J. H. VINTON.
Pipe-Wrench.

No. 221,633. Patented Nov. 11, 1879.

Fig. 1.

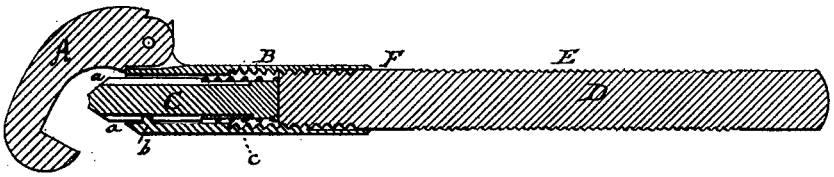
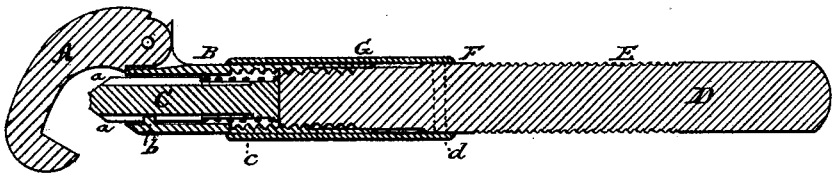


Fig. 2.



Witnesses;
John Tyler
F. W. Howard

J. H. Vinton Inventor;
By atty Wm. C. Linn & Sons

UNITED STATES PATENT OFFICE.

JOHN H. VINTON, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO FRANK ARMSTRONG, OF SAME PLACE.

IMPROVEMENT IN PIPE-WRENCHES.

Specification forming part of Letters Patent No. **221,633**, dated November 11, 1879; application filed October 23, 1878.

To all whom it may concern:

Be it known that I, JOHN H. VINTON, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Pipe-Wrenches; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to certain new and useful improvements in pipe-wrenches.

It has for its object to do away with the ordinary double handle, provide a ready adjustment of the biting-jaws, and at the same time obtain great strength and simplicity in construction; and with these ends and objects in view my invention consists in providing the pivoted hook or jaw with a hollow barrel, provided with an interior screw-thread for a portion of its extent, adapted to receive the screw-threaded end of a straight handle, which shall force forward a longitudinally-movable bit, the parts being so arranged that the handle shall enter the barrel in such manner that the latter shall serve to re-enforce or strengthen the handle, back of the terminus of its screw-thread, as will be hereinafter and in detail explained.

In order that those skilled may understand how to make and use my invention I will describe the same, referring by letters to the accompanying drawings, in which—

Figure 1 is a central longitudinal section of a pipe-wrench embodying my improvements, and Fig. 2 is a similar view of a modification of the same.

Similar letters indicate like parts in both figures.

A represents a jaw hinged or pivoted to the barrel B, which barrel, for a portion of its extent near the center, is formed with an interior screw-thread, and plain or smooth each side of said thread, as shown, and for the purposes presently explained. C is a longitudinally-movable bit, with one or more channels or grooves, *a*, adapted to travel over a teat or projection, *b*, on the front end of the barrel B. The grooves *a* terminate near the rear end of the bit, and consequently prevent the same from being projected entirely through. The rear portion of the bit is turned down, forming an annular space for a coil spring, *c*, and leaving a flange or head at the extreme end to form a stop, between which and the teat *b* the spring is compressed as the bit is moved forward.

D is a round handle, roughened at E. On the forward end of this handle is cut a thread corresponding with the thread on the interior of the barrel B, and smooth behind the thread, as seen at F.

From the construction described it will be observed that as the forward end of the handle D enters the screw-thread on the interior of the barrel B the bit C is projected and held against retraction, and in this way the wrench is adjusted to fit pipes of various diameters. The forward biting end of the bit is cut on a curve at the center, and beveled off at each side, thus forming two biting or knife edge points, which may be readily sharpened by simply grinding the beveled faces, and when worn out a new bit may be substituted. The pivotal point of the jaw A bears such relation to the bit that a perfect gripe is maintained. As the handle B forces the bit C out, the former enters the barrel B, so that the two telescope sufficiently to bring the threaded portion of the handle clearly within the barrel B, which serves as a support for the handle, and compensates for the weakness caused by the formation of the thread.

The modification at Fig. 2 represents an additional strengthening-barrel, G, secured to the handle D by a pin or rivet, *d*, or in any other suitable manner, so that as the handle is turned to project the bit, as above described, the auxiliary barrel G will in turn surround and strengthen the barrel B.

A ruler-joint is formed between the jaw A and its support on the barrel B to prevent the former from falling back on the hand of the operator.

As the handle D is drawn back the coil-spring *c* causes the bit to be correspondingly retracted to release its hold upon the pipe.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the barrel B, formed at its forward end with a smooth interior and with a teat, *b*, and at its central and rear portion with threaded and smooth interior, re-

spectively, the independent grooved bit C and handle D, the latter having its forward end threaded, as described, and turned smooth at F, as shown, with a diameter just equal to that of the rear interior of barrel B, whereby the turning of the handle will eject the bit in a straight line, and at the same time cause the portion F of the same to enter and be re-enforced by the barrel in the manner described.

2. The handle D, made of a single piece, threaded at its forward end to enter the bit-barrel, and provided with an exterior ferrule, adapted to move with the handle to form a re-enforce, substantially in the manner described.

Witness my hand and seal this 9th day of October, A. D. 1878.

JOHN H. VINTON. [L. S.]

In presence of—

WM. C. MCINTIRE,

M. M. ROHRER.