

No. 808,801.

PATENTED JAN. 2, 1906.

R. ADAMS.  
PIPE WRENCH.

APPLICATION FILED MAR. 7, 1905.

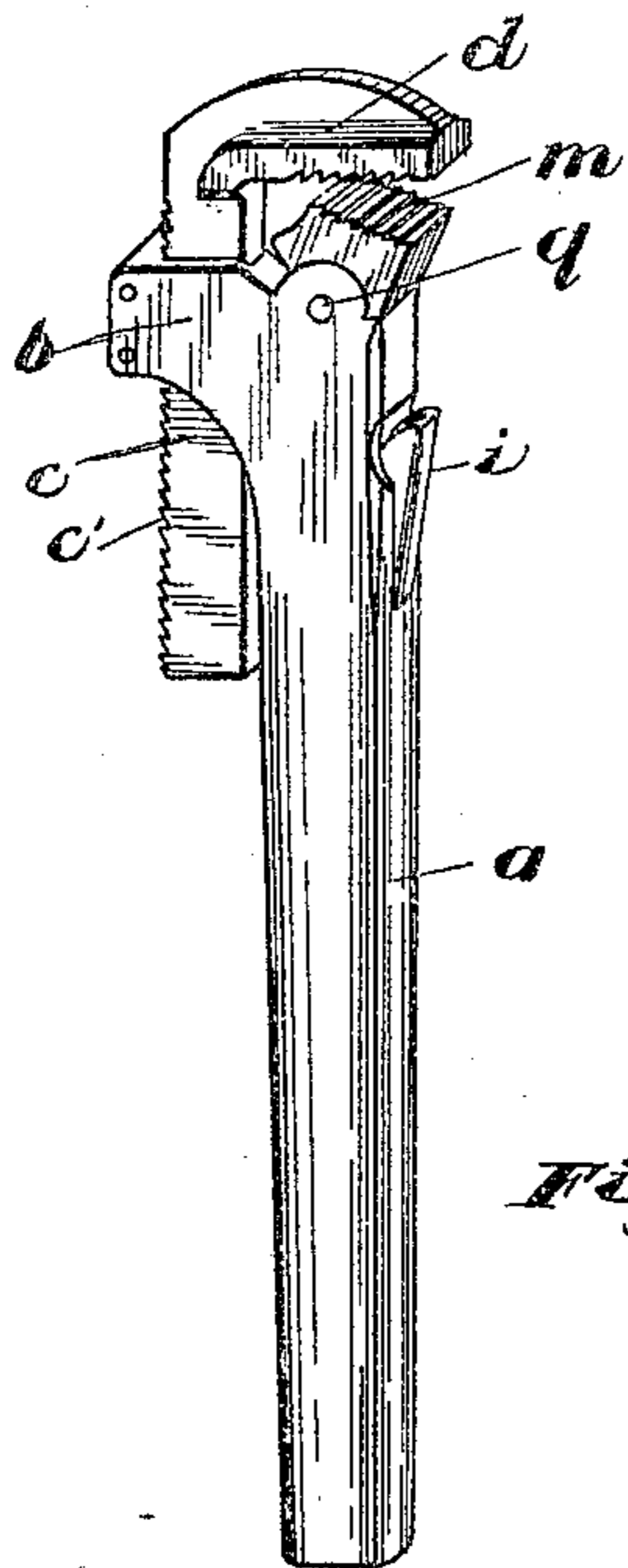


Fig. 1.

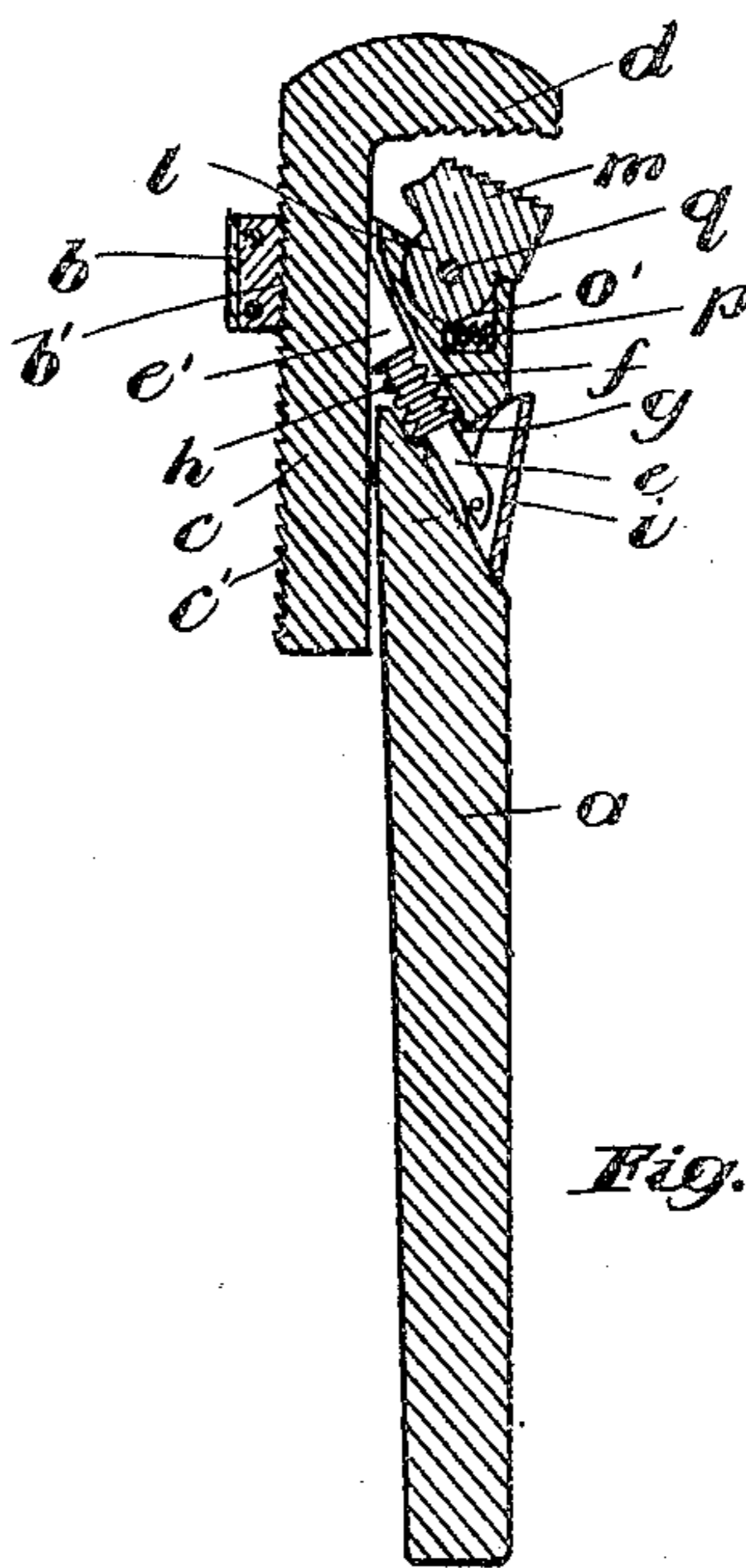


Fig. 2.

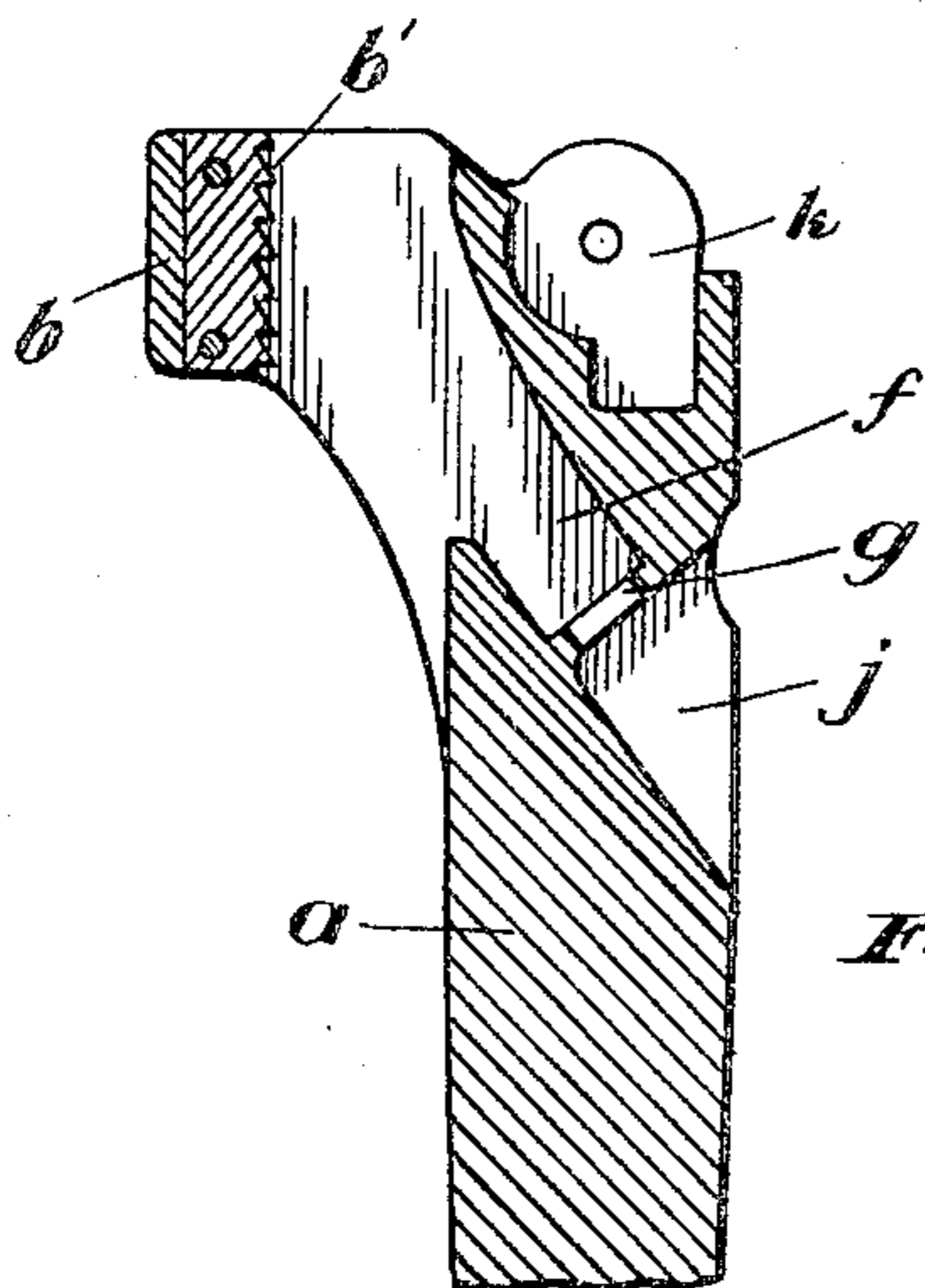


Fig. 3.

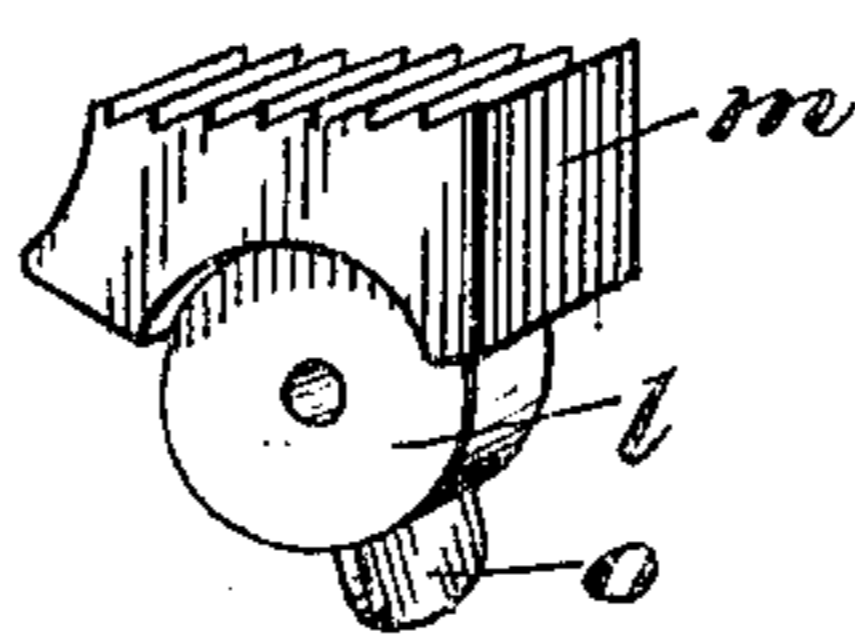


Fig. 4.

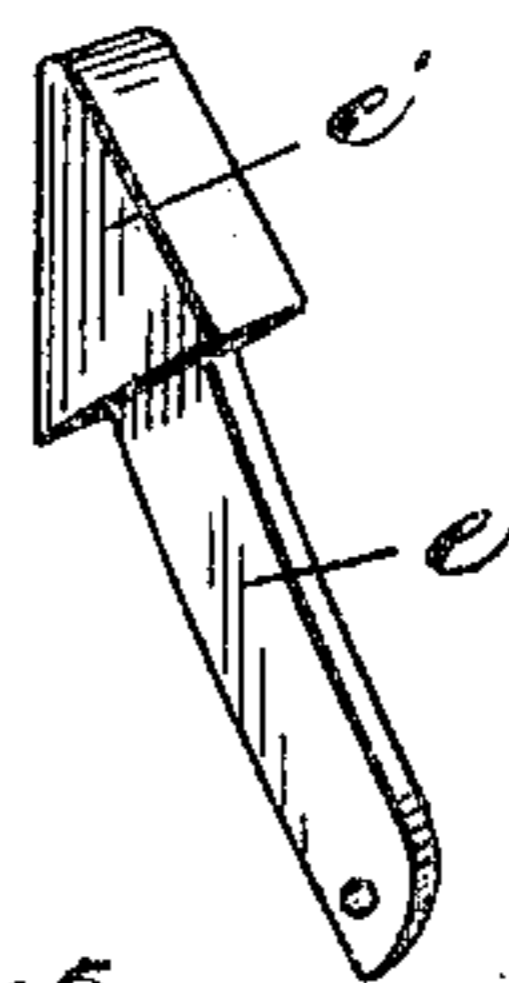


Fig. 5.



Fig. 6.

Witnesses.

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# UNITED STATES PATENT OFFICE.

RICHARD ADAMS, OF TORONTO, CANADA.

## PIPE-WRENCH.

No. 808,801.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed March 7, 1905. Serial No. 248,948.

*To all whom it may concern:*

Be it known that I, RICHARD ADAMS, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Pipe-Wrenches; and I hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to certain new and useful improvements in that class of pipe-wrenches having a movable jaw held in its adjusted position by a detent-rack, assisted by the action of a spring-tensioned locking-plunger; and it relates more particularly to the peculiar construction and operation of the movable jaw and locking-plunger and to the oscillating action of the fixed jaw coöperating with the movable jaw to bite the work.

In carrying out the invention the body portion of the wrench is made with a longitudinally-apertured offset having one of its inner faces serrated to engage with the serrated face of the shank for the movable jaw. This shank is arranged to move longitudinally through the apertured offset as the jaw is adjusted and is of a lesser width than the width of the aperture, so that it will have a limited lateral movement therein to enable its serrated face to disengage itself from the serrated face of the offset, so that it may move freely in either direction as the movable jaw is adjusted to the fixed jaw.

The invention also relates to a spring-tensioned locking-plunger contained within a corresponding chamber in the body portion to engage the adjacent face of the shank and position it to enable the serrations to engage and hold it in such position until the pressure of the locking-plunger is released, and the invention further relates to the peculiar construction and operation of the fixed jaw, which is arranged to oscillate from its normal position to its operative position during the use of the wrench and is returned from its operative to its normal position by the action of a tension-spring, as hereinafter more fully set forth, and more particularly pointed out in the claims.

For a full understanding of the invention reference is to be had to the following description and to the accompanying drawings, in which—

Figure 1 is a perspective view of the wrench, showing the fixed and movable jaws. Fig. 2 is a longitudinal section of the same. Fig. 3 is a sectional view of a part of the body por-

tion, showing it stripped of the fixed and movable jaws and locking-plunger for the movable jaw. Fig. 4 is a perspective view of the fixed jaw. Fig. 5 is a perspective view of the locking-plunger. Fig. 6 is a perspective view of the trigger for the locking-plunger.

Like letters of reference refer to like parts throughout the specification and drawings.

*a* represents the body portion of the pipe-wrench, which has at one end an offset *b*, longitudinally apertured to receive the shank *c* of the movable jaw *d*, which is longitudinally movable through the apertured offset and slightly less in width than the aperture, so that it may have a limited lateral movement to enable its serrations to disengage themselves from the serrated face of the offset during its longitudinal movement. The inner face *b'* of the offset *b* is serrated to intermesh with the serrations *c'* on the adjacent face of the shank *c* when the shank is pressed against the face *b'* by the spring-tensioned locking-plunger *e*. The locking-plunger *e* is contained in an obliquely-disposed chamber *f*, formed in the adjacent part of the body portion *a*, so that its head *e'* will be positioned to normally engage the adjacent side of the shank *c* when contained in the apertured offset. In the chamber *f* is an annular shoulder *g*, forming an abutment for the tension-spring *h*, which bears against it and against the head *e* of the locking-plunger to press the locking-plunger against the shank of the movable jaw and position the movable jaw so that the serrations *c'* will interlock with the serrated face *b'* to enable the serrations to securely hold the jaw in its adjusted position. To the outer end of the locking-plunger is pivoted a trigger *i*, contained in a recess *j* at the outer end of the chamber *f*. By pressing the upper end of the trigger inward or toward the body portion *a* the locking-plunger *e* is actuated to release the pressure of its head against the shank of the movable jaw, so that the shank can be displaced laterally to allow of the disengagement of the serrations to permit of the shank and movable jaw being moved in either direction to effect the adjustment of the movable jaw to the fixed jaw.

Formed in the end of the body portion *a* opposite the movable jaw *d* is a recess *k*, in which is contained the shank *l* of the fixed jaw *m*, and depending from the shank *l* is a lug *o*, against which bears a tension-spring *p* to normally hold the fixed jaw in the position shown in Figs. 1 and 2. Passing through

the body portion  $a$  and the shank  $l$  is a pivot-pin  $q$ , upon which the fixed jaw oscillates during the use of the wrench.

In the use of the wrench the movable jaw is adjusted relatively to the fixed jaw by releasing the pressure of the locking-plunger against the shank, so that its serrations may be displaced laterally from engagement with the serrated face of the offset to allow of the shank moving freely in either direction. When the movable jaw has been properly adjusted, the locking-plunger is allowed to return to its normal position to press the serrated face of the shank into engagement with the serrated face of the offset, so that the shank and movable jaw will be securely held in their adjusted position. When the movable jaw has been adjusted relatively to the fixed jaw to insure both jaws obtaining a secure bite upon the work, the rotation of the wrench will cause the fixed jaw to oscillate upon the pin  $q$ , so that its face will move into a plane approximately parallel with the face of the stationary jaw.

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

1. A pipe-wrench comprising a body portion having at one end an apertured offset with one of its inner faces serrated and a transversely - disposed chamber extending from the aperture of the offset to the opposite side of the body portion, a movable jaw having a shank with a serrated face to engage with the serrated face of the offset, a spring-tensioned plunger slidable in said chamber to engage said shank, a trigger to actuate the plunger and a fixed jaw for the body portion opposed to the movable jaw.

2. A pipe-wrench comprising a body portion having at one end an apertured offset with one of its inner faces serrated and a transversely - disposed chamber extending from the aperture of the offset to the opposite side of the body portion, a movable jaw having a shank with a serrated face to engage with the serrated face of the offset, an annular shoulder in said chamber, a plunger slidably movable in said chamber and through the annular shoulder, a tension-spring engaging

said shoulder and plunger to press its head against the shank of the movable jaw, a trigger to actuate the plunger and a fixed jaw for the body portion opposed to the movable jaw.

3. A pipe-wrench comprising a body portion having at one end an apertured offset with one of its inner faces serrated and a transversely - disposed chamber extending from the aperture of the offset to the opposite side of the body portion, a movable jaw having a shank with a serrated face to engage with the serrated face of the offset, a spring-tensioned plunger slidable in said chamber to engage said shank, a trigger to actuate the plunger, a fixed jaw for the body portion opposed to the movable jaw having a rocker contained in a corresponding recess in the adjacent end of the body portion, a lug for the rocker, a tension-spring contained within an extension of said recess engaging said lug and body portion and a rocker-pin passing through the body portion and rocker.

4. A pipe-wrench comprising a body portion having at one end an apertured offset with one of its inner faces serrated and a transversely - disposed chamber extending from the aperture of the offset to the opposite side of the body portion, a movable jaw having a shank with a serrated face to engage with the serrated face of the offset, an annular shoulder in said chamber, a plunger slidably movable in said chamber and through the annular shoulder, a tension-spring engaging said shoulder and plunger to press its head against the shank of the movable jaw, a trigger to actuate the plunger, a fixed jaw for the body portion opposed to the movable jaw, having a rocker contained in a corresponding recess in the adjacent end of the body portion, a lug for the rocker, a tension-spring contained within an extension of said recess engaging said lug and body portion, and a rocker-pin passing through the body portion and rocker.

Toronto, March 2, A. D. 1905.

RICHARD ADAMS.

In presence of—

L. FLORELLA BROCK,

H. L. TRIMBLE.