

E. Riple, *Wrench.*

N^o 16,997.

Patented Apr. 7, 1857.

Fig. 3

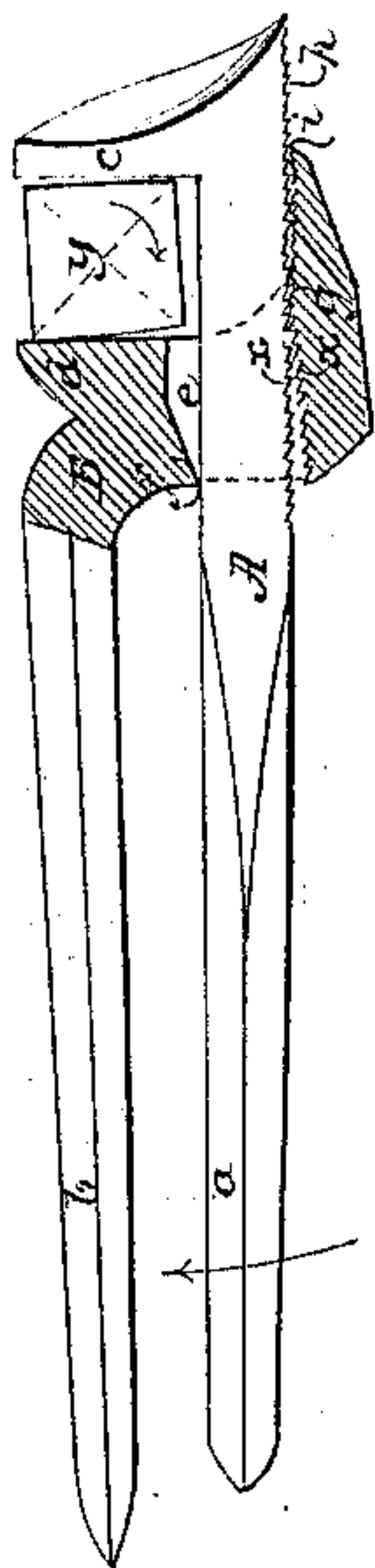


Fig. 1

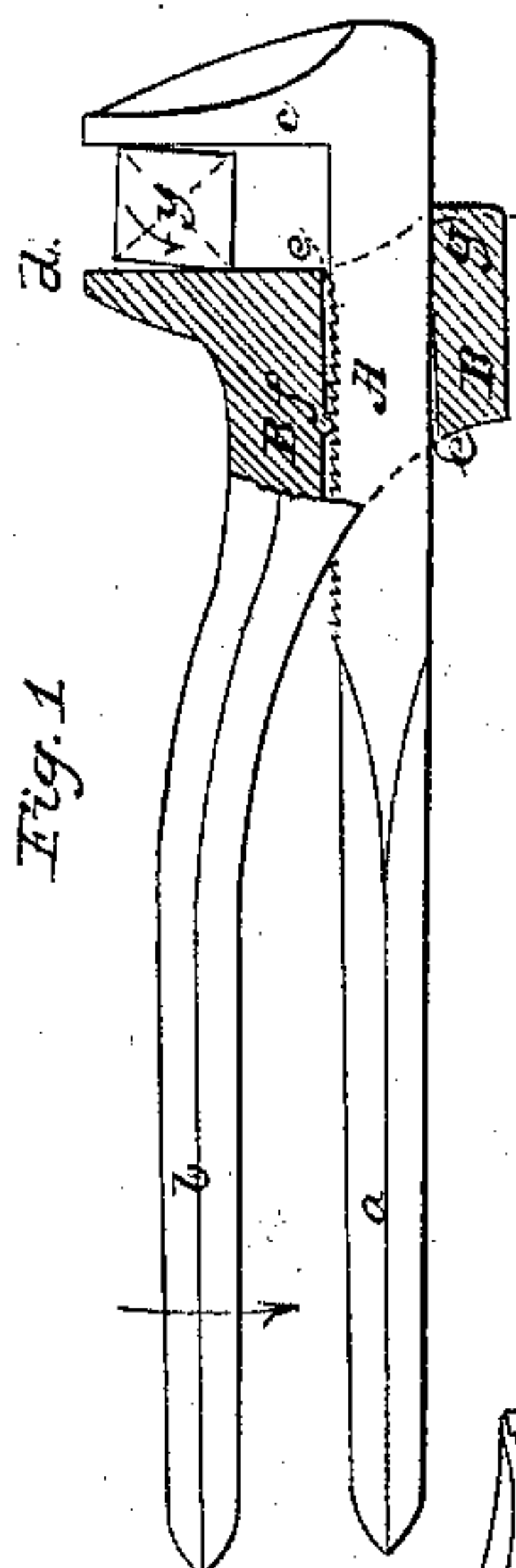


Fig. 4.

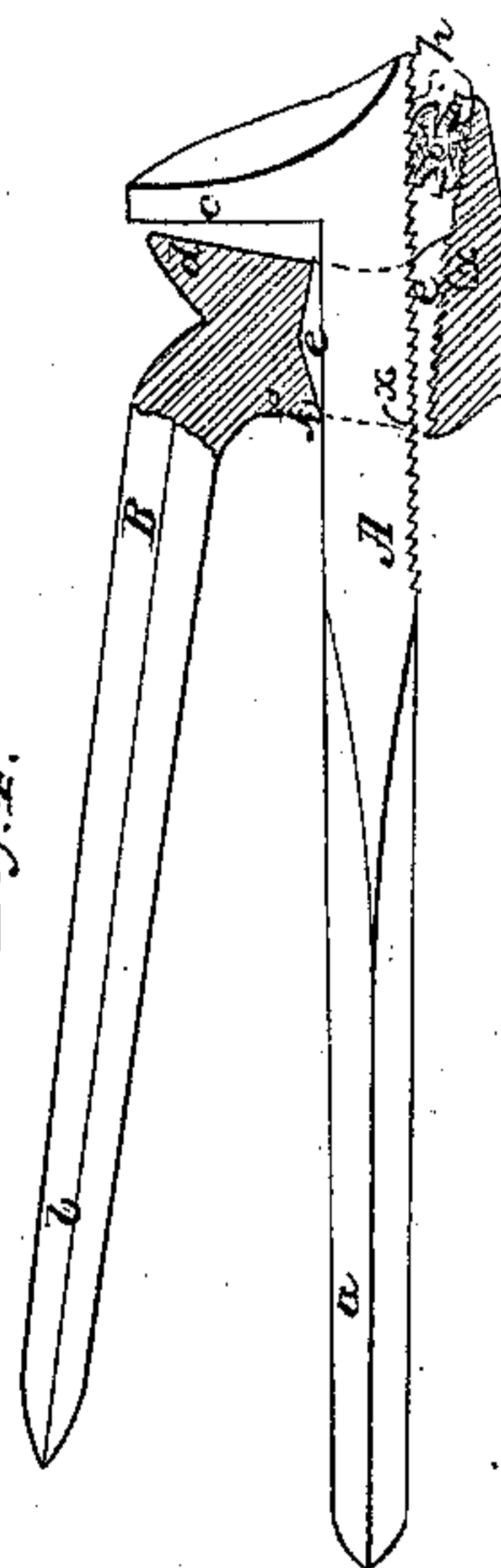
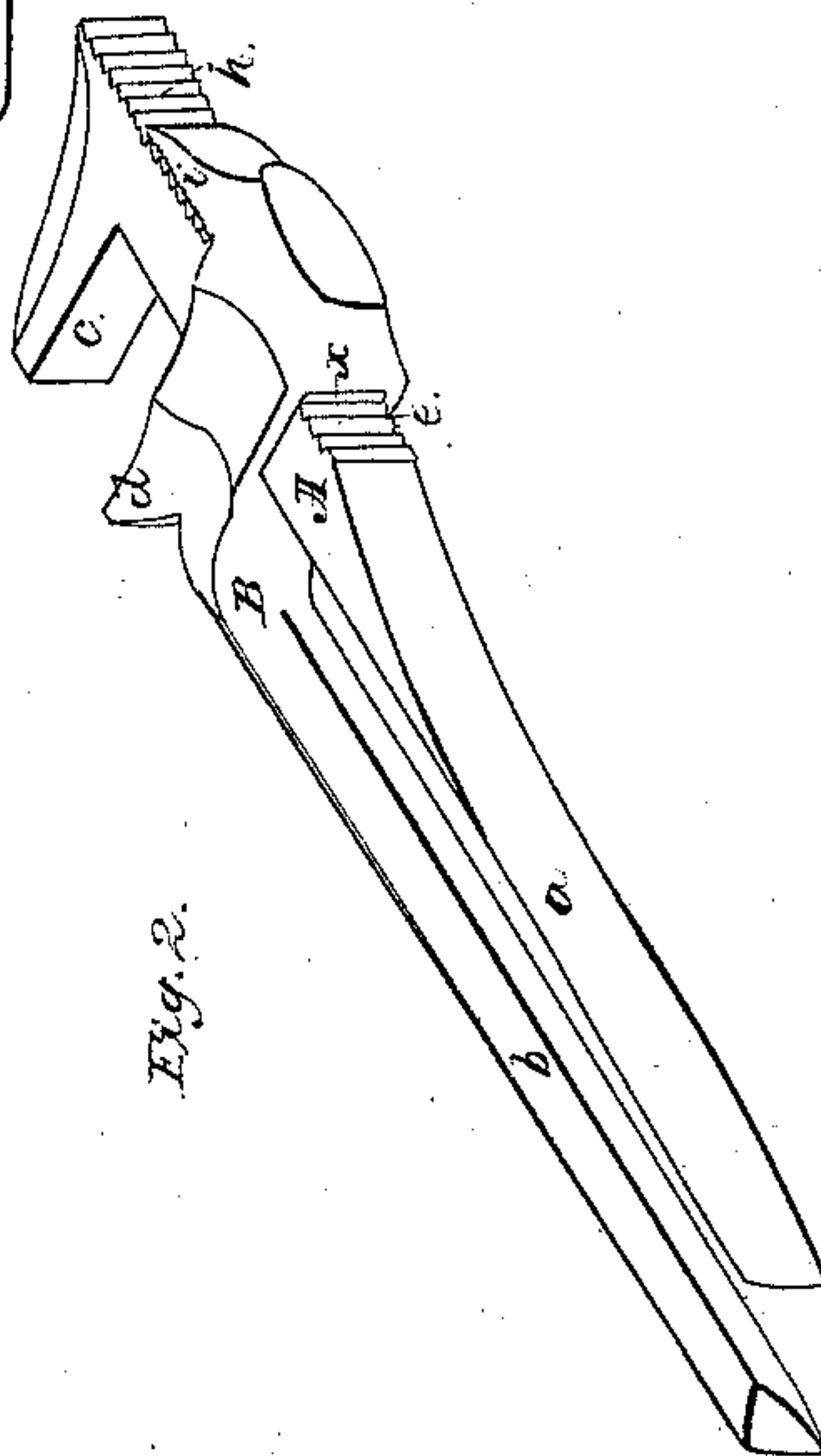


Fig. 2.



UNITED STATES PATENT OFFICE.

EZRA RIPLEY, OF TROY, NEW YORK.

WRENCH.

Specification of Letters Patent No. 16,997, dated April 7, 1857.

To all whom it may concern:

Be it known that I, EZRA RIPLEY, of the city of Troy, in the county of Rensselaer and State of New York, have invented a new and Improved Adjustable Pincer-Wrench for Turning Square Nuts or Bolts; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1 is a sectional view of my improved wrench, and Fig. 2 a perspective view and Figs. 3 and 4 sectional elevations of the same when made so that it can be also used as a pincers.

The same letters refer to like parts in all the figures.

The product of my invention is an exceedingly cheap, and yet efficient and durable adjustable wrench for general use in turning square nuts or bolts. It is composed of but two pieces; and these may be cast of iron and at once slipped together so as to make the wrench ready for market, or use, without further labor. These two pieces, are, the bar-lever A, provided with the wrench jaw *c*, and the mortise lever B having the jaw *d*. A portion of the lever A next the jaw *c* is square, or of other angular shape, and of such uniform or nearly uniform size that it can be evenly slid back and forth in the mortise *e*. The ends *a*, *b*, of the levers are so shaped that they can be both grasped at once by the hand when the levers are together as shown in the drawings; and the jaw *c* is kept from sliding away from the jaw *d*, when used as a wrench, by gripping

the handles *a*, *b*, so as to make intense friction between the bar A, and bearings *f*, *g*, on the sides of the mortise. Teeth, *x*, may be cast on the lever A, and in the mortise, as shown, so that the handles need be gripped but feebly to keep the jaws *c*, *d* from sliding apart. The wrench jaws *c*, *d*, are so arranged on the combined levers A, B, that when the handles are gripped the jaws *c*, *d*, are parallel or nearly so; and my improved wrench can be distinguished from all others which have been, or may be composed of but two pieces, by the fact that in my improved wrench the jaws *c*, *d*, are so arranged on the levers that the handles, *a*, *b*, do not tend to spread open while turning a nut or bolt, *y*, by the jaws *c*, *d*; as is apparent from Figs. 1 and 3.

By casting the levers A, B, with pincer-jaws *h*, *i*, arranged as shown in Figs. 2, 3, and 4, in addition to the wrench jaws *c*, *d*, and making the mortise *e* of such shape and size that the jaws *h* and *i*, can be opened and closed by working the handles, an implement is produced which can at once be used either as an effective pincers or as an adjustable wrench.

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

Making the levers A, B, combined together as described, with wrench-jaws *c*, *d*, so arranged that the levers do not tend to spread open when used as an adjustable wrench, as set forth.

EZRA RIPLEY.

Witnesses:

ED. H. UNIAC,
A. F. PARK.