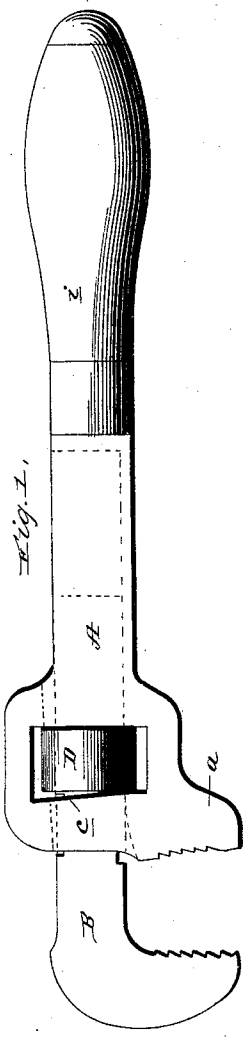
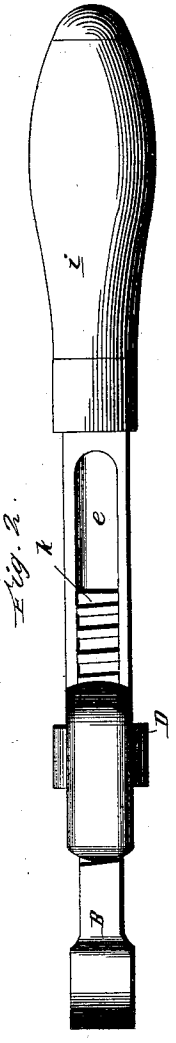
(No Model.)

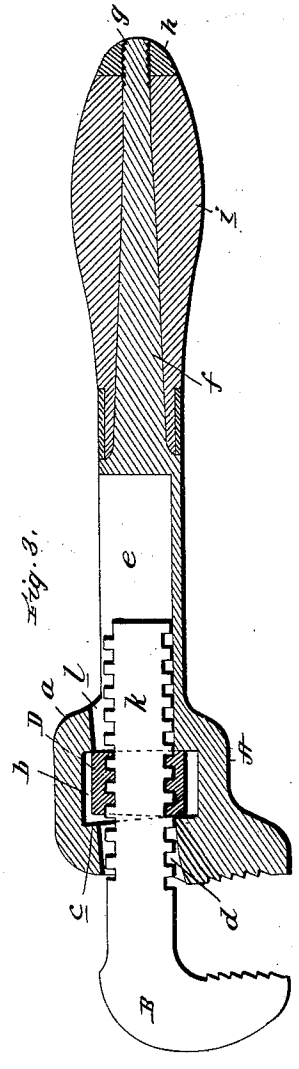
G. B. STEVENSON.

WRENCH.

No. 482,281. Patented Sept. 6, 1892.







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WRENCH.

SPECIFICATION forming part of Letters Patent No. 482,281, dated September 6, 1892.

Application filed May 4, 1892. Serial No. 431,809. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. STEVENSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Pipe-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.

This invention relates to an improvement in wrenches, and although more particularly adapted for use as a pipe-wrench it is obvious that it may be advantageously used as a nut-wrench, or it may be used for any purposes for which wrenches are usually employed.

Among other things the invention has for its object to produce a wrench which may be quickly manipulated and the parts arranged in such a compact manner that they are not liable to become injured and are convenient for use.

A further object of the invention is to allow a slight rocking motion to the longitudinally-movable jaw and to provide a stop for limiting such movement, so as to prevent the crushing or injuring of a pipe when operated upon.

Other objects and advantages will appear from the following description and claim, when taken in connection with the annexed drawings, in which—

Figure 1 is a side view of a wrench constructed according to my invention. Fig. 2 is a plan view of the same, and Fig. 3 is a longitudinal sectional view.

Referring by letter to said drawings, A indicates the fixed jaw, and B the movable jaw. This fixed jaw has a head *a*, which is slotted transversely, as shown at *b*, and the upper portion of the forward wall of this slot is beveled, as shown at *c*, for a purpose which will be presently described. This head is, furthermore, provided with a longitudinal slot *d*, which extends a sufficient distance into the handle or shank as shown at *e*, and the reduced portion of the stem preferably terminates in a handle or shank, as shown at *f*, and is threaded at its free end, as shown at *g*, to receive a nut *h*, a sleeve *i* of wood or other suitable material being arranged on the reduced portion of the stem or shank and confined thereon by means of the nut *h*.

In the present illustration of my invention I have shown the slot *d* as open on the upper or outer side of the handle or stem, so as to allow a greater movement of the jaw B when power is applied after the jaws are placed in engagement with a pipe. As better shown in Fig. 3 of the drawings, the lower wall of the longitudinal slot *d*, in advance of the transverse slot *b*, is beveled downwardly and outwardly to serve in conjunction with the beveled wall *c*, for a purpose presently set forth.

The movable jaw B may be of the form usually employed in sliding-jaw wrenches, and has its threaded stem or shank *k* arranged in the slot *d* of the head of the fixed jaw and receives a nut D, which is arranged in the slot *d* of the head *a*. It will be seen that by reason of the lower portion of the wall *c* being straight and the upper portion beveled when the nut D rests against the same, a fulcrum is formed which will permit of a slight rocking motion, the said nut D normally bearing against the straight portion of the wall *c*, so as to hold said movable jaw away from the fixed jaw and allow the jaws to be readily mounted upon a pipe. After the jaws have been placed in position upon the pipe when power is applied the nut D will rock and bear against the beveled portion of the wall *c*, while the beveled lower wall of the slot *d* will afford a play-space for the threaded portion of the movable jaw, so as to enable the said jaw to approach the fixed jaw and grip the pipe firmly. In turning a pipe into a fitting tightly the teeth of the jaws will sink into the pipe, but will be prevented from crushing or flattening the pipe by having the threaded portion K of the shank of the movable jaw come in contact with the back wall *l* of the rigid jaw.

In operation it will be seen that the movable jaw may be run back and forth by manipulating the nut D, and that the stem or shank of said jaw is confined within the shank of the rigid jaw, so that the parts are held in the compact manner.

Having described my invention, what I claim is—

In a wrench, the rigid jaw having a trans-

verse slot, the forward wall *c* of which has its upper portion beveled and its lower portion straight and also having the longitudinal slot which extends into the shank or handle thereof and is open on the upper or outer side of said handle and has its lower wall in advance of the transverse slot beveled downwardly and forwardly, in combination with the movable jaw having a threaded shank or stem arranged in the slotted head and shank or handle of the rigid jaw, and a threaded nut arranged on said stem and within the transverse slot of the rigid jaw, the whole adapted to operate substantially as specified.

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

GEORGE B. STEVENSON.

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