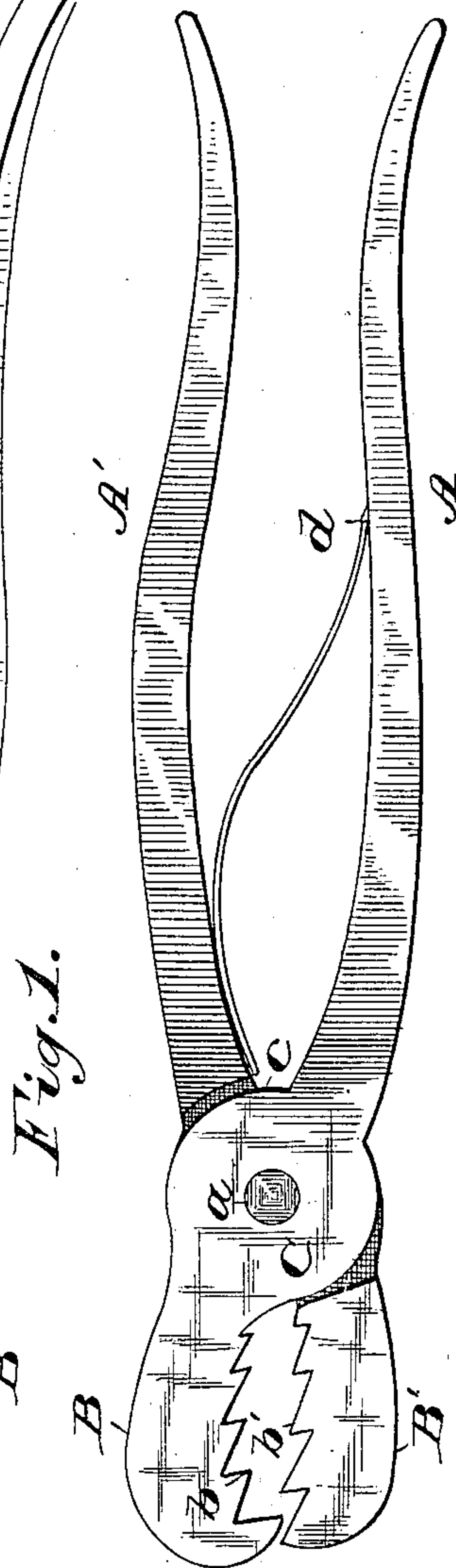
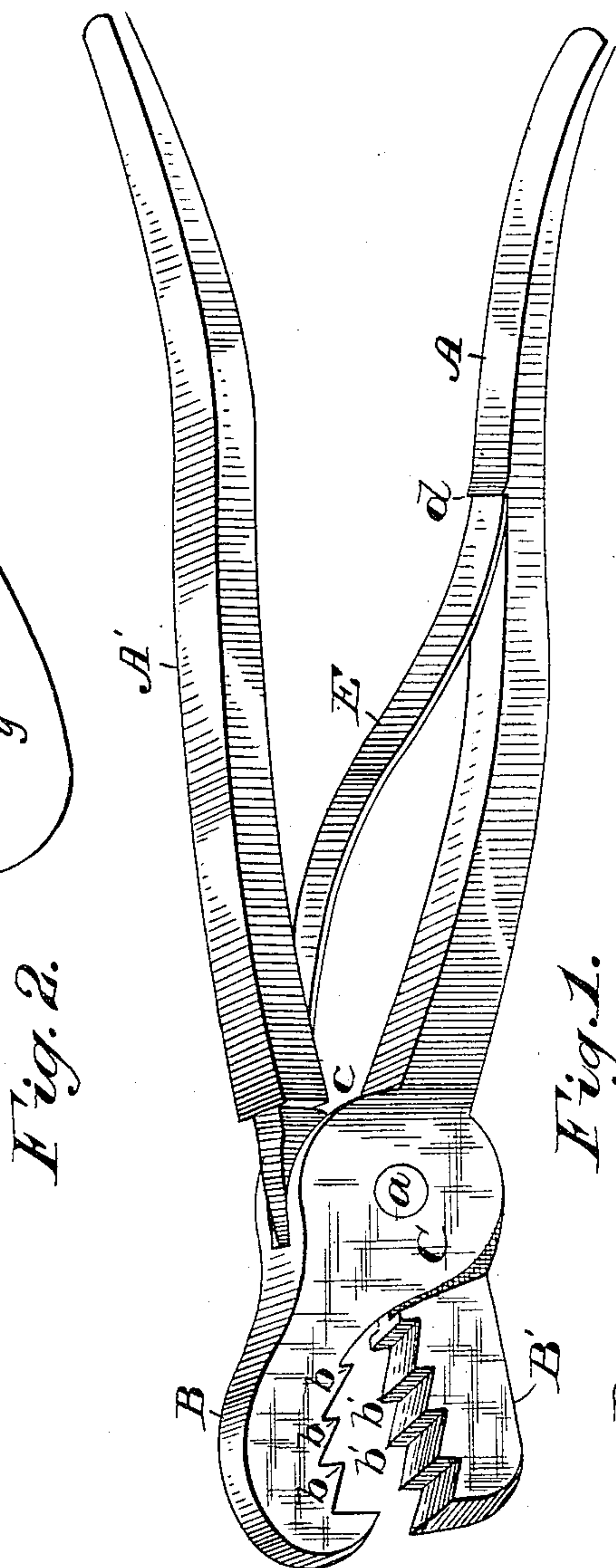
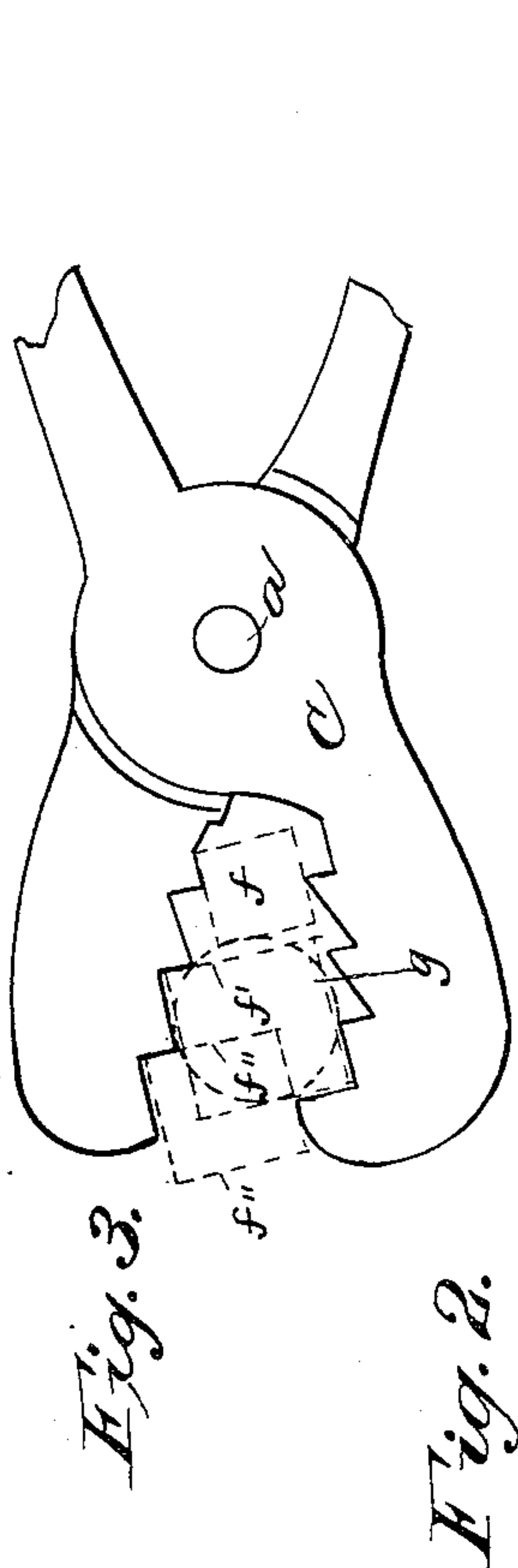


(No Model.)

G. A. REESE.  
LEVER WRENCH.

No. 371,476.

Patented Oct. 11, 1887.



Witnesses:  
*Harry C. Rohrer,*  
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*George A. Reese*  
By *E. E. Ouff* Attorney

# UNITED STATES PATENT OFFICE.

GEORGE A. REESE, OF WELLSTON, OHIO, ASSIGNOR OF ONE-HALF TO  
JAMES M. LIVELY, OF SAME PLACE.

## LEVER-WRENCH.

SPECIFICATION forming part of Letters Patent No. 371,476, dated October 11, 1837.

Application filed July 19, 1886. Serial No. 208,441. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE A. REESE, of Wellston, in the county of Jackson and State of Ohio, have invented certain new and useful Improvements in Lever-Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to an improvement in wrenches, and more particularly to wrenches known as "pivotal-jaw."

Hitherto in wrenches of the above character, where the jaws were provided with serrations or teeth, the said serrations or teeth have been adapted to impinge the nut or pipe which they engaged with their edges and hold it from turning for the greater part by the said gripping-edges of the teeth which indented to a greater or lesser extent the face of the nut or pipe.

The object of my present invention is to provide a wrench in which the serrations in the opposite jaws shall be so arranged that they will present a shoulder or abutment and an extended bearing along the edges of the held nut at the diagonally-opposite corners, thereby securing a firmer and surer hold with a comparatively light pressure.

A further object is to provide a wrench which shall be adapted to adjust itself perfectly to different-sized nuts, and also to pipes or rods having a curved exterior.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the wrench with jaws closed. Fig. 2 is a perspective view of the same with jaws open, and Fig. 3 represents different-sized nuts and a pipe within the grasp of the jaws.

A and A' represent the handles, and B B' the jaws, preferably formed integral therewith. One of the handles—A, for example—is provided with a thicker portion at the base of the jaw, in which is formed an eye, c, through

which the opposite jaw projects, the two jaws being pivotally secured together by the pivotal bolt or rivet a. The jaws are held normally closed by a spring, E, inserted between the handles, which latter are preferably curved slightly outward or away from each other to afford free action for the spring. One of the jaws—B', for example—is nearly or quite straight along its serrated face, its teeth b' being longer on the face toward the pivotal point of the jaws than on the opposite face, as shown.

The upper jaw has a slightly-curved serrated face, the teeth b, formed thereon, being of a similar construction to the teeth b', but having their faces set at such angles as to occupy positions parallel to the faces of the teeth b', one when the jaws are partially opened and another when the jaws are more widely opened, the long or short face of each tooth b corresponding with the long or short face of the tooth b', located either diagonally toward the end or pivot of the jaw, as the case may be. The result is that when an angularly-shaped nut—such as f'', for example—is grasped by the jaws its diagonally-opposite corners will be received into two diagonally-opposite notches, the corners of the nut abutting against the short faces of the teeth and the long faces of the teeth resting in extended contact with the edges of the nuts, as shown. Nuts might also be grasped by having one corner only set in the notch between two teeth and the edge of an opposite tooth impinge against the opposite side of the nut, as shown at f f<sup>3</sup>.

A pipe curved on its exterior is grasped, as shown at f', by being cramped between two teeth on each of the opposite jaws.

The handles are preferably made of malleable wrought-iron and the teeth of steel.

The jaw B' is inserted in the eye c before the latter is perfectly cool and while it may be spread to receive it, after which it is closed to its normal shape.

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

1. In a wrench, the combination, with a jaw provided with a series of teeth having a longer and a shorter side, of a curve-faced jaw piv-



otally secured to the former and having a set of teeth arranged on its curved face, the said teeth having longer and shorter faces, the longer faces having directions adapted to be-  
5 come parallel with the faces of the alternate teeth on the opposite jaw at different widths of openings of the jaws, substantially as set forth.

10 2. The wrench consisting, essentially, of the pivotal jaws, one having an essentially straight serrated face and the other a curved serrated face, each serration or tooth on the curve-

faced jaw having a longer and shorter side, the longer sides having a more or less oblique direction relatively to one another, for the pur- 15  
pose substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE A. REESE.

Witnesses:

O. E. DUFFY,

J. M. LIVELY.