

No. 667,449.

Patented Feb. 5, 1901.

L. C. McCARTY.

WRENCH.

(Application filed May 12, 1900.)

(No Model.)

Fig. 1.

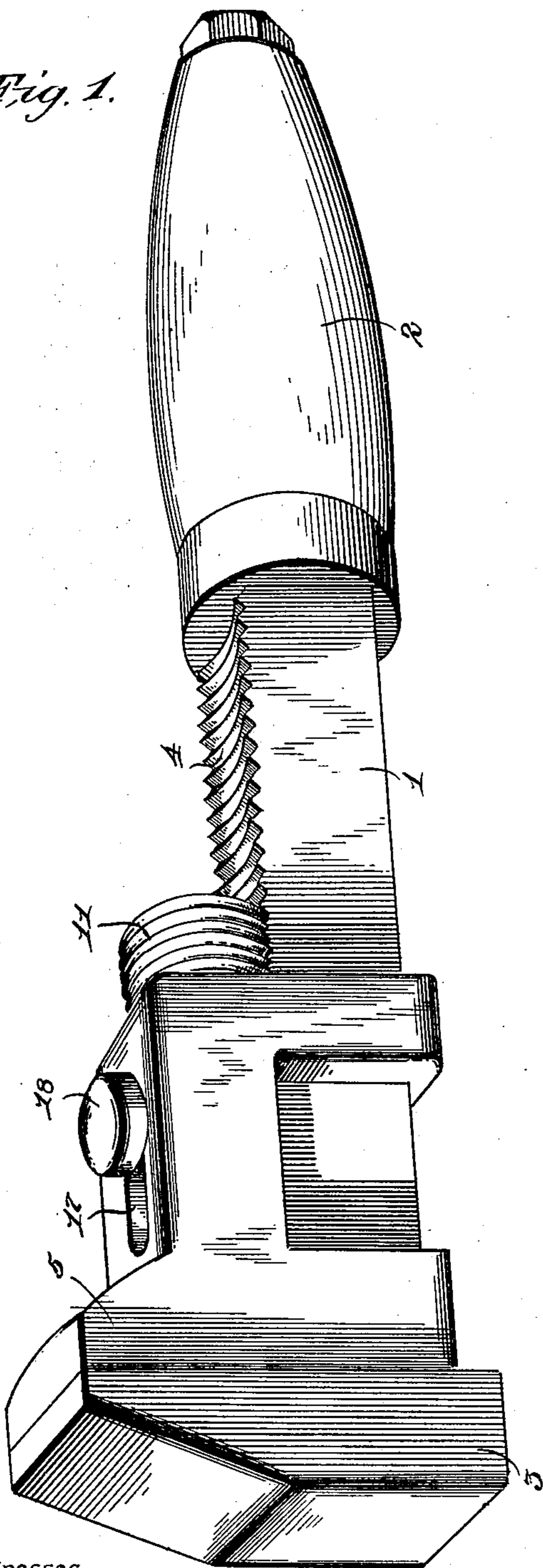
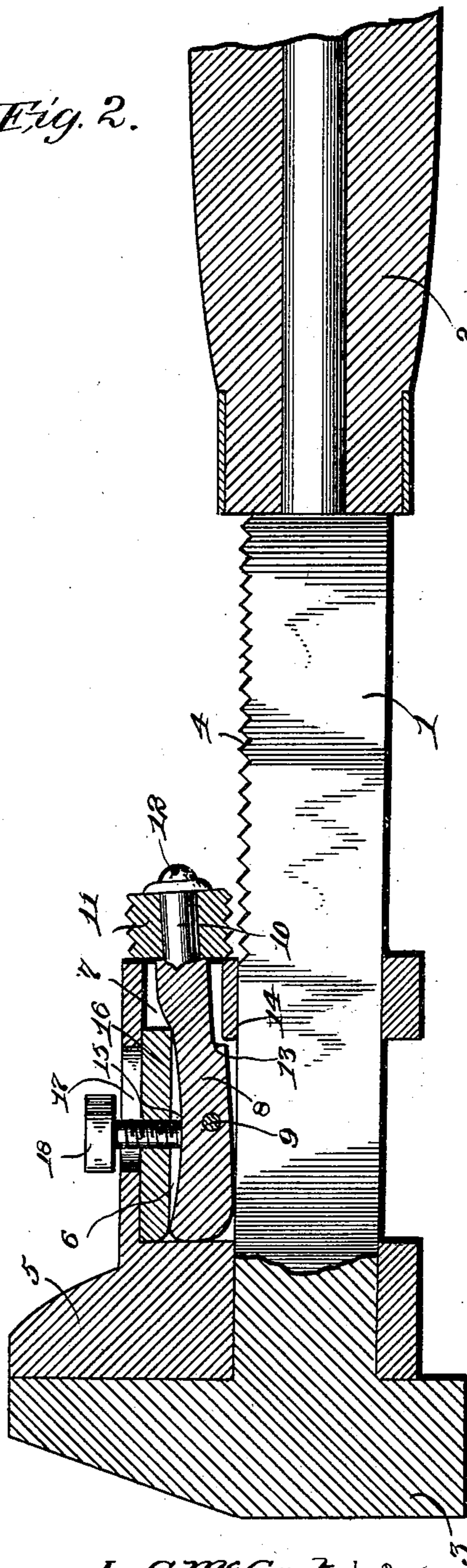


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

LEWIS C. McCARTY, OF MEMPHIS, TENNESSEE, ASSIGNOR TO GEORGE P. MELCHIOR AND THOMAS L. JONES, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 667,449, dated February 5, 1901.

Application filed May 12, 1900. Serial No. 16,487. (No model.)

To all whom it may concern:

Be it known that I, LEWIS C. McCARTY, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to sliding-jaw wrenches which employ a rack and pinion for adjusting the slidable jaw longitudinally upon the shank of the wrench.

One object of the invention is to provide improved means for throwing the pinion into and out of engagement with the rack, so that both a quick and a close adjustment of the slidable jaw may be had. It is furthermore designed to provide an operating device for adjusting the pinion, and also to locate such operating device in convenient reach, and finally to house all of the movable parts of the device within the movable jaw.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a wrench constructed in accordance with the present invention. Fig. 2 is a central longitudinal sectional view thereof.

Corresponding parts in both figures of the drawings are designated by like characters of reference.

Referring to the accompanying drawings, 1 designates the shank of the wrench, which is provided at one end with the usual handle 2 and at the opposite end thereof with the fixed jaw 3, the inner edge of the shank being provided with a screw-threaded rack 4. Slidably embracing the shank is the movable jaw 5, which is provided with a socket 6, so as to expose the rack upon the shank and to form a hollow jaw. In the inner end of the jaw there is provided a longitudinal slot 7 to af-

ford an entrance into the interior of the jaw. Housed within the hollow jaw is a rock bar or arm 8, which is supported intermediate of its ends upon a pivot-pin 9, which extends through the opposite sides of the jaw. The outer end of the arm projects outwardly through the slot or opening 7 and is provided with a cylindrical stem or shank 10, upon which is mounted an exteriorly-screw-threaded pinion 11, the latter being held in place by means of a suitable headed fastening 12, set into the outer end of the stem. Between the stem and the pivot-pin the inner edge of the rock bar or arm is provided with a notch 13 to receive the shoulder 14 on the inner side of the jaw formed by the entrance slot or opening 7. The width of the arm is less than that of the socket, and the outer face of the arm is concaved, as at 15, or beveled longitudinally and inwardly in opposite directions to slidably receive the adjusting block or slide 16, which is located between the outer face of the arm and the opposite wall of the socket. It will now be seen that by sliding the block longitudinally the arm may be caused to rock upon its pivot, and thereby throw the screw-threaded pinion into and out of engagement with the rack upon the shank.

To facilitate the operation of the slidable block, the outer face of the movable jaw is provided with a longitudinal slot 17 for the reception of a set-screw 18, the head of which is upon the outer side of the jaw, and the screw-threaded shank passes inwardly through the slot and into a screw-threaded perforation in the slidable block, whereby the set-screw forms a finger-piece for conveniently operating the slidable block.

When it is desired to move the slidable jaw quickly upon the shank, the set-screw or finger-piece 18 is pushed forwardly, thereby carrying the slide 16 forward and against the beveled or inclined front end of the rock-arm, thereby rocking the latter and throwing the opposite end thereof and the pinion out of engagement with the rack, as plainly illustrated in Fig. 2 of the drawings, whereby the jaw is free to be slid longitudinally of the shank. By a reverse movement or adjustment of the finger-piece the slide may be

caused to throw the pinion into engagement with the rack for a close adjustment of the slidable jaw.

It will be observed that at the opposite limits of the slidable block the set-screw is located at one side or the other of the pivotal support of the rock-arm and the perforation in the block extends entirely through the same, so that the set-screw may be set directly against the rock-arm to hold the latter in a fixed position, and thus effectively hold the pinion in or out of engagement with the rack.

What is claimed is—

1. A wrench, comprising a shank, a fixed jaw, a slidable jaw, a rock-arm mounted upon the latter jaw, an adjusting device carried by the arm, and having an operative connection with the shank, and a slidable operating device for rocking the arm toward and away from the shank.

2. A wrench, comprising a shank, a fixed jaw, a movable jaw, an oppositely-beveled rock-arm mounted upon the latter jaw, an adjusting device carried by the arm, and a slidable operating device working over the beveled faces of the rock-arm, to rock the latter toward and away from the shank.

3. A wrench, comprising a shank, a fixed jaw, a slidable jaw, having a socket, a rock-arm pivoted within the socket and provided with an adjusting device operatively connected to the shank, a slide mounted within the socket and working over the rock-arm to rock the latter toward and away from the shank, and an operating-stem carried by the slide and projecting outwardly through a slot in the slidable jaw.

4. A wrench, comprising a shank, a fixed jaw, a slidable jaw, a rock-arm mounted upon the latter jaw, an adjusting device carried by the arm and having an operative engagement with the shank, and means for fixedly locking the arm in its opposite positions.

5. A wrench, comprising a shank, a fixed jaw, a slidable jaw, a rock-arm pivoted intermediate of its ends upon the slidable jaw and movable toward and away from the shank, an adjusting device carried by one end of the rock-arm and having an operative engagement with the shank, and a locking device,

having alternate locking engagements with the arm at opposite sides of the pivot thereof.

6. A wrench, comprising a shank, a fixed jaw, a slidable jaw, a rock-arm pivoted intermediate of its ends upon the slidable jaw, an adjusting device carried by one end of the arm and having an operative engagement with the shank, and a locking device, which is slidable longitudinally of the arm, to engage the latter at opposite sides of the pivot thereof.

7. A wrench, comprising a shank, a fixed jaw, a slidable jaw, a rock-arm pivoted intermediate of its ends upon the slidable jaw, an adjusting device carried at one end of the arm, and having an operative engagement with the shank, a slide, which is movable longitudinally of the rock-arm, and operatively engaged therewith, and an operating set-screw fitting a screw-threaded perforation which extends entirely through the slide, and the set-screw being adjustable into engagement with the rock-arm.

8. A wrench, comprising a shank, having a screw-threaded rack, a fixed jaw, a slidable jaw, having a socket, a rock-arm pivoted intermediate of its ends within the socket, and having one end projecting outwardly through the open end of the socket, and also provided with an inwardly and oppositely beveled outer face, an externally-screw-threaded adjusting-pin mounted upon the projecting end of the arm and in threaded engagement with the rack on the shank, a slide working longitudinally over the beveled portion of the arm, and provided with an intermediate screw-threaded perforation that is located at opposite sides of the pivot of the arm at the opposite limits of the slide, and a set-screw engaging the perforation of the slide, extending outwardly through a slot in the slidable jaw, and also being adjustable into engagement with the rock-arm.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LEWIS C. McCARTY.

Witnesses:

R. J. MORROW,
FRANK SCHUMANN.