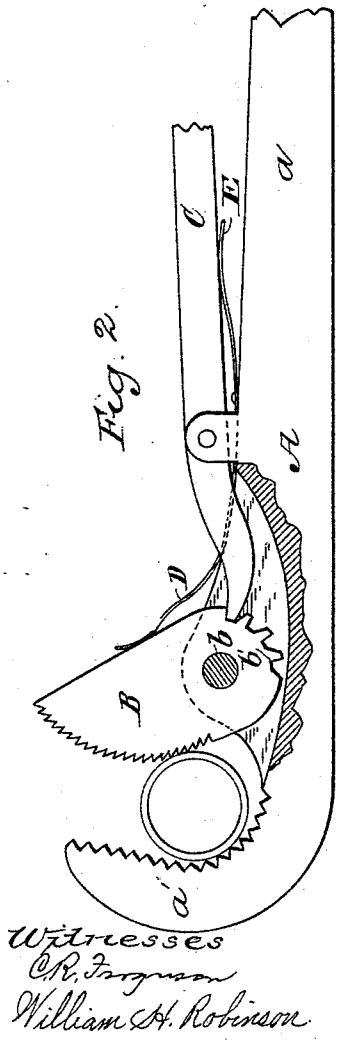
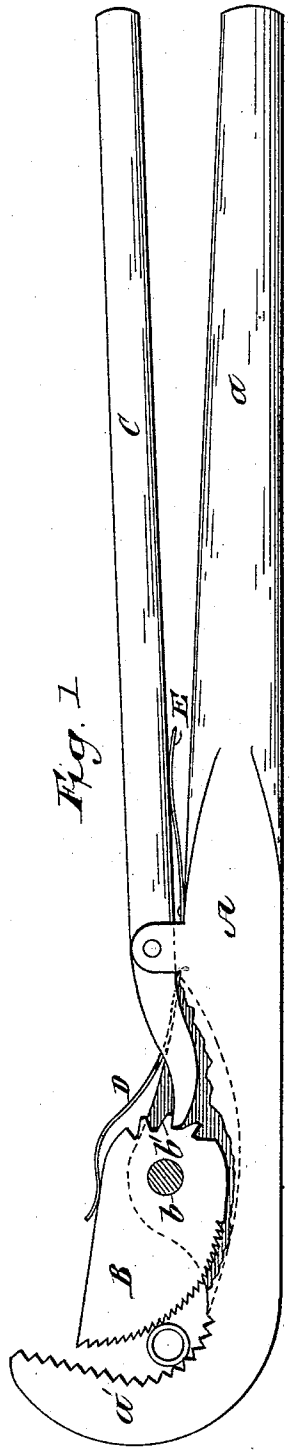
(No Model.)

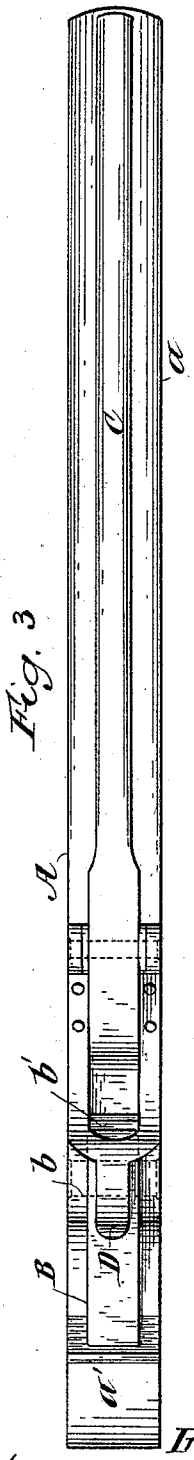
B. G. BERRIEN, Jr.

WRENCH.

No. 419,816. Patented Jan. 21, 1890.







Witnesses
C. R. Ferguson
William H. Robinson

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UNITED STATES PATENT OFFICE.

BENJAMIN G. BERRIEN, JR., OF YONKERS, NEW YORK.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 419,816, dated January 21, 1890.

Application filed November 13, 1888. Serial No. 290,686. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN G. BERRIEN, Jr., of Yonkers, in the county of Westchester and State of New York, have invented a certain new and useful Improvement in Wrenches, of which the following is a specification.

My improvement particularly relates to wrenches for use with pipes or other round articles.

The improvement consists in the combination, in a wrench, of a fixed jaw, a movable or adjustable jaw provided with a number of teeth or projections at the rear portion, and a lever fulcrumed to the main frame or handle of the wrench and adapted to engage with one or other of said teeth or projections on the movable jaw and hold it rigidly as adjusted.

In the accompanying drawings, Figure 1 is a partly-sectional side view of a wrench embodying my improvement. Fig. 2 is a similar view of the jaw portion, showing the movable jaw in a different position. Fig. 3 is a top view.

Similar letters of reference designate corresponding parts in all the figures.

A designates the main frame of the wrench. It comprises a handle portion *a* and a fixed jaw *a'*, which may advantageously be serrated, as shown.

B designates a movable jaw. It is shown as inserted in a bifurcated or slotted portion of the frame A and secured therein by a cross-pin *b*, so as to be capable of swinging. I have shown the face of this movable jaw as serrated. The opposite faces of the jaws may be of any desired shape. I have shown the outer portion of the face of the movable jaw as rounded. The heel or rear portion of the movable jaw is concentric to the pivot-pin, and is shown as provided with a number of teeth or projections *b'*.

C designates a lever fulcrumed between the ends to the main frame and extending at the forward end into such a position that it may engage with one of the teeth or projections *b'* on the movable jaw, and extending at the other end into proximity with the handle portion of the frame A.

The movable jaw may be independently adjusted into position, so that it, with the fixed jaw, may grip pipes or other round articles of different sizes. The lever C may, after any adjustment of the movable jaw, engage with one of the teeth or projections *b'* on the heel of the movable jaw, and if the lever be then grasped with the hand which holds the handle portion of the frame of the wrench the movable jaw may be securely and rigidly held in position. If the force applied to the lever be relaxed, the movable jaw may be swung backward. It will be observed that the lever C does not operate to adjust the jaw B. The lever may be oscillated far enough to be entirely disengaged from the movable jaw, so as to leave the latter free to be swung in either direction into a new position. After adjustment the lever will be re-engaged with the movable jaw.

To adapt the wrench for work in all positions, it may be desirable to combine with the movable jaw a spring D. I have shown this spring as forked, so as to straddle the lever C, and as being secured at the forked portion to the bifurcated portion of the wrench-frame in which the movable jaw is secured. The spring bears upon the back of the movable jaw, pressing it toward the fixed jaw. A spring E is shown as arranged between the lever and the handle. This may be used to swing the lever in a direction to automatically disengage it from the movable jaw.

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

1. A wrench having, in combination, a fixed jaw, an adjustable jaw provided on the heel or rear portion with teeth or projections, and a lever which may be swung into or out of engagement with said movable jaw, substantially as and for the purpose specified.

2. A wrench having, in combination, a fixed jaw, an independently-adjustable jaw provided on the heel or rear portion with teeth or projections, a spring for pressing the movable jaw toward the fixed jaw, and a lever

which may be swung into or out of engagement with the said movable jaw and holding the same rigidly, substantially as specified.

3. A wrench having, in combination, a fixed jaw, a movable jaw provided on the heel or rear portion with teeth or projections, a lever which may be swung into or out of engagement with said movable jaw, holding the jaw as adjusted, and a spring serving to oscillate said lever in such direction as to disengage it from the movable jaw, substantially as and for the purpose specified.

BENJAMIN G. BERRIEN, JR.

Witnesses:
C. S. BURNHAM,
JOHN C. STILWELL.