

(No Model.)

A. J. BARNES.

WRENCH.

No. 344,301.

Patented June 22, 1886.

Fig. 1.

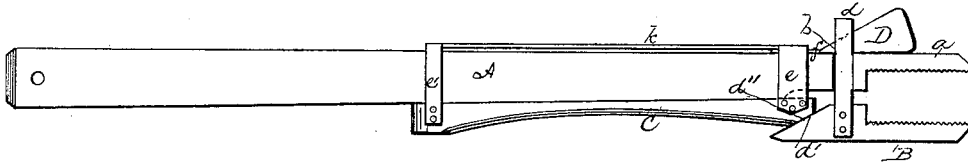


Fig. 2.

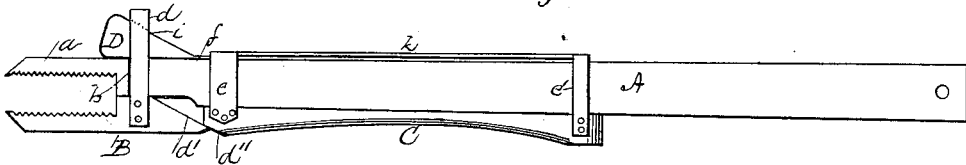


Fig. 3.

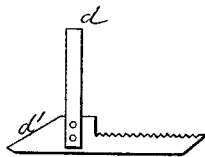


Fig. 4.

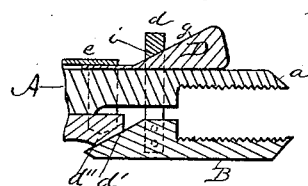
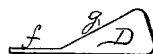


Fig. 5.



WITNESSES

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SPECIFICATION forming part of Letters Patent No. 344,301, dated June 22, 1886.

Application filed January 7, 1886. Serial No. 187,871. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR J. BARNES, of Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Sliding-Jaw Wrench; and I hereby declare the following to be a full, clear, and exact description of the same, reference be had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of my improved wrench with the jaws distended to the fullest extent. Fig. 2 is a side elevation of the same with the jaws closed to the limit. Figs. 3, 4, and 5 are details to be referred to.

The object of my invention is to provide a wrench which shall have the jaws adjustable, and which can be readily set with one hand; and my invention consists of a handle or staff recessed to receive a transversely-sliding strap bearing a movable jaw, in combination with two oppositely-sliding wedges, which impinge against the sliding jaw and the interior of the strap, to hold the sliding or movable jaw in any relation to the fixed jaw that may be desired.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is a bar forming the handle or lever of the wrench, and having its end *a* serrated, or of any desired shape incident to the purposes for which the wrench is intended. At *b* the bar A is recessed on opposite sides to form ways, in which slides a strap or yoke, *d*, to the lower end of which is secured the movable jaw B, having a biting-surface of similar conformation to jaw *a*. The rear end of jaw B is beveled, as shown at *d'*, to receive the thrust of a beveled face, *d''*, on the end of a sliding locking-bar, C, and straps *e e'* hold this bar C to the lever or bar A, so that bar C may be moved longitudinally along the under side of bar A.

Secured to strap *e* is a short connecting-bar, *f*, carrying a wedge, D, which slides on top of bar A within the strap or yoke D, the angular side *g* of the wedge bearing against

an angular or beveled face, *i*, on the interior of the upper end of yoke D. If desired to strengthen the structure, another rod or bolt, *k*, may connect straps *e e'*; but this I do not consider essential.

The pitch of the wedge-surfaces *d' g i* is on the same angle, and as bar C, having beveled face *d''*, straps *e e'*, and wedge D, all move synchronously, the changing of bar C back and forth along bar A through the medium of the wedge-surfaces shifts the position of yoke *d* transversely across bar A, and thereby the movable jaw is made to approach or recede from the fixed jaw *a*, to accommodate the wrench to its work.

The conformation of the jaws of my improved wrench may be changed from that shown in the drawings to adapt the wrench for use as a pipe-wrench, or for any other specific use, without departing from the spirit of my invention.

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

1. In an adjustable wrench, a fixed jaw and a longitudinally-moving jaw, in combination with two synchronously-acting wedge-faces set in alignment with the travel of the movable jaw, and operating to move the movable jaw toward and away from the fixed jaw in consequence of the direct movements of said movable jaw, substantially as described.

2. The combination of bar A, carrying a stationary jaw, and a movable jaw, B, having its rear end beveled at *d'*, with sliding bar C, having beveled face *d''*, transverse yoke *d*, having beveled face *i*, and wedge D, all constructed, arranged, and operated as set forth.

3. The combination, with bar A, having a fixed jaw, and a movable jaw, B, having beveled rear end, of sliding bar C, having straps *e e'*, the yoke *d*, having beveled face *i*, and the wedge D, all constructed and arranged to operate as specified.

ARTHUR J. BARNES.

Witnesses:

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J. L. POTTS.