. (No model.)

To all whom it may concern:

Be it known that I, HENRY HUKRIEDE, a citizen of the United States, and a resident of Eden Valley, in the county of Stearns and State of Minnesota, 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side elevation of the invention. Fig. 2 is a side elevation of my wrench, partly broken away, showing the wrench as in application. Fig. 3 is a rear end view of the invention.

This invention is designed to provide a pipe-wrench of improved character; and it consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claim.

In the accompanying drawings the letter A designates an integral bar rounded off and transversely toothed or serrated at one end portion to form the fixed jaw C of the wrench. At the base of this jaw portion the bar is formed with a through-slot D, in which is pivoted the shank *h* of an angular or recessed movable jaw H, whose biting-face is also formed with transverse teeth or serrations *h'*. The shank *h* extends through the said slot and projects a short distance in rear of the bar A, and pivotally connected to this projecting portion is one end of a rod E. The opposite end of said rod is pivotally engaged with an eye or perforated lug *f* of a handle-piece F, convexo-concave throughout its length. Said handle-piece is slotted or bifurcated at its lower or forward end portion to embrace approximately one-half of the circumference of the rounded handle portion of the barrel, the arms or furcations thereof being pivotally secured to the bar at *f'*. When the jaw H is in closed position, the handle piece or blade F fits closely the rounded surface of the bar, contacting therewith throughout its length.

The wrench above described by reason of the relative arrangement of its jaws and the shape of their biting-faces is designed to take a secure and effective grip upon the work. The arrangement of the handle blade or piece enables the wrench to be conveniently manipulated with one hand, while the general construction and arrangement is such as to permit the wrench to be used effectively in angles and narrow places.

By forming my handle-piece convexo-concave throughout its length I am enabled to make it of thin sheet metal and at the same time strong and inflexible.

It will be noted that as my handle-piece contacts throughout its length with the handle portion of the wrench and is of thin metal I am enabled to form a low angular relation of the link connecting the movable jaw with said handle-piece and a line passing through the connection of the handle-piece to the bar A and the connection of link and handle-piece, whereby said connection of link and handle-piece works in a plane nearly at right angles to the bar A, with a consequently more powerful effect upon the movable jaw.

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

The herein-described pipe-wrench, consisting of the integral bar having a rounded handle portion, a central slot, and at one end a convex jaw-face provided with uninterrupted teeth; the movable jaw having its shank pivoted and working in said slot; the thin sheet-metal handle-piece convexo-concave throughout its length, and contacting throughout its length with said handle portion, said handle-piece having bifurcations pivoted to said bar; and the link connecting said movable jaw and handle-piece, and having a low angular relation with a line passing through the connection of said handle-piece and bar, and the connection of said link and handle-piece, substantially as specified.

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

HENRY HUKRIEDE.

Witnesses:

J. H. REEVES,

D. W. WOOLSEY.