(No Model.)

C. B. RUBERT.

WATCH MAKER'S HAND VISE AND RING BENDER.

No. 297,853. Patented Apr. 29, 1884.

Fig. 1.

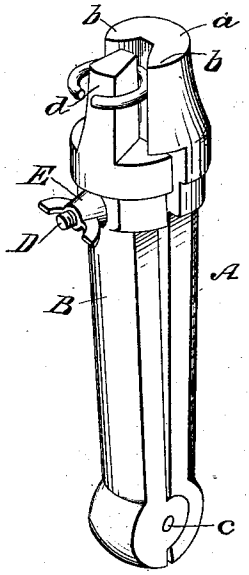


Fig. 2.

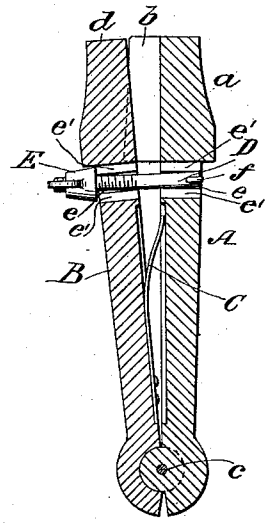
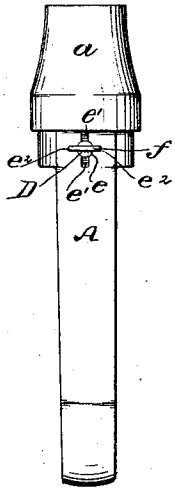


Fig. 3.



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CHARLES BURNETT RUBERT, OF OWEGO, NEW YORK.

WATCH-MAKER'S HAND-VISE AND RING-BENDER.

SPECIFICATION forming part of Letters Patent No. 297,853, dated April 29, 1884.

Application filed October 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. RUBERT, of Owego, Tioga county, New York, have invented a new and Improved Combined Ring-Bender and Vice for Watch-Makers' Use, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my new and improved ring-bender and hand-vise combined. Fig. 2 is a sectional elevation of the same, and Fig. 3 is a rear elevation of the tool.

The invention will first be described in connection with the drawings and then pointed out in the claims.

Referring to the drawings, A represents the main jaw of the tool. This jaw is formed at one end with the cylindrical head *a*, which is cut away to form the diverging cheeks *b b*.

B represents the opposite jaw of the tool, which is pivoted to the jaw A by the pin *c*, and this jaw B is reduced in size at its upper end, to form the nose *d*, which is adapted to close in between the cheeks *b b* of the jaw A, for grasping a wire or ring or other object to be held by the jaws, as shown in Fig. 1.

Between the jaws A B is placed the spring C, for forcing the jaws apart, and the said jaws have formed through them corresponding openings *e e*, in which is placed the bolt D, which is locked in the opening at one end, and provided at the other with the thumb-nut E, so that by turning the thumb-nut the jaws A B may be opened and closed like the jaws of a vise.

When the tool is used for bending rings, the bolt D will be removed from the tool; and in order that this may be done without removing the nut E from the bolt D, in place of forming the bolt with an ordinary head, I provide it with the small plate or cross-head *f*, and form above and below the passages *e e*, through the jaws, the slots *e' e'*, which are of such width and length as to permit the head-plate *f* to pass through the jaws, when the bolt D is turned to bring the plate *f* parallel with the said slots.

For locking the bolt D in place in the jaws, the bolt is simply to be turned to bring the plate or cross-head *f* at right angles to the slots *e' e'*, as shown in Figs. 2 and 3, and shallow recesses e^2 e^2 are formed at the back of the jaw A, to receive the plate *f*, for locking the bolt D against turning in the jaws, and for inclosing the plate *f*, as indicated in Fig. 2, so that it will not project past the outer surface of the said jaw.

In using the tool as a ring-bender, the bolt D will, as above stated, be removed from the tool. The tool will then be placed in an ordinary bench-vise, and the rod or wire to be bent placed between the jaws A B, and the jaws of the bench-vise will then be forcibly brought together, which will close the nose *d* of the jaw B between the cheek-pieces *b b* of the jaw A and bend the rod into ring form, as shown in Fig. 1; and by placing the pendent ring of a watch that has become loose in the stem of the watch between the jaws A B and bringing them together the ring may quickly and easily be given a shorter bend for tightening it in the stem.

To use the tool as a hand-vise, the bolt D will simply be replaced in the passages *e e* in the jaws A B, and turned to lock it in place by the plate *f*, as above described, when it is adapted to be used the same as any ordinary hand-vise.

The tool is also adapted for jewelers' use for bending finger-rings, and holding them while being soldered; and also the tool is adapted for various other uses.

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

1. The tool herein shown and described, consisting of the jaw A, having cheek-pieces *b b*, and the jaw B, having the nose *d*, adapted to close in between the cheek-pieces, substantially as and for the purposes set forth.

2. The jaws A B, having formed through them the passages *e e*, and slots *e' e'*, in combination with the bolt D, having cross-head *f* at one end, and provided at the other with the thumb-nut E, substantially as and for the purposes set forth.

3. The jaws A B, having passages *e e*, and slots *e' e'*, in combination with bolt D, having cross-plate *f*, the jaw A, having recesses e^2 e^2, formed at the back, substantially as and for the purposes set forth.

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Witnesses:
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