(No Model.)

B. F. LANCASTER.

WRENCH.

No. 376,891. Patented Jan. 24, 1888.

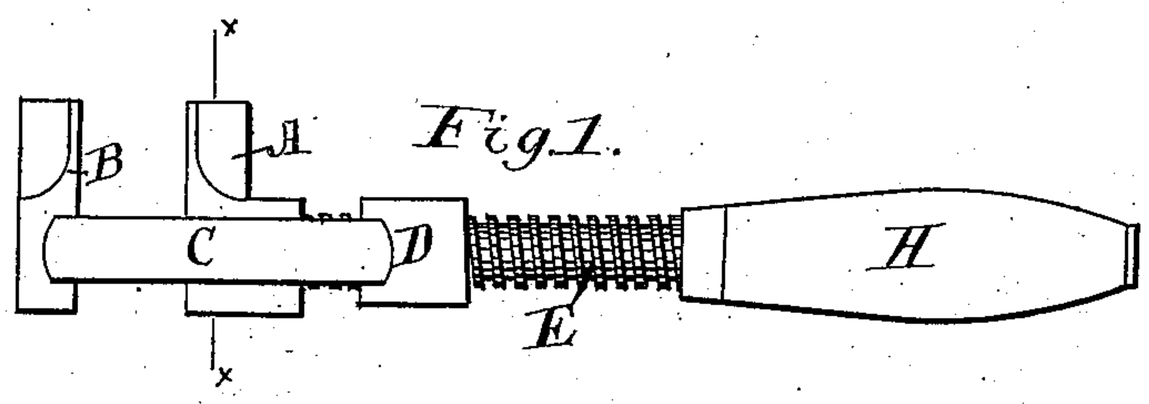

Fig. 1.

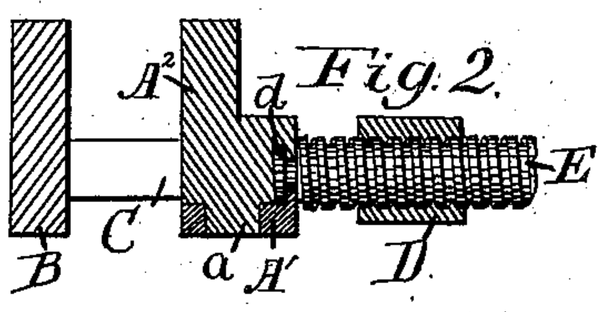

Fig. 2.

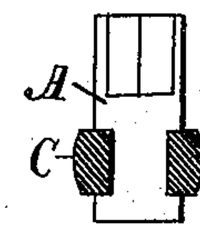

Fig. 3.

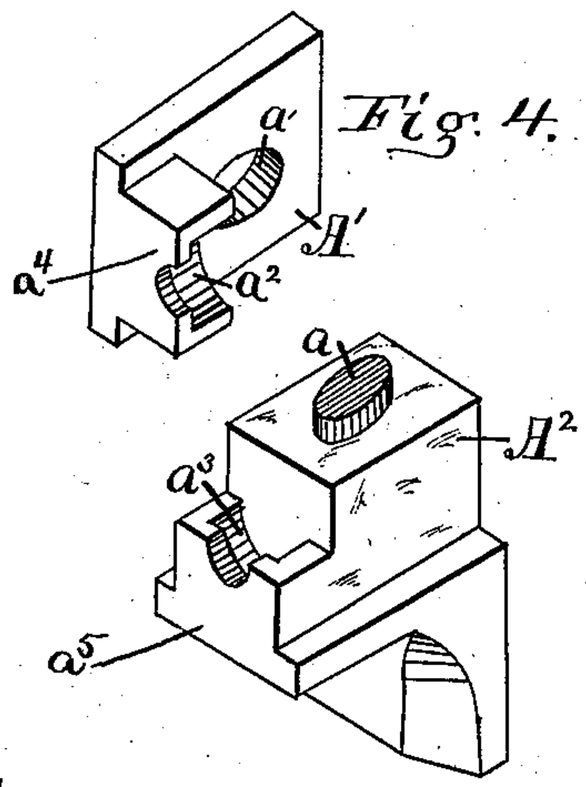

Fig. 4.

Witnesses:

C. B. Currie

C. M. Gerard.

Inventor:

Bradford F. Lancaster

by S. N. Bates

his atty.

UNITED STATES PATENT OFFICE.

BRADFORD F. LANCASTER, OF AUGUSTA, MAINE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 376,891, dated January 24, 1888.

Application filed September 22, 1885. Serial No. 177,865. (No model.)

To all whom it may concern:

Be it known that I, BRADFORD F. LANCASTER, a citizen of the United States, residing at Augusta, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to wrenches, and particularly to that class known as "sliding-jaw" and "side-bar;" and the novelty consists in a movable jaw made in two parts locked together by a rivet elliptical in cross-section and interlocked together, and in the combination thereof with the side bars and the screw and the fixed jaw, substantially in the manner and for the purpose set forth, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation. Fig. 2 is a longitudinal section. Fig. 3 is a transverse section through *x x* of Fig. 1. Fig. 4 shows details of movable jaw.

B is a fixed jaw joined to the ends of two side bars, C C. The opposite ends of the bars C C are connected together by the nut D. In constructing the wrench I cast the jaw B, the side bars, C C, and the nut D in one piece. The movable jaw A slides between the bars C C, the jaw being formed with a slot in each side to admit the bars. (See Fig. 3.) The screw E passes through the nut D, which is tapped out to fit it, and it has on one end the handle H, while the other end turns in the movable jaw A.

The construction of jaw A and its manner of connecting with the screw E are as follows, viz: The jaw A is cast in two pieces. (See Fig. 4.) The main portion A^2 is provided with the rivet *a*, oblong or elliptical in shape in cross-section, and the elliptically-shaped recess a^3 in the shoulder a^5. Part A′ consists of a cap containing an elliptically-shaped hole, *a′*, to receive the rivet *a*, and a projection or lug, a^4, containing a semicircular recess, a^2. When these parts are riveted together by passing rivet *a* through hole *a′*, the two recesses a^2 and a^3 come together and form a circular inclosure just sufficient to contain the shoulder *d*, which is turned on the end of screw E, and which is inserted before the two parts of jaw A are riveted.

It will be noted that the projection or lug a^4 comes down upon the face of the part A^2 just below the base of the rivet *a*, and while the rivet *a* tends to lock the two parts together, and thus more perfectly resist the lateral or other strain, the extension of the lug a^4 over the face of the part A^2 serves to interlock these parts and greatly increase the resistance to all strain—lateral, vertical, torsional, or other.

The process of putting the wrench together is as follows: The screw is first screwed through the nut D. The two parts of jaw A are then closed over the end of the screw E, and the portion A^2 of the jaw is then secured to the part A′ by heading down the rivet.

The simple construction here shown enables me to manufacture my wrench at a low cost and to secure an article of great strength and durability, while its simplicity of action makes it peculiarly convenient and useful.

I am aware that wrenches have been made with side bars, and also with a screw operated by a handle, as in the present case; but I am not aware that any wrench has possessed the combination of desirable qualities shown in my wrench.

I am aware that it is not broadly new to make a tap-wrench with a head in two parts, each flat-faced and recessed and the two united by a screw-bolt, and such construction I do not claim.

I claim—

In a wrench, a sliding jaw made in two parts, the one having an elliptically-shaped rivet and the other an elliptically-shaped hole and a projecting lug, and secured together by heading said rivet, the lug of the one part coming against the face of the other part, whereby the two parts are locked and interlocked together, substantially in the manner and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

BRADFORD F. LANCASTER.

Witnesses:

S. W. BATES,

E. W. ROBERTS.