T. KEENAN.

PIPE-WRENCH.

No. 183,574. Patented Oct. 24, 1876.

Fig. 1.

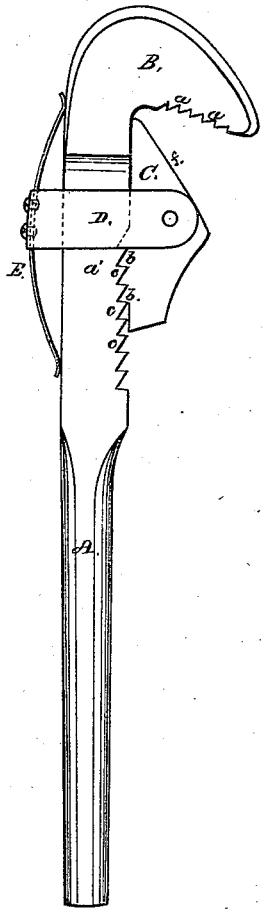
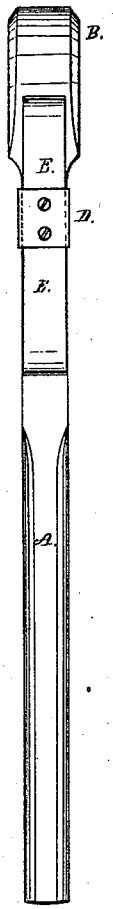


Fig. 2.



Witnesses.

Geo Gray

F. G. Hale

Thomas Keenan

by his attorney.

T. P. Hale

UNITED STATES PATENT OFFICE.

THOMAS KEENAN, OF EAST CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN PIPE-WRENCHES.

Specification forming part of Letters Patent No. **183,574**, dated October 24, 1876; application filed April 24, 1876.

To all whom it may concern:

Be it known that I, THOMAS KEENAN, of East Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Pipe-Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

In such drawing, Figure 1 is an elevation, and Fig. 2 a top view, of a pipe-wrench constructed in accordance with my invention.

The object of my invention is to produce a simple, strong, and effective device for grasping and holding or turning pipes, &c., one which can not only be readily adjusted to fit pipes of differing sizes, but be applied thereto and removed therefrom with great facility; and my invention consists in the peculiar construction and arrangement of the parts, as hereinafter described and claimed.

In the drawing, A denotes a metallic bar or lever, provided at one end with a curved hooked jaw, B, such jaw having its inner face disposed at an acute angle with respect to the bar, and having a series of teeth, *a*, formed thereon. C is the movable jaw, which is secured to the lower furcated ends of a clasp, D, such clasp embracing and sliding upon the shank *a'* of the stationary jaw B. The upper part or base of the jaw C is provided with a series of teeth, *b*, to engage with one or more teeth, *c*, formed on the contiguous face of the lever A. E is a flat curved metallic spring, which, at or near its center is affixed to the upper part of the clasp D, its free ends bearing on the top surface of the lever, and tending by its action to maintain the teeth of the movable jaw in impingement with the contiguous teeth formed on the shank *a'* of the stationary jaw. The working face *f* of the movable jaw is formed with a downward inclination, the object of such being to allow the wrench to be readily applied to a pipe, and so that when the lever A is moved downward to force the pipe toward or into the angular crotch of the stationary jaw, the binding wedging action of the movable jaw serving to hold the pipe in close contact with the teeth of the stationary jaw.

By this construction of the movable jaw—viz., with the inclined face, as described—pipes of somewhat varying diameters may be readily grasped without adjustment of the jaw, as would be the case were the faces of the jaws parallel and at right angles to the bar A, while the inward inclination of the fixed jaw serves to give a more effective gripe upon the pipe when the outer end of the lever A is moved downward.

I would remark that the spring E may be a very light and elastic one, as it requires only a resilient force sufficient to maintain the teeth of the movable jaw in impingement with those on the bar A.

I would also state that, if desirable, the face of the movable jaw may be formed with teeth; but such I do not deem essential.

From the above it will be seen that the wrench is readily adjustable to fit the size of the pipe to be operated on, it being effected by simply pressing on the top of the clasp with sufficient force to move the teeth out of contact, when the movable jaw may be moved either toward or away from the fixed jaw, as may be desirable.

I do not claim the invention as shown and described in Letters Patent Nos. 64,656 and 171,133, as my invention differs therefrom.

What I claim as my invention is—

The improved pipe-wrench, as described, the same consisting of the lever A, provided with a notched shank, *a'*, and stationary or fixed jaw, B, having an acute-angled serrated face, *e*, the movable jaw C formed with the inclined retreating non-serrated face *f*, and serrated non-tilting base, the clasp D, and clamp E, the whole being combined and arranged in manner as shown and described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

THOMAS KEENAN.

Witnesses:

F. P. HALE,

F. C. HALE.