

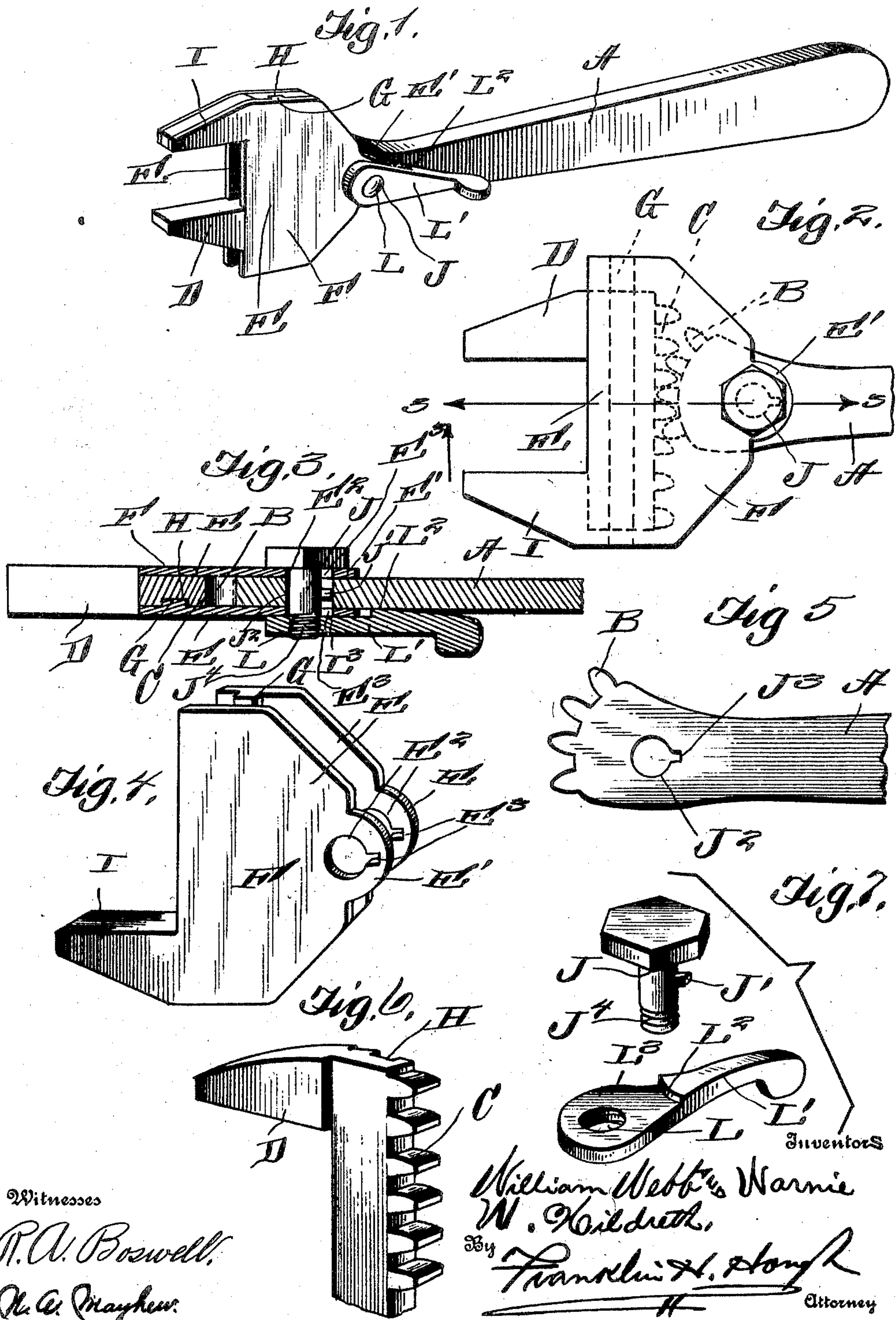
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PATENTED FEB. 6, 1906.

W. WEBB & W. W. HILDRETH.

WRENCH.

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UNITED STATES PATENT OFFICE.

WILLIAM WEBB AND WARNIE W. HILDRETH, OF GLOVERSVILLE, NEW YORK.

WRENCH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WILLIAM WEBB and WARNIE W. HILDRETH, citizens of the United States, residing at Gloversville, in the county of Fulton and State of New York, have invented certain new and useful Improvements in Wrenches; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 a part of this specification.

This invention relates to wrenches, and more particularly to a wrench adapted for unscrewing and screwing nuts or bolts. It can also be made in the form of a pipe-wrench, if so desired, by providing the jaws with teeth as generally used in pipe-wrenches.

More especially, the invention provides a device of this character having a jaw which is pivotally mounted upon a suitable handle, which is provided with gear-teeth upon one end of said handle, said teeth radially projecting from the pivot of said jaw. Said jaw is also provided with a laterally-moving jaw, which is provided with rack-teeth adapted to engage the teeth upon the handle, whereby as the handle is moved in one direction or the other said laterally-moving jaw will be adjusted to fit any desired size of nut or bolt.

The invention is also provided with means for holding said laterally-moving jaw in the desired position after the same has been adjusted.

To these ends and to such others as the invention may pertain the same consists in the novel construction and combinations of parts and features which will be hereinafter more fully described and then pointed out in the appended claims.

Our invention is illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which—

Figure 1 is a perspective view of the improved wrench. Fig. 2 is a plan view with a portion of the handle broken away, showing the teeth of the laterally-moving jaw in dotted lines for engagement with the teeth upon the handle. Fig. 3 is a sectional view on line 3 3 of Fig. 2. Fig. 4 is a detail perspective view of the pivotally-mounted jaw. Fig. 5 is a de-

tail view of a portion of the handle having the gear-teeth thereon. Fig. 6 is a detail perspective view of the laterally-moving jaw, and Fig. 7 shows detail perspective views of the pivot-bolt and locking device.

Reference now being had to the details of the drawings by letter, A designates the handle of the improved wrench, which is provided with suitable gear-teeth, as at B, which are adapted to engage rack-teeth C, which are integral with a laterally-moving jaw D, which is adapted to move between the side walls E of the pivotally-mounted jaw F. One of the side walls of said pivotally-mounted jaw is provided with a laterally-depressed rib G, adapted for engagement with a groove H in the laterally-moving jaw to insure direct lateral movement with relation to the biting portion I of said pivotally-mounted jaw when said jaw is operated by the movement of the handle, as shown clearly in Figs. 1, 2, and 3 of the accompanying drawings. As before referred to, said pivotally-mounted jaw is provided with side walls E, which are provided with circular extensions E', having cylindrical openings E² therein, which are adapted for engagement with a pivot-bolt J, which is carried by the handle A. Said bolt is provided with a lug J', projecting from the center of the shank portion thereof, which is provided for the purpose of preventing the bolt from turning within the handle when the same has been inserted in a cylindrical opening J² of the handle, because of the simple fact that the lug J' is adapted to enter a recess J³ in the circumference of the opening J², as shown clearly in Figs. 5 and 7 of the accompanying drawings. The openings E² in the side walls of the pivotally-mounted jaw are also provided with similar recesses E³, which are provided for the purpose of allowing the shank portion of the bolt J to pass therethrough to allow the lug J' to engage the recess J³ as the parts are assembled, adapting the invention to be in readiness for use. The shank portion of said bolt is provided with screw-threads J⁴, designed for engagement with the threads in opening L with the operating-lever L'.

It will be noted that when the various parts of the wrench are assembled and it is desired to adjust the jaws in any fixed position it may be readily accomplished by simply pushing upon the lever L', which will

turn upon the threaded portion of the bolt and draw the opposite parallel walls of the jaw F frictionally against the opposite faces of the shank portion of the laterally-movable jaw D with sufficient force to hold the jaws against a heavy strain. By moving the operating-lever in the opposite direction, the lever being a winged nut, unscrewing upon the bolt will relieve the opposite walls of the jaw F from pressure and allow the jaw to move in one direction or the other, accordingly as the jaw may be tilted in one direction or another.

From the foregoing description it will be plainly observed that a very efficient wrench is provided having a pivotally-mounted jaw and a laterally-moving jaw to cooperate therewith and when manufactured approximately in accordance with the illustration of the accompanying drawings may be sold comparatively cheap to the trade.

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

1. A wrench comprising a handle with rack-teeth at the end thereof, a bolt mounted in an aperture in said handle, a lug projecting from said bolt and engaging an offset in the aperture of the handle, a pivotal jaw having shank portion with walls spaced apart and pivotally mounted upon said bolt, a laterally-movable jaw mounted between the parallel walls of the pivotal jaw and having rack-

teeth engaging the teeth of said handle, a locking-lever having a threaded aperture and fitted over the threaded end of said bolt and designed to cooperate with the bolt and walls of the pivotal jaw to hold the laterally-movable jaw in an adjusted position, as set forth.

2. A wrench comprising a handle with rack-teeth at the end thereof, a bolt mounted in an aperture in said handle, a lug projecting from said bolt and engaging an offset in the aperture of the handle, a pivotal jaw having shank portion with walls spaced apart and pivotally-mounted upon said bolt, a laterally-movable jaw mounted between the parallel walls of the pivotal jaw and having rack-teeth engaging the teeth of said handle, a rib projecting from the inner face of one of the walls of the pivotal jaw and having a play in a recess formed in the shank portion of the laterally-moving jaw, a lever having a threaded aperture fitted over the threaded end of said bolt and adapted to cooperate with the bolt and walls of the pivotal jaw to hold the laterally-movable jaw in an adjusted position, as set forth.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

WILLIAM WEBB.

WARNIE W. HILDRETH.

Witnesses:

FRANK E. GOULD,
F. L. COMSTOCK.