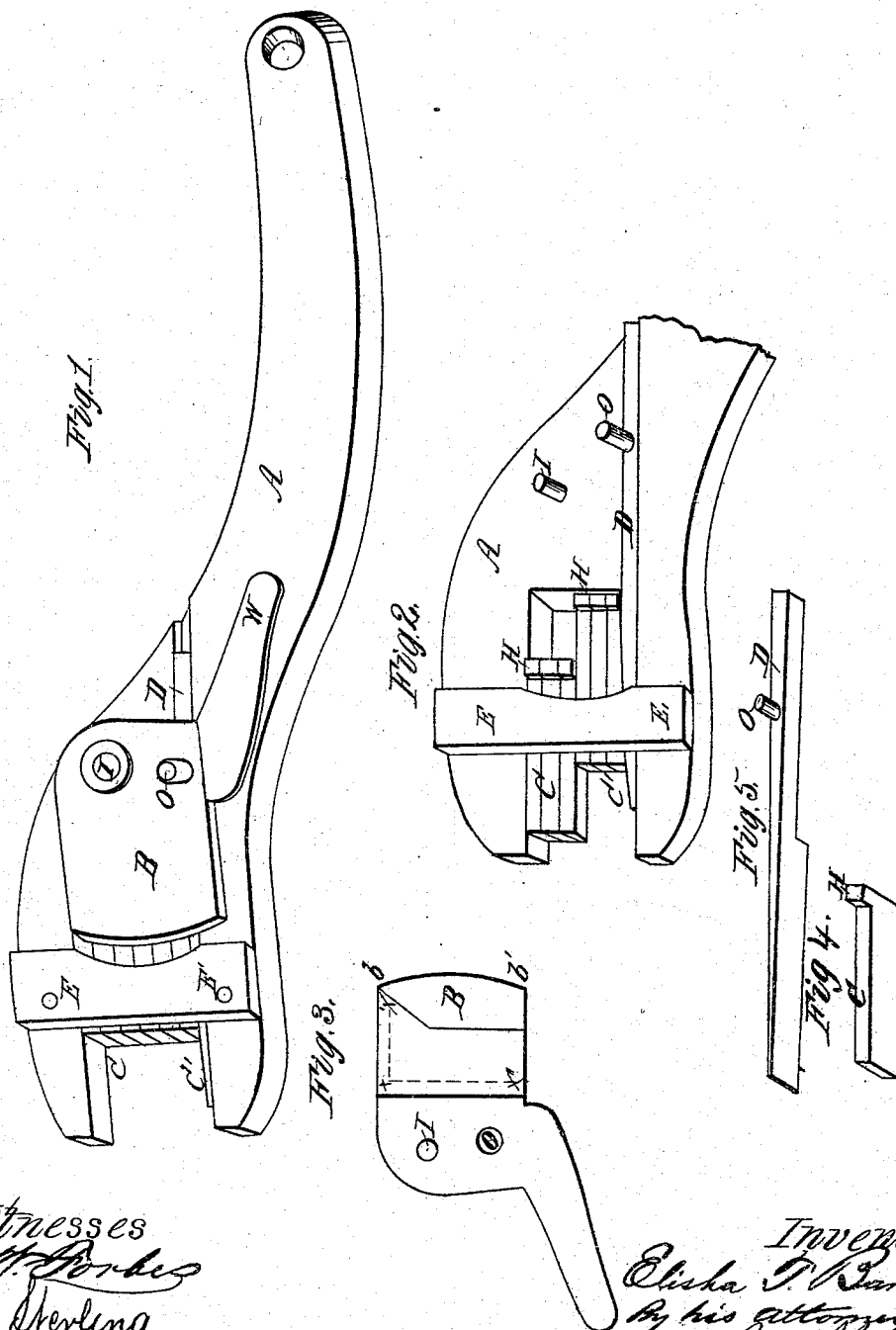


E. T. BARLOW.

WRENCH.

No. 172,239.

Patented Jan. 11, 1876.



Witnesses
C. H. Forbes
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UNITED STATES PATENT OFFICE.

ELISHA T. BARLOW, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **172,239**, dated January 11, 1876; application filed January 8, 1876.

CASE A.

To all whom it may concern:

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

Figure 1 is a side view of a complete wrench. Fig. 2 is a view of the head or jaw, with the lever and shield removed to show the working parts. Fig. 3 is a detached view of the lever and shield. Fig. 4 shows one of the series of sliding plates, and Fig. 5 the locking wedge or key.

Like letters refer to corresponding parts in the several figures.

The object of my invention is to construct an ordinary open-jawed wrench so that it can be readily adapted to nuts of various sizes; and my invention consists in arranging a series of movable plates so that one or more can be placed within the space between the fixed jaws, to adapt them to various sizes of nuts or other objects.

In the drawing, A is the main bar or handle, provided with two jaws in the head or enlarged portion, which is also slotted directly below the jaws to receive the sliding plates C C', and at the side of said slot is an extended slot, to accommodate the sliding wedge D, for securing the sliding plates C C' in place. Transverse plates E E' are secured to the head, and extend across the slot or opening on either side of the head, to retain and guide the sliding plates C C'.

These plates may be cast solid with the head or fixed with rivets, as shown. They are arranged at the proper distance from the point of the jaws to give the necessary depth to them.

The shield or plate B is constructed with a lever-handle, W, and pivoted to the head at I. It is also constructed with a recess upon its under side, to allow the projections H upon the sliding plates to pass. (Shown at *x x'*, Fig. 3.) The upper edge of the shield is rounded, as at *b b'*, which holds the sliding plates in position by forming an abutment for the projections H. The sliding wedge D is provided with a stud, O, that engages with a slot in the pivoted shield, so that when the shield is turned by the lever W the wedge is moved forward or retracted. When the shield or plate B is in the position shown in Fig. 1 the sliding plates are secured in the position shown. When the shield is turned laterally the wedge is retracted, and one or more of the sliding plates may be advanced within the jaw, when the shield is turned back the rounded edge passing behind the projections H, and securing them within the jaws, the wedge D at the same time being advanced.

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

1. A wrench provided with a series of movable plates, to adapt the jaws to various-sized objects, substantially as set forth.

2. A pivoted shield or plate, B, constructed substantially as described, and provided with a lever or handle, W, for the purpose set forth.

3. The pivoted shield or plate B, provided with the slot, in combination with the sliding wedge D, having stud O, constructed and operating as described.

ELISHA T. BARLOW.

In presence of—

P. O. WEGENER,
GEO. A. WORZ.