

H. A. PAQUETTE.  
WRENCH.

APPLICATION FILED JAN. 27, 1908.

Patented Feb. 2, 1909.

911,154.  
Fig. 1.

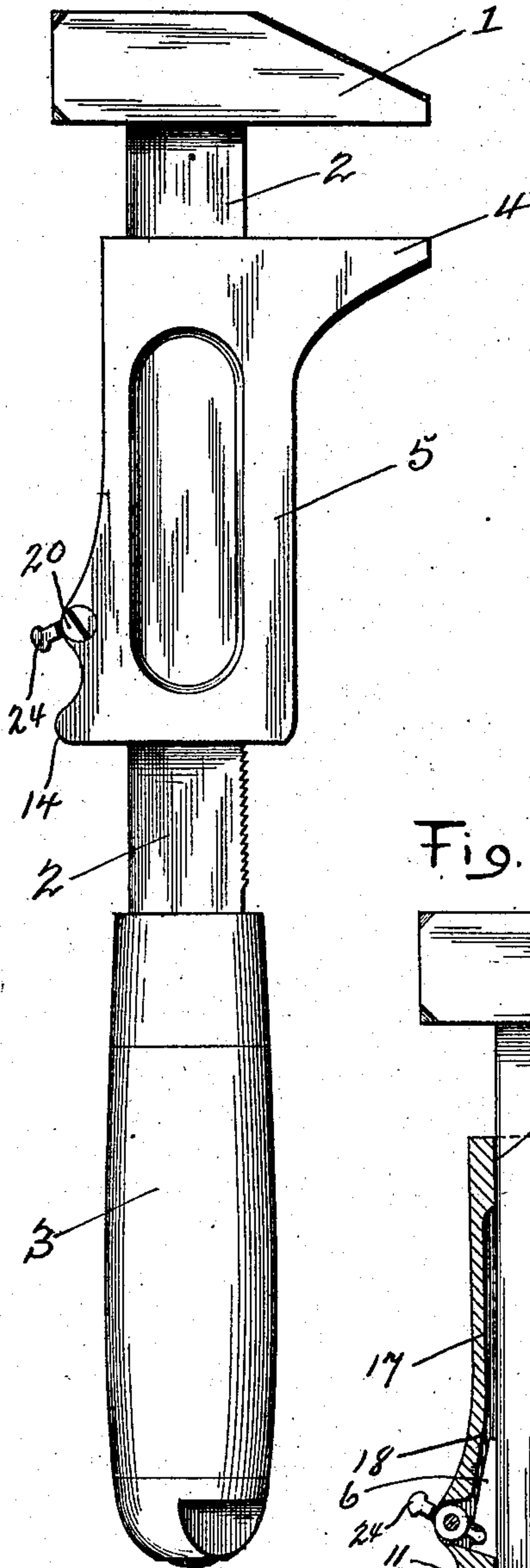


Fig. 2.

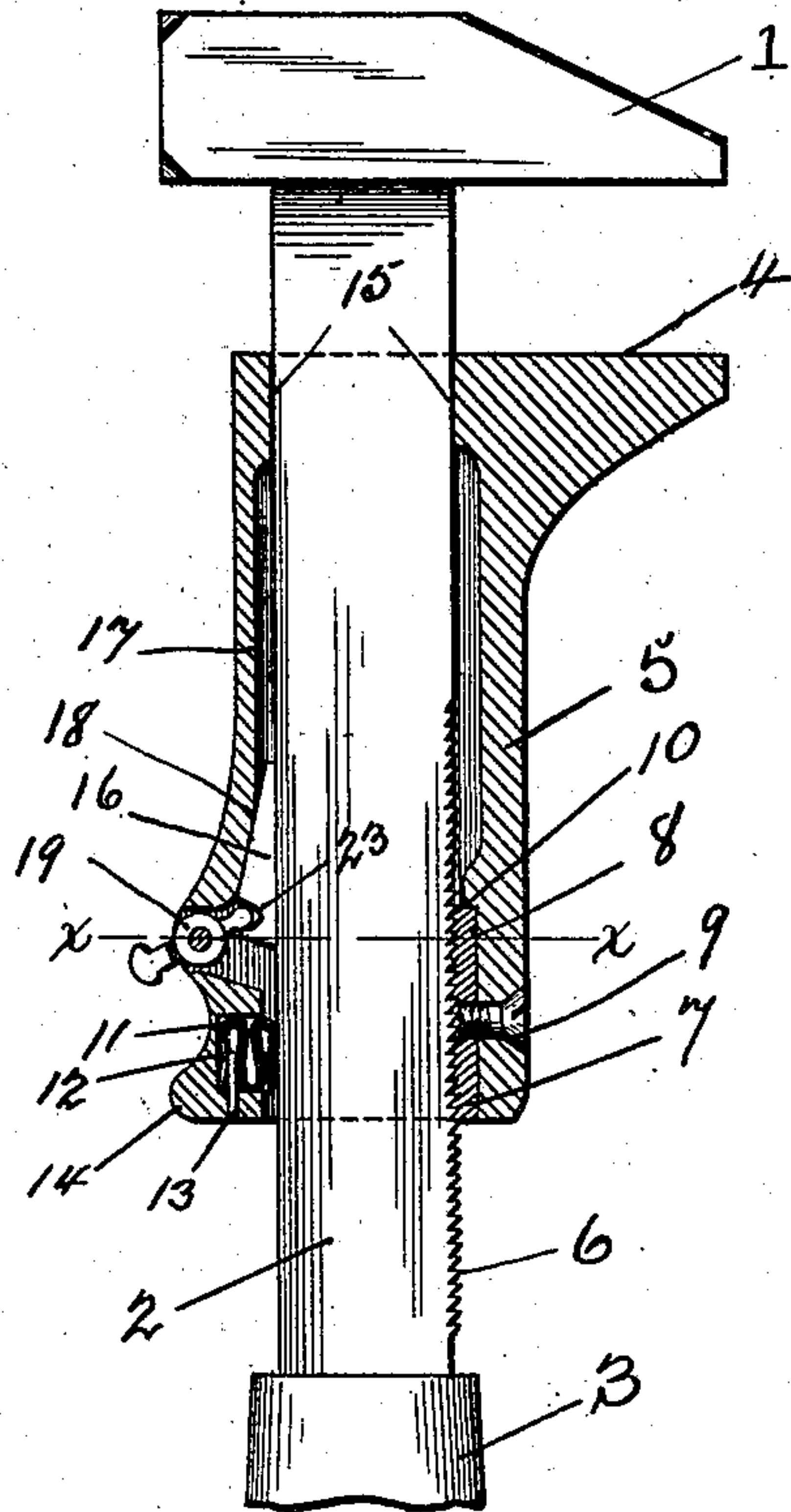


Fig. 3.

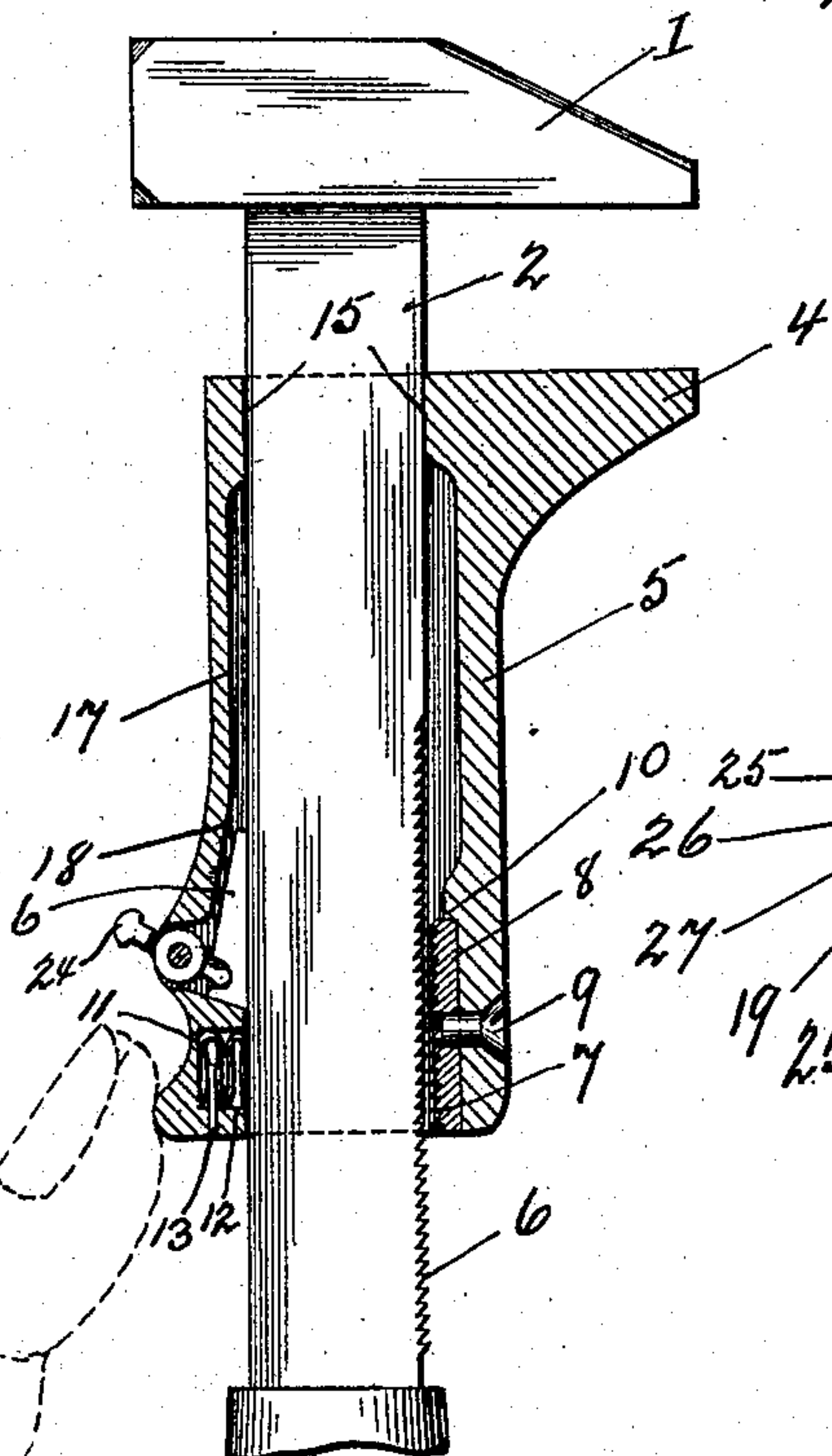
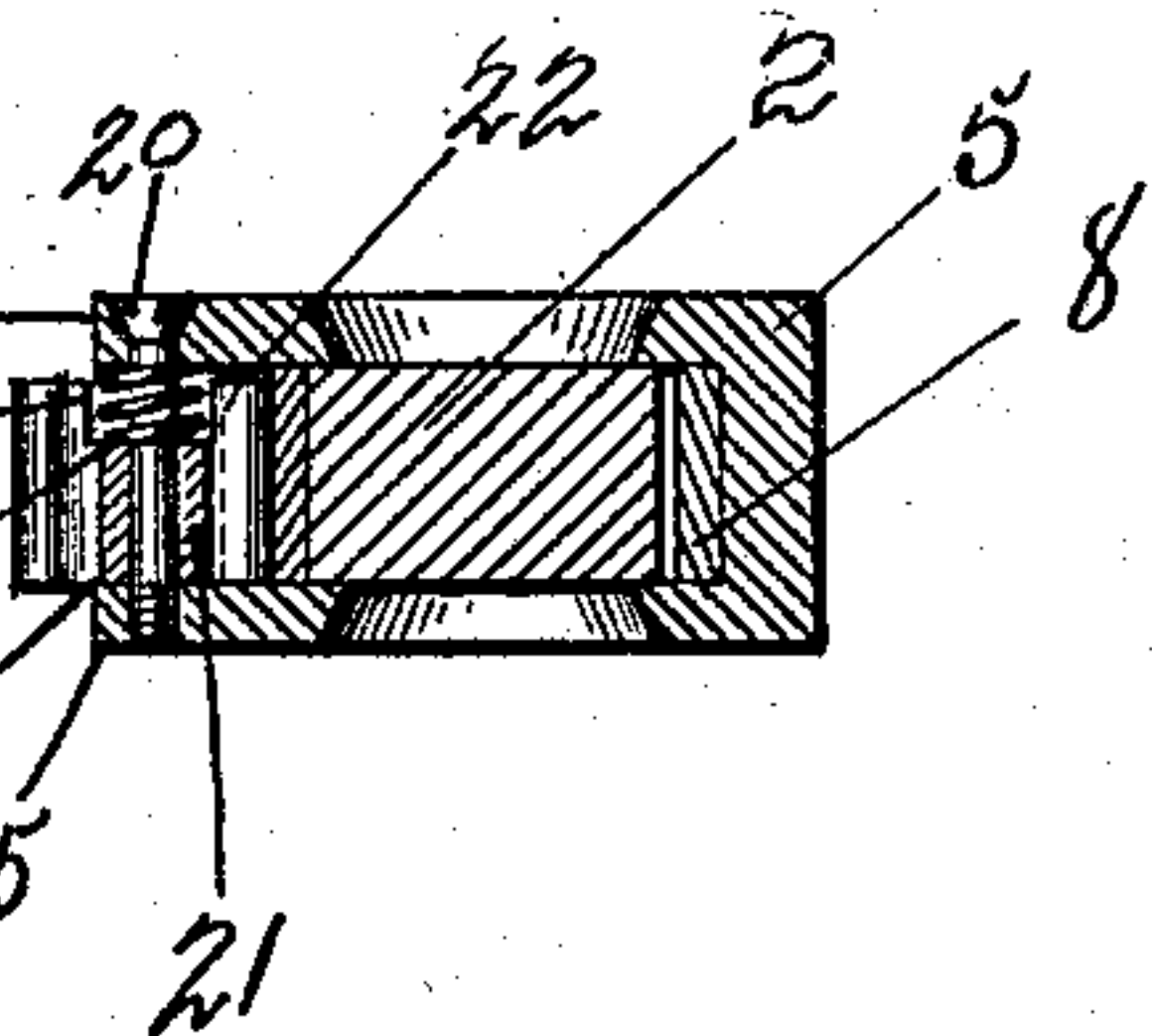


Fig. 4.



Witnesses:

H. S. Austin  
James R. Offield.

Inventor

Herman A. Paquette,  
by Offield, Towle & Luthicum.

Att'y's.



# UNITED STATES PATENT OFFICE.

HERMAN A. PAQUETTE, OF CHICAGO, ILLINOIS.

## WRENCH.

No. 911,154.

Specification of Letters Patent.

Patented Feb. 2, 1909.

Application filed January 27, 1908. Serial No. 412,836.

*To all whom it may concern:*

Be it known that I, HERMAN A. PAQUETTE, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to wrenches, and particularly to that class thereof characterized by a movable jaw slidably mounted upon the shank of a stationary jaw. It is usual in wrenches of this form, to provide a screw for adjusting the jaws, the screw also acting as a lock for the jaw. To adjust a wrench of this kind takes considerable time, and usually requires both hands.

The object of my invention is to provide a wrench wherein the movable jaw may be readily and quickly adjusted by sliding it longitudinally on the shank of the stationary jaw by a single movement of the thumb, and equip the same with means for quickly locking the jaw after having been set.

A further object of my invention is to provide a wrench as mentioned, which shall be of simple construction, strong and durable, and one which will not readily get out of order.

Other objects will appear hereinafter.

My invention consists generally in a wrench comprising a stationary jaw having a suitable shank, a movable jaw slidably mounted on said shank and adapted to be moved freely thereon, and means for locking said jaw against movement.

My invention further consists in a wrench comprising a stationary jaw having a suitable shank, a movable jaw slidably mounted on said shank and adapted to be moved freely thereon, co-acting locking faces upon said shank and said movable jaw, means normally holding said faces in yielding engagement, and means for positively locking said faces.

My invention further consists in various details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which;

Figure 1 is a side elevation of a wrench embodying my invention in its preferred

form, Fig. 2 is a longitudinal section through the movable head, the stationary head and the shank being shown in elevation, and the parts being shown positively locked. Fig. 3 is a similar view with the parts in unlocked position, illustrating the position they assume when the head is being moved longitudinally on the shank, and Fig. 4 is a cross-section on the line  $x-x$  of Fig. 2.

Referring to the drawings, 1 indicates the stationary head of the wrench fixed to the end of the shank 2, the said shank terminating in a suitable handle 3.

4 indicates the movable jaw. This is slidably mounted on the shank 2 and is provided with a sleeve 5 formed integrally therewith. The front edge of the shank 2 is provided with a notched or ratchet edge 6 and the contiguous face of the sleeve 5 is provided with a similar co-acting face 7 near its lower end. The ratchet face 7 is preferably formed upon a separate block 8 attached to the sleeve 5 by a screw 9.

10 indicates a lug or shoulder which bears against the block 8 relieving the screw 9 of the strain when the wrench is in operation. Directly opposite from the block 8 is a spring 11. This rests in a recess 12 formed in the inner face of the sleeve 5 and bears against the shank 2 normally holding the ratchet faces 6 and 7 in yielding engagement. The spring 11 is formed of a strip of flat spring metal bent into the shape shown and is held in the recess by a pin 13. The upper end of the sleeve fits the shank 2 quite snugly, the bearing faces 15 resting against the front and back edges of the shank. The inner front and back walls of the sleeve are cut away throughout the remainder of their length, permitting the sleeve to move sufficiently at its lower end to withdraw the serrations of the face 7 from the serrations of the face 6, or, in other words, to disengage the ratchet faces.

To adjust the jaw, it is but necessary to shove on the lower rear corner of the sleeve with the thumb as indicated in dotted lines in Fig. 3. This presses the ratchet faces out of engagement after which it is obvious that the jaw 4 and its sleeve are free to slide on the shank. When the jaw is in proper position, the thumb pressure on the end 14 of the sleeve is released and the spring 11 again brings the ratchet faces into engagement. It is obvious that on account of the



formation of the ratchet faces, the jaws may be closed without disengaging said faces; but to open the jaws it is necessary to disengage the faces as shown in Fig. 3. It is  
5 also obvious that so long as the ratchet faces remain in engagement the jaws are locked against opening. However, the spring 11 is not of sufficient strength to hold them in engagement when the wrench is in use,  
10 especially if any great strain is placed upon the handle. Consequently it is necessary to provide auxiliary locking means to prevent disengagement of the faces when in use. To this end, I provide a wedge shaped cam  
15 block 16 and form the rear wall 17 of the sleeve with the inclined inner face 18 for cooperation therewith. By sliding the block 16 upwardly or toward the jaws, the faces 6 and 7 are positively locked. To  
20 operate the block 16 I provide a lever 19 pivotally mounted on a pin 20 arranged adjacent to the thumb piece 14. The lever comprises a sleeve 21 suitably drilled to receive the pin 20, a cam portion 22 which en-  
25 gages a notch 23 in the block, and a thumb piece 24. The lever is mounted between the ears 25 on the sleeve 5 and is partly cut away as shown in Fig. 4 forming a recess 26 to accommodate a spring 27 interposed be-  
30 tween one of the ears 25 and the end of the sleeve 21. The spring 27 presses the opposite side of the lever against the adjacent lug 25 with sufficient force to prevent accidental displacement of the lever and the  
35 block 16. After the jaw 4 is in proper position the thumb piece 24 is drawn down by the thumb securely and positively locking the jaw against movement. When it is desired to again adjust the jaw, the thumb  
40 piece is thrown into the opposite direction, that is, in the position shown in Fig. 3, after which the jaw may be readily slid upon the shank as before.

Having described my invention what I  
45 claim as new and desire to secure by Letters Patent is:

1. A wrench comprising a stationary jaw having a suitable shank, in combination with a movable jaw slidably mounted on  
50 said shank and comprising the jaw proper and an integral sleeve, a ratchet face formed

on one edge of said shank and a co-acting ratchet face upon said sleeve at the opposite end from said jaw, said sleeve having a recess opposite said ratchet face, a spring 55 arranged in said recess and adapted to bear against said shank to hold said ratchet faces in yielding engagement, a wedge shaped cam block arranged between said shank and the rear wall of said sleeve, said wall 60 having an inclined portion for cooperating with said block, and means for moving said block to positively lock and unlock said ratchet faces as and for the purpose specified.

2. A wrench comprising a stationary jaw 65 having a suitable shank, in combination with a movable jaw having an integral sleeve and slidably mounted on said shank, a ratchet face formed on one edge of said shank and a co-acting ratchet face upon 70 said sleeve, a spring adapted to bear against said shank to hold said faces in yielding engagement, a wedge shaped cam block arranged between said shank and the walls of said sleeve, said walls having an inclined 75 portion for cooperation with said block, a lever mounted in said sleeve for moving said block to positively lock and unlock said ratchet faces and a spring bearing against said lever to prevent accidental dis- 80 placement thereof, substantially as described.

3. A wrench comprising a stationary jaw having a suitable shank, in combination with a movable jaw slidably mounted on said shank, and comprising the jaw proper 85 and a sleeve secured thereto, a ratchet face formed on one edge of said shank and a co-acting ratchet face upon said sleeve, a wedge shaped cam block arranged between said shank and the rear wall of said sleeve, said 90 wall having an inclined portion for cooperating with said block, means for moving said block to positively lock and unlock said ratchet faces, and a spring adapted to bear against said shank to hold said ratchet faces 95 in yielding engagement, as and for the purpose specified.

HERMAN A. PAQUETTE.

Witnesses:

JAMES R. OFFIELD,  
ALLEN W. MOORE.