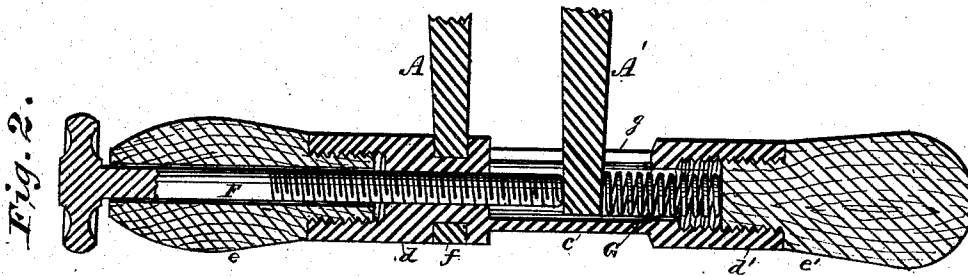
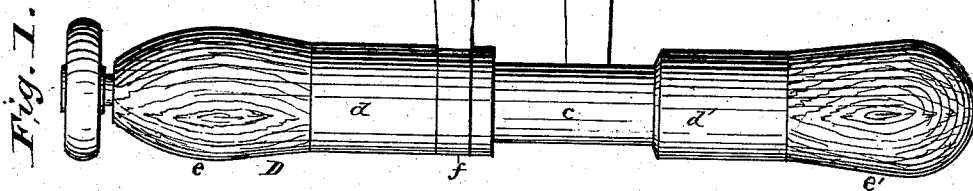
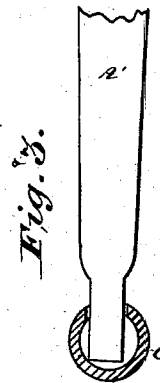
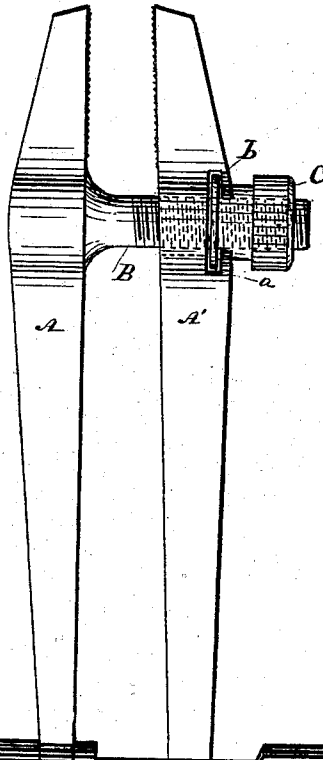
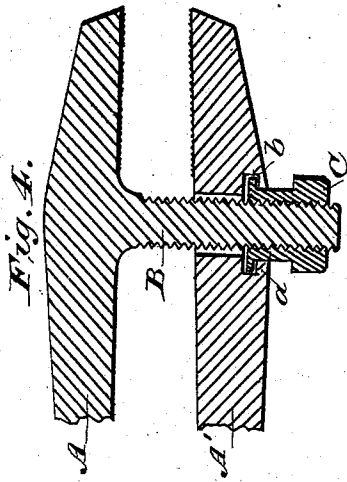


(No Model.)

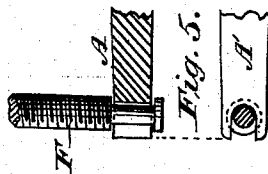
C. E. BAILEY.
HAND VISE AND WRENCH.

No. 268,447.

Patented Dec. 5, 1882.



Witnesses:
J. C. Bruchty
Jos. - Hannover



Inventor
Chas. E. Bailey

UNITED STATES PATENT OFFICE.

CHARLES E. BAILEY, OF BENZONIA, MICHIGAN.

HAND-VISE AND WRENCH.

SPECIFICATION forming part of Letters Patent No. 268,447, dated December 5, 1882.

Application filed November 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. BAILEY, a citizen of the United States, residing at Benzonia, in the county of Benzie and State of Michigan, have invented certain new and useful Improvements in a Hand-Vise and Wrench; 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 the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in a hand-vise and wrench, and especially as an improvement on the patent granted to P. S. Meaborn, No. 260,404, July 4, 1882, of which I am now half owner.

The object of my invention is to combine the parts of which the implement is made, so as to bring into requisition two screws and a lever for clamping the object which is to be held between the jaws, and at the same time render the implement capable of being used as a wrench for loosening or tightening bolts, &c.

My invention consists in adjustably holding the two jaws of the wrench together by means of a screw-bolt which is rigidly attached to one of the jaws, said bolt being adapted to pass through an opening in the other jaw and enable said jaw to be moved back and forth on the bolt by means of a screw-nut.

My invention consists, further, in securing the lower end or extension of one of the jaws rigidly to a horizontal handle, the other jaw being free to move in a groove or slot in said handle, and to be operated by a screw-bolt in one direction and by a spiral spring in the other direction.

Figure 1 is a front elevation of my device. Fig. 2 is a sectional view of the lower or handle portion. Fig. 3 is a detached sectional view of the lower portion of the movable jaw or lever in the hollow portion of the handle. Fig. 4 is a sectional view of the upper part of the tool, showing the manner of attaching the movable jaw to the operating-nut. Fig. 5 is a sectional view of the lower part of the tool, showing the attachment of the operating-screw to the lower end of the movable jaw.

A and A' are the jaws of the wrench and vise, of any desired length. The jaw A is provided with a bar or side extension, B, rigidly or otherwise secured thereto, said extension or bar being provided with a screw-thread for the reception of the thumb-nut C. The jaw A' is provided with a hole or perforation, through which the extension or pin B passes, said extension or bar acting as a fulcrum-point for the jaw A'. The jaw A' is also provided with a flanged recess, *a*, for the reception of the flange *b*, which is an extension of the thumb-nut C.

Instead of cutting away the jaw to form the flanged recess for the reception of the flange *b* of the nut C, I may cast or otherwise secure to the jaw A' a projecting lug, which will fit over and partially surround the flange *b*. This construction will serve equally well to hold the thumb-nut or burr C in contact with the jaw A', while the jaw A' will not be weakened by the cutting out of the flanged recess therein.

D is the handle, and consists of a central metallic cylinder, *c*, provided with enlarged ends *d d'*, for the reception of the handles *e e'*. The enlarged ends *d d'* of the cylinder *c* are screw-threaded to receive and hold the screw-threads on the handles *e e'*, by which the handles are securely held in position. The lower end of the jaw A is rigidly secured to the enlarged portion *d* of the cylinder, as shown at *f*, while the lower end of the jaw or lever A' is confined in the cylinder *c*, and is free to work back and forth in a slot, *g*.

F is a screw-bolt, which passes centrally through the handle *c* and through the enlarged portion *d* of the cylinder *c*, the aperture in the portion *d* being screw-threaded to receive the screw-bolt F. The inner end of the screw-bolt F impinges against the lower end of the lever or jaw A' to push it back when tightening the jaws onto the nut or other article to be operated upon, while a spiral spring, G, located in the cylinder *c*, serves to force the lever or jaw A' in a reverse direction when the pressure of the screw-bolt F is removed therefrom.

In lieu of the spring, I may secure the inner end of the screw-bolt F to the lower end of the jaw A' by a swivel-connection, so that the said jaw may be positively operated in both directions. The inner sides of the clamping-jaws

are serrated or provided with V-shaped projections, so that the implement can be advantageously used as a pipe-wrench.

The operation of my device is as follows:
5 The jaws having been fitted over the nut or other article to be held or operated on, the thumb-screw C is turned so that the jaws are brought in contact with the article. The screw-bolt F is then turned, and forces the lower end
10 of the lever A' outward, which causes the jaws to clamp the article more firmly.

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

15 1. In a combined hand - vise and wrench, a transverse threaded bar rigidly attached to the fixed jaw and passing through the lever-jaw, said lever-jaw having a flanged nut swiveled therein and engaged with the threaded bar,

whereby the jaws are readily adjusted to the 20 article to be clamped.

2. In a combined hand - vise and wrench, a handle transverse to both jaws, and secured rigidly to the fixed jaw, and engaging the movable jaw, and means located longitudinally 25 within the transverse handle for operating the movable jaw toward and from the fixed jaw, substantially as set forth.

3. The combination of the fixed jaw A, the movable lever A', and the threaded and slotted 30 cylinder c, of the handle, with the screw-bolt F and spring G, as set forth.

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

CHAS. E. BAILEY.

Witnesses:

H. C. HUNTEMANN,
LEVI BACON.