No. 675,008. Patented May 28, 1901.

G. JOHNSON.

WRENCH.

(Application filed Feb. 25, 1901.)

(No Model.)

Fig. 1.

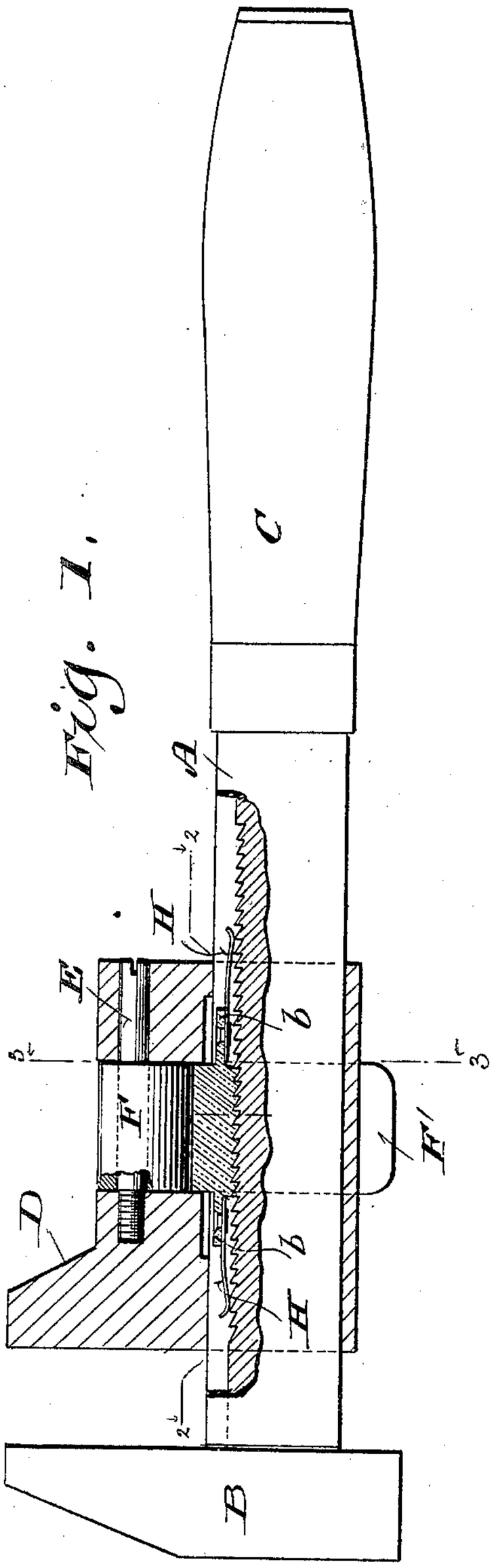


Fig. 3.

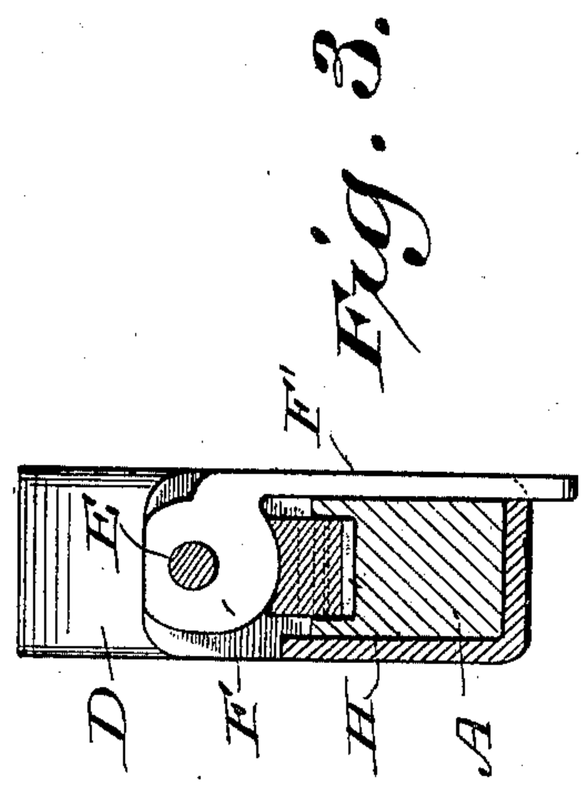
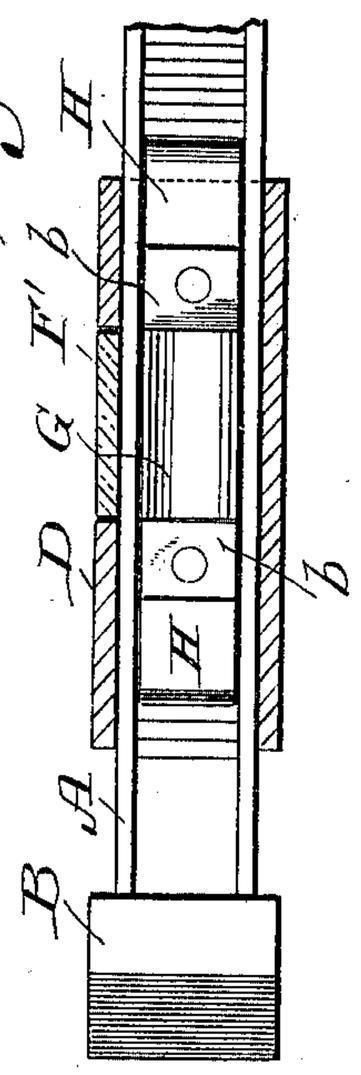


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE JOHNSON, OF SHEBOYGAN, WISCONSIN.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 675,008, dated May 28, 1901.

Application filed February 25, 1901. Serial No. 48,655. (No model.)

To all whom it may concern:

Be it known that I, GEORGE JOHNSON, a citizen of the United States, and a resident of Sheboygan, in the county of Sheboygan and State of Wisconsin, have invented certain new and useful Improvements in Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide simple, economical, strong, durable, and readily-adjustable wrenches of the sliding-jaw type, said invention consisting in what is hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a side view of one of my improved wrenches, partly in longitudinal section; Fig. 2, a plan view of a portion of the wrench, partly in horizontal section, this view being indicated by lines 2 2 in the first figure, and Fig. 3, a transverse sectional view of said wrench as indicated by lines 3 3 in said first figure.

Referring by letter to the drawings, A indicates the stock, and B a jaw, of my improved wrench, the two being rigid one with the other and preferably in one piece. The working face of jaw B will be made smooth when the herein-described tool is made to constitute a nut-wrench; but when said tool is designed for use as a pipe-wrench said face of the jaw will be serrated to facilitate grip.

One edge of the tool-stock is herein shown as being longitudinally channeled between jaw B and a handle C on said stock at the end thereof farthest from said jaw. The face of the stock within the channel is serrated to form a rack, the teeth of which are preferably inclined toward jaw B, as herein shown. Arranged to slide on the stock between jaw B and handle C is another jaw D, the working face of which is made to conform to that of jaw B accordingly as the tool is designed for use as a nut or pipe wrench. Sliding jaw D is a block having a longitudinal opening therein engaged by the stock A, and this opening is intercepted by a transverse recess in said block.

A pivot-screw E is arranged in the sliding jaw longitudinally of the same, and loose on this pivot-screw within the recess of said jaw is a cam F, having a lever-shank F′, preferably in one piece therewith. When the cam is in working position, its lever-shank lies close against a side of the tool-stock in a side recess of the sliding jaw flush with the same, and said shank is preferably long enough to extend past said tool-stock when swung alongside of same, whereby manipulation of the cam is facilitated.

Engageable with the tool-stock rack under pressure of cam F is a rack-faced block G, having end ears *b*, to which the inner extremities of spring-plates H are riveted or otherwise rigidly connected, the outer extremities of these spring-plates being impinged against said tool-stock rack. Lever F′ being swung up to relieve pressure of cam F on block G, the spring-plates H arch themselves to lift said block clear of the adjacent rack, after which jaw D is adjusted on the tool-stock to or from the rigid jaw B, according to the size of the nut, pipe, or other device to be gripped by the wrench. The adjustment of the sliding jaw having been thus readily effected, the lever F′ is swung down to operate cam F against block G and overcome resistance of springs *b*, whereby said block is locked in engagement with the tool-stock rack and said sliding jaw held in its adjusted position.

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

1. A wrench comprising a rack-edge stock and a fixed jaw therewith, a sliding jaw consisting of a block provided with an outside transverse recess, a longitudinal opening and an inside transverse recess intercepting said opening; a lever-controlled cam pivoted in the inner recess of the sliding jaw, a loose rack-block arranged to engage the stock-rack under pressure of the cam, and spring-plates in connection with the rack-block to impinge said stock-rack, the cam-lever being engaged with the outer recess of said sliding jaw when the engagement of said block and stock is effected.

2. A wrench comprising a rack-edge stock and a fixed jaw therewith, a sliding jaw consisting of a block provided with an outside transverse recess intercepting said opening; a lever-controlled cam pivoted in the inner recess of the sliding jaw, a loose rack-block arranged to engage the stock-rack under

pressure of the cam, the cam-lever being engaged with the outside recess of said sliding jaw when the engagement of said block and stock is effected, ears extending from ends of the rack-block, and spring-plates made fast to the block-ears to impinge against said stock-rack.

In testimony that I claim the foregoing I have hereunto set my hand, at Sheboygan, in the county of Sheboygan and State of Wisconsin, in the presence of two witnesses.

GEORGE JOHNSON.

Witnesses:
PHILIP J. MUTH,
NILS KJELSON.