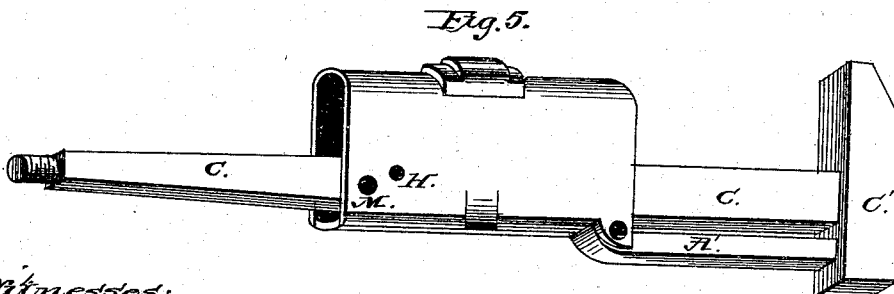
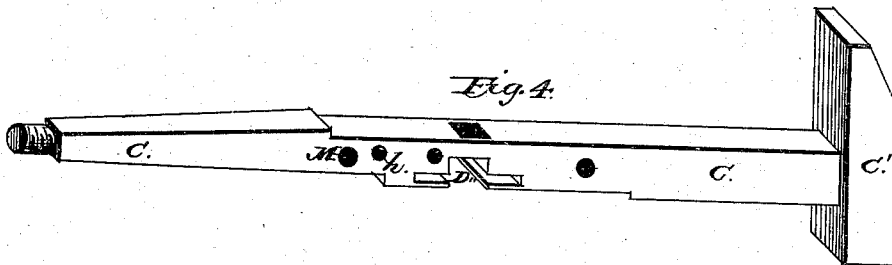
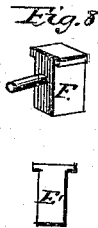
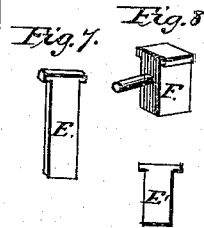
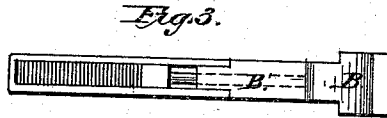
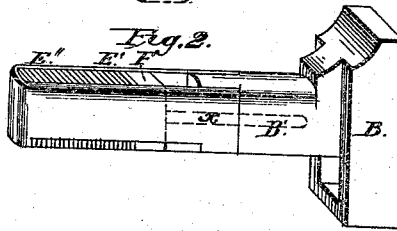
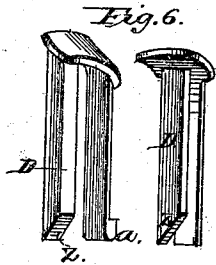
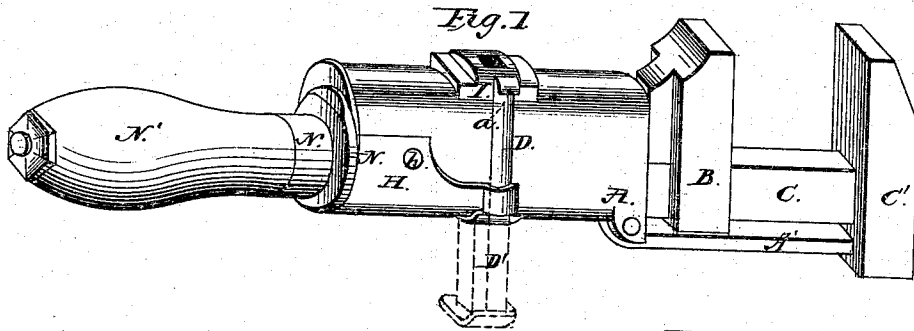


E. T. BARLOW.
MONKEY-WRENCH.

No. 172,240.

Patented Jan. 11, 1876.



Witnesses:
C. M. Perkins
A. Sterling.

Inventor:
Elisha T. Barlow
By his attorney
A. Myers

UNITED STATES PATENT OFFICE.

ELISHA T. BARLOW, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN MONKEY-WRENCHES.

Specification forming part of Letters Patent No. **172,240**, dated January 11, 1876; application filed January 8, 1876.

CASE B.

To all whom it may concern:

Be it known that I, ELISHA T. BARLOW, of San Francisco, county of San Francisco and State of California, have invented a new and useful Improvement in Monkey-Wrenches; and I hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a view showing a wrench embodying my improvements; and Figs. 2, 3, 4, 5, 6, 7, and 8 are views of detached portions of the same.

The object of my invention is to produce a wrench that may be readily adjusted to various-sized objects, and, when adjusted, will resist great strain, and also form a compact, durable, and well-finished article, hereinafter fully described and claimed.

In the drawings, C C' is the main bar and hammer-jaw, which may be formed of a single piece of metal. B is the sliding or movable jaw, through which the main bar passes. It is constructed with a slotted or recessed portion, B', arranged parallel with the main bar, for holding a number of thin steel plates, E E', Figs. 2 and 7, and the steel block F. These plates are constructed of T shape, as shown, the block F being provided with a rod or bar, passing into the cavity *x*. A rubber spring is inclosed within this cavity, and behind the rod, or a coiled-wire spring may embrace the rod. This spring, acting upon the rod or block F, forces the steel plates within the recess together or in close contact, as shown in Figs. 2, 3. A sufficient space is left in the recess to accommodate the locking-key D. The purpose of this key is to secure the movable jaw at any desired position. It is constructed as shown in Fig. 6, and arranged to pass through the main bar, and between the steel plates arranged in the recess of the movable jaw. The recess is made of a sufficient length to correspond with the distance through which the movable jaw passes, so that the yielding steel plates will always be beneath the point of the locking-key as it descends and separates them.

I do not confine myself to the arrangement of the steel plates as described and shown, as it is obvious that they may be placed within a recess formed in the main bar, and the key made to pass through the movable jaw, without departing from the spirit of my invention.

The key D is shown constructed with an arm, D', which passes outside the body of the wrench. This arm is provided with a projection or thumb-piece, *a*, for the purpose of facilitating the adjustment of the key, and to form a stop to prevent its displacement, the flat spring H forming a guide and limit to its movement. This spring may be raised over the projection whenever it is necessary to remove the key.

The swell or boss I, Fig. 1, supports the point of the key, which passes through the slot thereof.

The shield or cap A incloses the shank of the movable jaw and its appendages, thus protecting them from dirt or injury.

The bar A', connecting the shield to the fixed jaw, renders the wrench very strong at this point, where the greatest transverse strain exists.

The shield A is firmly attached to the main bar, as shown, and its end supported by the step or cross-piece N.

N' shows the handle, secured by the end nut on the main bar.

The manner of operating the wrench is very simple. The adjustment can be made with the same hand that grasps the handle by pushing upon the projection of the arm of the key with the thumb.

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

1. The movable jaw of a wrench, constructed to hold and carry a number of thin plates, in combination with a key passing through the main bar, and between the plates in the movable jaw, for the purpose specified.

2. The movable jaw B, constructed with the arm B', having the recess for holding the plates E E' and block F, as set forth and shown.

3. The block F, provided with the rod shown, in combination with the spring arranged in the cavity *x*.

4. The key D; having arm D' and beveled point Z, as and for the purpose described.

5. The key D, having arm D' and projection *a*, in combination with the spring H, for the purpose specified.

6. The shield or cap A, provided with the boss I, substantially as shown and described.

7. The combination of the main bar C, the movable jaw B, plates E E', block F, wedge D, and shield A, constructed and arranged substantially as shown and described.

8. In a wrench, the combination of the steel plates and a wedge, for the purpose specified.

ELISHA T. BARLOW.

In presence of—

F. O. WEGENER,
GEO. A. WORZ.