J. A. DODGE.

WRENCH.

No. 188,605. Patented March 20, 1877.

Fig. 1.

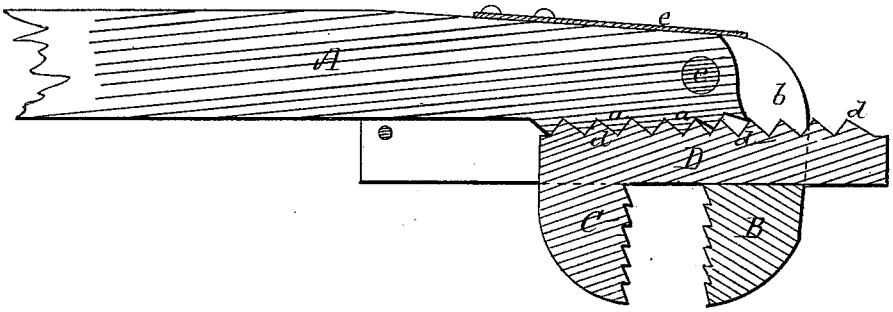


Fig. 2.

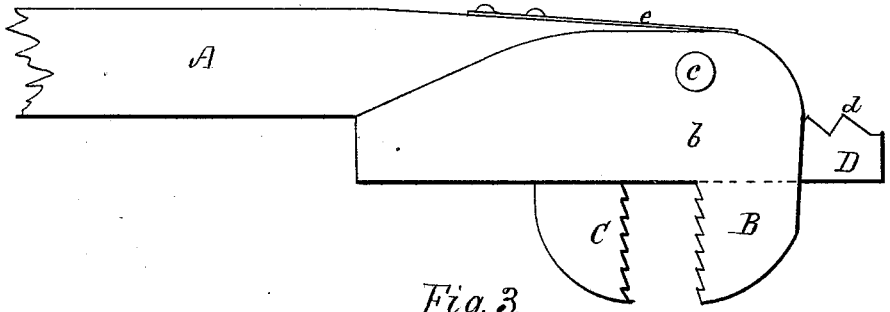
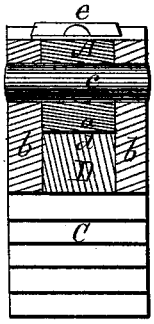


Fig. 3.



Witnesses.

F. Hunnewell.

W. E. Boardman.

Inventor.

John A. Dodge.

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UNITED STATES PATENT OFFICE.

JOHN A. DODGE, OF BRIDGETOWN, NOVA SCOTIA.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **188,605**, dated March 20, 1877; application filed November 21, 1876.

To all whom it may concern:

Be it known that I, JOHN A. DODGE, of Bridgetown, Nova Scotia, at present residing at Boston, Suffolk county, Massachusetts, have invented certain Improvements in Wrenches, of which the following is a specification:

In this wrench two movable jaws are employed, one of which embraces both the end of the handle and the other jaw, and is pivoted to such handle, the second named jaw sliding within or upon the first, and being provided on its upper side with a toothed rack or series of teeth, which engage a similar rack formed upon a portion of the under edge of the handle, the first named or pivotal jaw serving not only to throw the sliding jaw into or out of connection with the teeth of the handle, but to effect a variation in the space between the two jaws when the sliding jaw is in connection with the handle, and thus render the instrument self-adapting to objects of various sizes.

The drawings accompanying this specification represent, in Figure 1 a longitudinal section, in Fig. 2 a side elevation, and Fig. 3 a cross-section, of a wrench embodying my invention.

In these drawings, A represents the handle of my wrench, upon a portion of the lower edge of the front end of which I form a rack of teeth, *a a*, &c. B represents the outer or primary jaw, which is formed with ears *b b*, which straddle the end of the handle, and are pivoted to the latter by a pin, *c*, in such manner that the jaw is free to turn upon its pivot about the end of the handle. The secondary or inner jaw of the wrench is shown at C, as forming part of a bar, D, upon the upper side of which bar is created a rack or series of teeth, *d d*, &c, these teeth corresponding in size and shape of those of the handle, and serving to interlock the latter, and prevent slipping of the jaw upon the handle, the bar D being susceptible of sliding movements between the ears *b b* of the jaw B.

It will be seen that when the parts are in working position no sliding movement of jaw C upon the handle can take place, consequently as the jaw B is turned upon its fulcrum it must recede from the jaw C, and increase the distance between the two, and thereby adapt the instrument to objects of various sizes.

When it becomes necessary to effect great changes in the space between the two jaws, greater than that permitted by the automatic movement before described, the jaw B (and with it the jaw C) is turned upon its pivot until the teeth of the jaw C are out of engagement with the teeth of the handle. The sliding jaw C may then be moved upon the jaw B the required distance, and when the two are turned back the former becomes locked to the handle, as before stated.

A spring, *e*, is secured to the top of the handle, and bears at its free end upon the upper side of the jaw B, to prevent slipping and misplacement of the latter.

It will be seen that the only movement necessary to adapt the wrench to objects varying considerably in size is to turn the jaw B upon its pivot until it has receded from the jaw C to such an extent that the intervening space is greater than the object to be siezed, when a downward movement of the handle crowds the two jaws together tightly upon such object.

My wrench is equally available as a monkey-wrench or as a pipe-wrench, and will be found very effective as either.

I claim—

The combination of the handle, the jaw pivoted thereto, the spring for holding in place the pivoted jaw, and the sliding jaw supported and adjustable in the pivoted jaw, and provided on its inner edge with teeth which engage teeth on the handle, substantially as and for the purposes set forth.

JOHN ALBERT DODGE.

Witnesses:

JAS. G. MARTYN,

W. E. BOARDMAN.