(No Model.)

J. D. WILSON.

PIPE WRENCH.

No. 527,917. Patented Oct. 23, 1894.

Fig. 1.

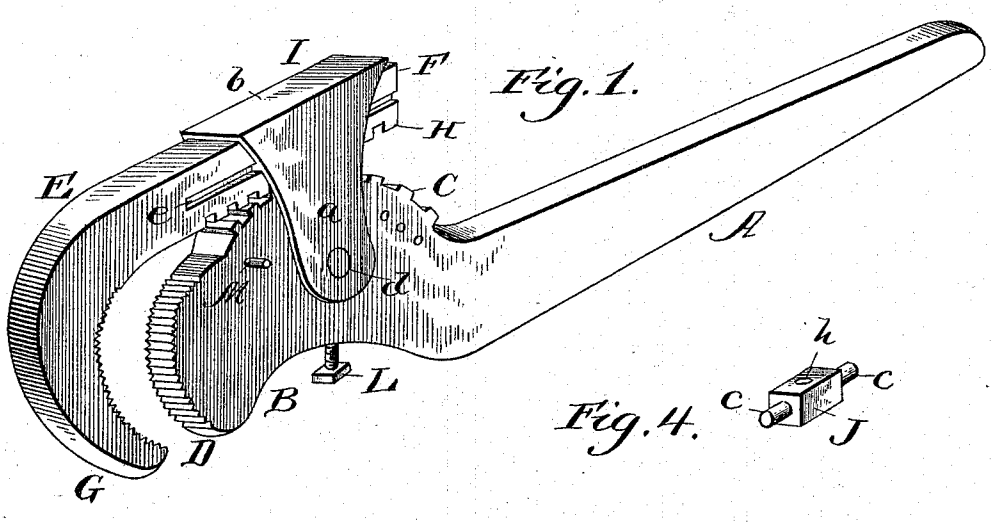


Fig. 4.

Fig. 2.

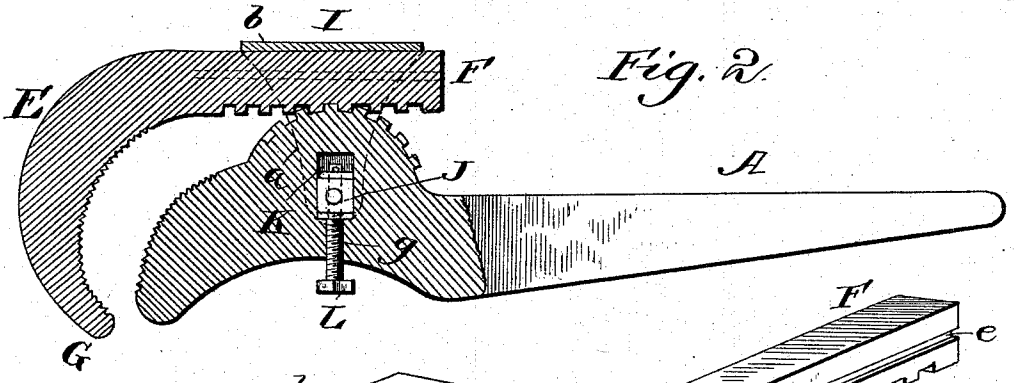


Fig. 5.

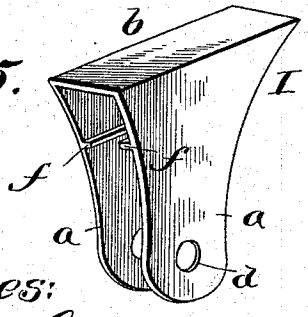
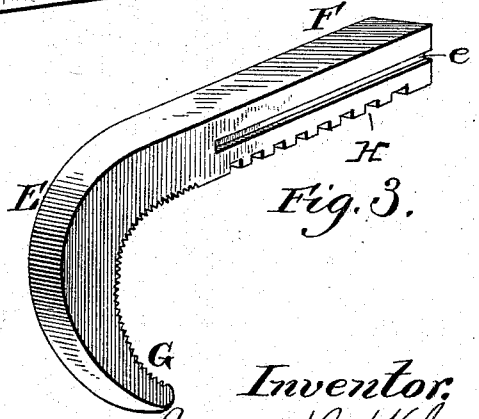


Fig. 3.



Witnesses:
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Attys

UNITED STATES PATENT OFFICE.

JAMES D. WILSON, OF SAN DIEGO, CALIFORNIA.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 527,917, dated October 23, 1894.

Application filed December 21, 1893. Serial No. 494,258. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. WILSON, a citizen of the United States of America, residing at San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to pipe-wrenches; and has for its object to provide a wrench of this class which will accommodate itself to the unevenness and irregularities of shape and contour of the pipe operated upon, which will provide a sure and reliable grip upon the pipe, which will not be liable to lock or jam in operation, and which shall be simple in construction, inexpensive in manufacture, durable in use, and efficient and serviceable in operation.

For the attainment of these objects, and for other purposes hereinafter enumerated, my improvement comprises, in brief, certain details of construction, arrangement and combination of parts, all of which will be more fully described hereinafter, and the specific points of novelty in which will be specifically designated in the appended claim.

Referring to the accompanying drawings forming a part of this specification:—Figure 1 is a perspective view of a wrench embodying my invention. Fig. 2 is a vertical central section taken longitudinally through the same. Fig. 3 is a detail perspective view of the upper jaw. Fig. 4 is a similar view of the bearing block; and Fig. 5 is a detail view of the guide-bracket.

In all the views of the drawings like letters of reference denote like or corresponding parts.

Referring to Figs. 1 and 2, A designates the handle of the wrench, made preferably of iron or other metal and of the requisite length. This handle tapers slightly toward its rear free end, and at its forward end is provided with an integral segmental head, B, constituting one gripping jaw of the wrench. At the apex or upper side of the head, B, is formed a toothed segment, C, which extends a prescribed distance over the edge of the head in the arc of a circle described from the axis of said head; and on the forward portion of this head and in front of the segment, C, is formed the roughened or serrated gripping segment, D, on the convex forward end of the head, and is adapted to co operate with the correspondingly roughened portion of the upper jaw, more fully described hereinafter.

The upper jaw, E, is made in one piece of metal and consists of the straight horizontal rectangular portion, F, and the integral hook shaped end, G, forming the upper gripping jaw and having the curved concaved side adjacent to the segment, D, roughened or serrated to correspond to the latter. The under side of the horizontal portion, F, is provided with a rack-bar, H, which engages and intermeshes with the teeth of the segment, C; and the two jaws are held together and in engagement by the bifurcated guide-bracket, I, made in one piece of metal, and comprising the two side-brackets, *a*, *a*, and the top flat plate, *b*. The bracket, I, is pivotally connected with the head, B, by the bearing-block, J, which is seated in an elongated rectangular slot, K, formed transversely through the head, B, and consists of a rectangular block having at each end a laterally projecting stud, *c*, which enters and bears in a coincident bearing opening, *d*, in the adjacent bracket, *a*. By this construction the head, B, is axially swiveled on the studs, *c*, and is pivotally connected thereby to the bracket, I. On each side of the portion, F, is formed a longitudinal channel or groove, *e*, which engages a rib or bead, *f*, on the adjacent inner wall of the respective bracket, *a*, whereby the upper jaw, E, is guided in its forward and backward play.

L indicates a thumb-screw which passes up from the under side of the head, B, through a vertical screw-threaded bore, *g*, and also passes loosely through the opening, *h*, in the block, J, terminating in a cross-pin fitted to the upper terminal thereof and provided with a rigid stop at the outer face of the block to hold the screw in place in the block. Thus, by turning the thumb-screw in either direction the bearing block, J, is correspondingly moved in its elongated slot and the jaws, B, and E, either released from engagement or secured together. In this way, the rack-bar and

the segment, C, can be thrown out of engagement and the jaws separated for re-adjustment or removal from the pipe.

The operation of the wrench is so apparent that a further description thereof seems unnecessary.

M, M, are stop-pins on each side of the bracket, I, to limit the swing or play of the parts.

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

A wrench composed of the wrench bar having the curved serrated jaw at its outer end and the toothed segment on its rear side, and the elongated slot K opposite said segment, the movable jaw having a straight shank toothed on the inner side to mesh with said segment and provided with the side grooves, the U shaped yoke embracing said shank and having the internal ribs in said grooves, substantially as described, the pivot block adjustable in said slot and to which said yoke is pivoted, and the adjusting screw, as set forth.

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

JAMES D. WILSON.

Witnesses:
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