B. F. JOSLYN.

WRENCH.

No. 170,089. Patented Nov. 16, 1875.

Fig. 1

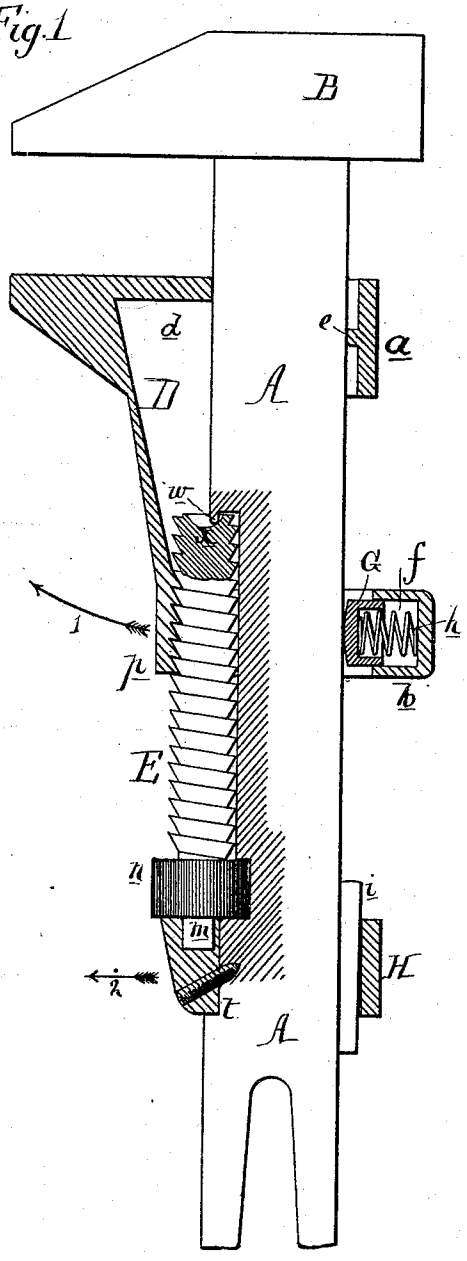
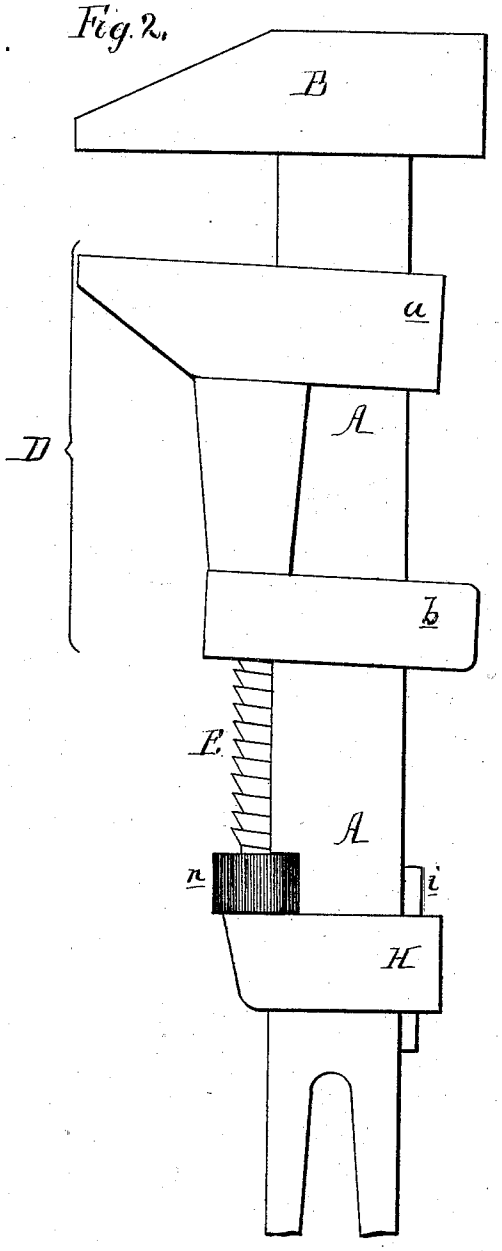


Fig. 2.



Witnesses, Harry Smith
Thomas McElwain

B. F. Joslyn
by his Attys.
Howson and Sons

UNITED STATES PATENT OFFICE.

BENJAMIN F. JOSLYN, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO RICHARD P. BRUFF, OF NEW YORK, N. Y.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **170,089**, dated November 16, 1875; application filed September 19, 1874.

To all whom it may concern:

Be it known that I, BENJAMIN F. JOSLYN, of Worcester, Worcester county, Massachusetts, have invented an Improved Screw-Wrench, of which the following is a specification:

The object of my invention is an improvement in the construction of that class of wrenches having sliding jaws, to be operated directly by the pressure of the hand or by an elevating-screw, as circumstances may require; and this object I attain in the manner illustrated in the sectional view, Fig. 1, and exterior view, Fig. 2, of the accompanying drawing.

A is the stem of the wrench; B, the usual fixed jaw; and D, the movable jaw, which has two projections, *a* and *b*, for receiving the said stem, and which is recessed at *d*, partly for the sake of lightness, and partly to allow for the admission of the screw E, referred to hereafter. The opening in the projection *a* for receiving the stem A is somewhat larger than the latter, but a rounded teat, *e*, within the opening bears against the back edge of the stem. The opening in the projection *b* of the jaw D is also larger than the said stem, and this projection has a recess, *f*, for admitting a spiral spring, *h*, and a block, G, into a chamber in which fits a portion of the spring, and which bears against the back edge of the stem. The spring and its block in the projection *b*, and the teat *e* in the projection *a*, permit the jaw D to be turned to a limited extent in the direction of the arrow on the said teat *e* as a center, so that the jaw can be moved to the position shown in Fig. 2, its normal position, however, being that seen in Fig. 1. A strap or collar, H, is secured to the stem of the wrench by a wedge, *i*, the said collar fitting into a recess, *t*, in the stem, so that when secured by the wedge it is incapable of any longitudinal movement. The screw E has a serrated enlargement or collar, *n*, which projects into a recess in the stem A, the latter consequently resisting the end strain to which the screw is subjected. The screw has a journal, *m*, adapted to a recess in the collar H, and the thread of the screw is inclined on one side and abrupt on the other, as shown. The body of the screw is adapted to a longitudinal groove in the front edge of the stem, within which groove the screw is maintained at one end by the journal *m*, and at the opposite end by a teat, *w*, projecting into a recess, *x*, at the extreme end of the screw.

There are internal teeth on the portion *p* of the jaw D, and as long as the latter remains in the position shown in Fig. 1 these teeth remain in gear with the thread of the screw, so that the jaw can be adjusted on the stem only by turning the screw, the manipulation of which is rendered easy by its serrated enlargement *n*. On moving the jaw in the direction of the arrow, however, to the position shown in Fig. 2, its teeth will be out of gear with the thread of the screw; hence as long as the said jaw is held in the position, Fig. 2, it can be quickly adjusted to and fro on the stem, but the moment it is released again comes under the control of the screw.

It will thus be seen that the jaw D admits of being adjusted slowly and delicately through the medium of the screw, or adjusted rapidly independently of the same, as in other wrenches of this class. It will be seen, however, that the hollow projection *b* and its spring enable the operator to disengage the jaw from the screw by the mere pressure of his thumb, instead of both hands being employed, as in the ordinary wrench, where a sliding bolt has to be manipulated. It will further be seen that a wrench having the hollow projection and spring is less expensive to construct, and is less liable to become inoperative from clogging with rust or dirt than one in which a sliding bolt is used.

An important feature of my invention is the facility with which the screw E can be removed and replaced. After the jaw D has been moved into contact with the fixed jaw, and the wedge *i* has been withdrawn, the collar H may be moved so far in the direction of the arrow 2, Fig. 1, that it will be clear of the recess *t*, when the collar may be drawn along the stem, leaving the screw at liberty. It will be evident that the screw may be as readily replaced in a manner which needs no description.

I do not claim broadly a wrench in which

the movable jaw can be tilted to disengage it from the elevating-screw; but

I claim—

The combination of the stem A, its screw E, tilting jaw D, bearing at *e* against the stem, and a spring secured to the jaw, bearing against the stem, and tending to maintain the jaw in contact with the screw, all as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BENJAMIN F. JOSLYN.

Witnesses:
S. B. I. GODDARD,
GEO. E. SMITH.