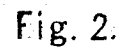
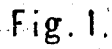


Wrenches.

Patented Feb. 11, 1873.



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UNITED STATES PATENT OFFICE.

JOSEPH SMILEY, OF FRANKLIN, PENNSYLVANIA.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. 135,856, dated February 11, 1873.

To all whom it may concern:

Be it known that I, JOSEPH SMILEY, of Franklin, in the county of Venango and State of Pennsylvania, have invented a new and valuable Improvement in Monkey-Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side view, part sectional, of my wrench. Fig. 2 is a detail view.

This invention has relation to wrenches; and consists in the construction and novel arrangement of the spring-catch, in the head of the stationary jaw, adapted to engage with the teeth of the shank of the movable jaw, thereby fixing the same in position when adjusted. The object of this invention is to provide the hand-wrench with a simple and convenient lock, whereby with but little exertion the jaws may be fixed in position relatively when properly adjusted to the work.

In the accompanying drawing, the letter A designates the handle carrying the stationary jaw B of the wrench. The upper portion of the handle or shank is centrally recessed to form a socket, *a*, for the reception of the stem of the movable jaw. C indicates the movable jaw, which is provided with a stem, *b*, designed to extend downward into the socket *a*, and serrated on its front edge to engage with the spring-catch E. At the upper part of the socket *a* it is extended forward and backward, as well as somewhat laterally, to form a seat in the body of the stationary jaw, for the reception of the spring-catch. This catch is in the form of a rectangle, open centrally for the passage of the stem of the movable jaw, and provided at its rear end with a stud, *c*, which

projects through an opening, *e*, in the rear wall of the recess, in which the spring-catch is located. Before this catch, within the recess, is arranged a spiral spring, *s*, which serves to push the catch toward the serrated edge of the stem of the jaw C. A removable steel pin, *z*, is usually employed to engage with the notches or interspaces of the serrated edge, as it can be easily replaced when worn or broken. The lower or stationary jaw is made shorter at the heel end than the movable jaw, for the purpose of protecting the stud when the wrench is used as a hammer, the projecting end of the movable jaw serving for this purpose.

In the application of this instrument, one hand is ordinarily sufficient. The thumb being placed upon the stud *c* to disengage the catch from the stem *b*, the jaw C is moved outward and adjusted to the work by the forefinger. The stud *c* is then relieved from pressure, and the catch allowed to engage with the serrated stem, thus securing the jaws in their relative position.

For convenience in the manufacture, the inner face of the stationary jaw may consist of a removable plate, as shown at D.

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

In a hand-wrench, the combination, with the recessed and perforated stationary jaw B, of the serrated stem *b* of the movable jaw, and the spring-catch E, and thumb-stud *c*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH SMILEY.

Witnesses:

MOSES J. COLMAN,
I. L. DEWOODY.