

(No Model.)

E. J. JOHNSON.
WRENCH.

No. 599,844.

Patented Mar. 1, 1898.

Fig. 1.

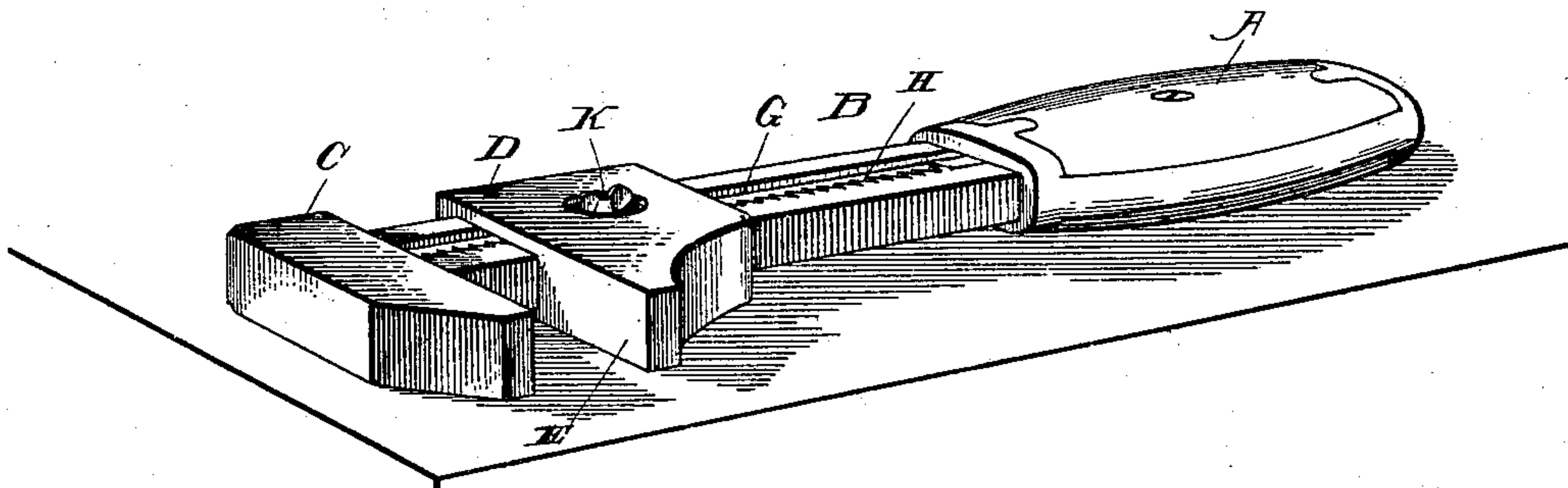


Fig. 2.

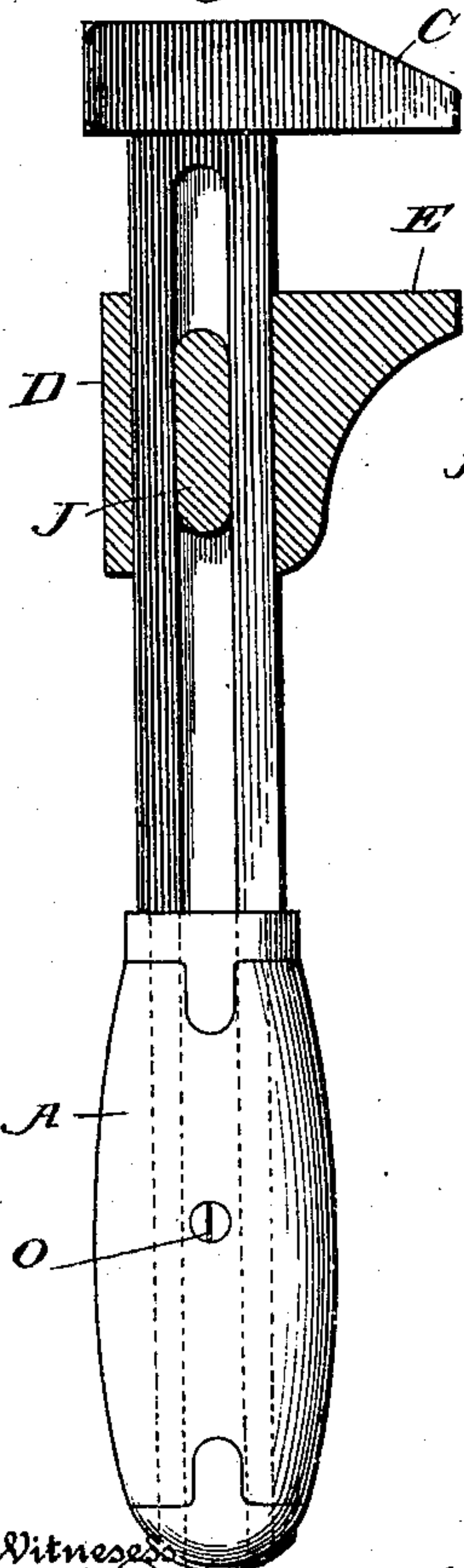


Fig. 5.

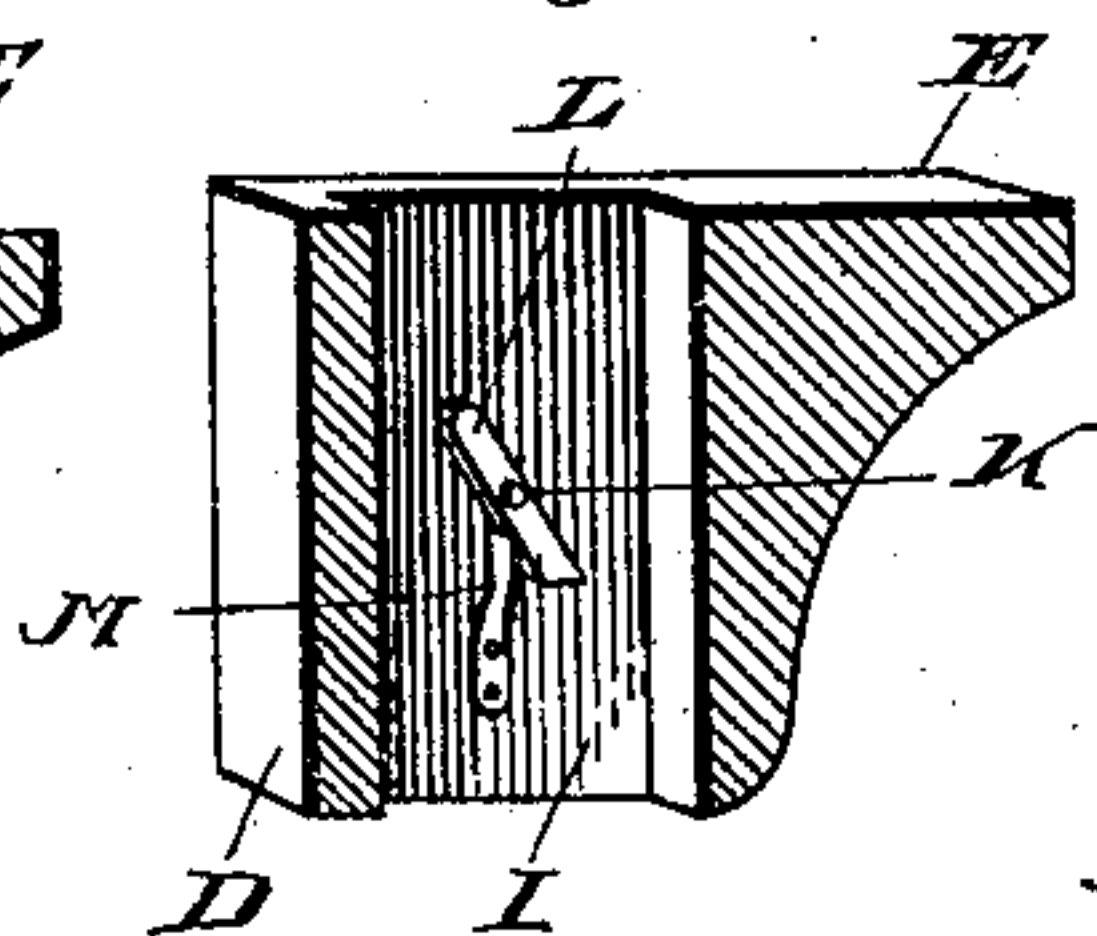


Fig. 4.

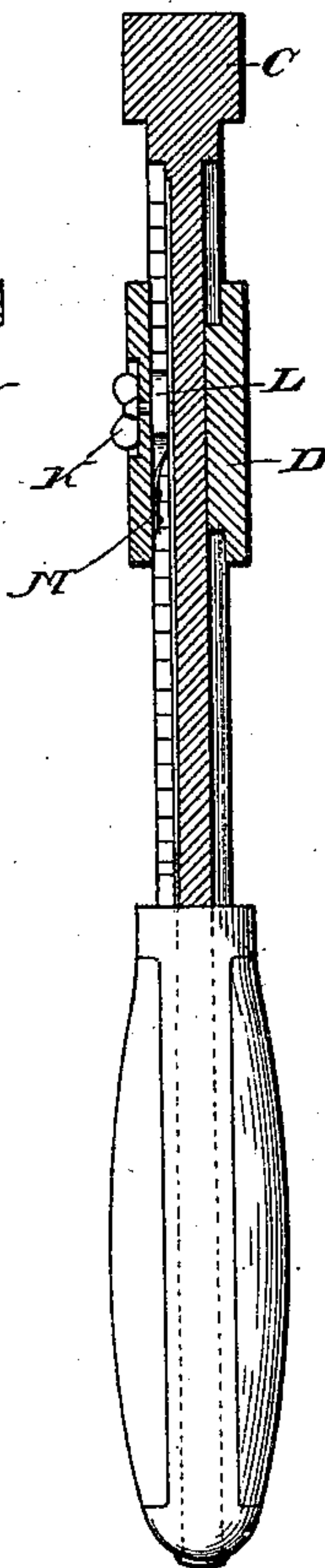


Fig. 3.

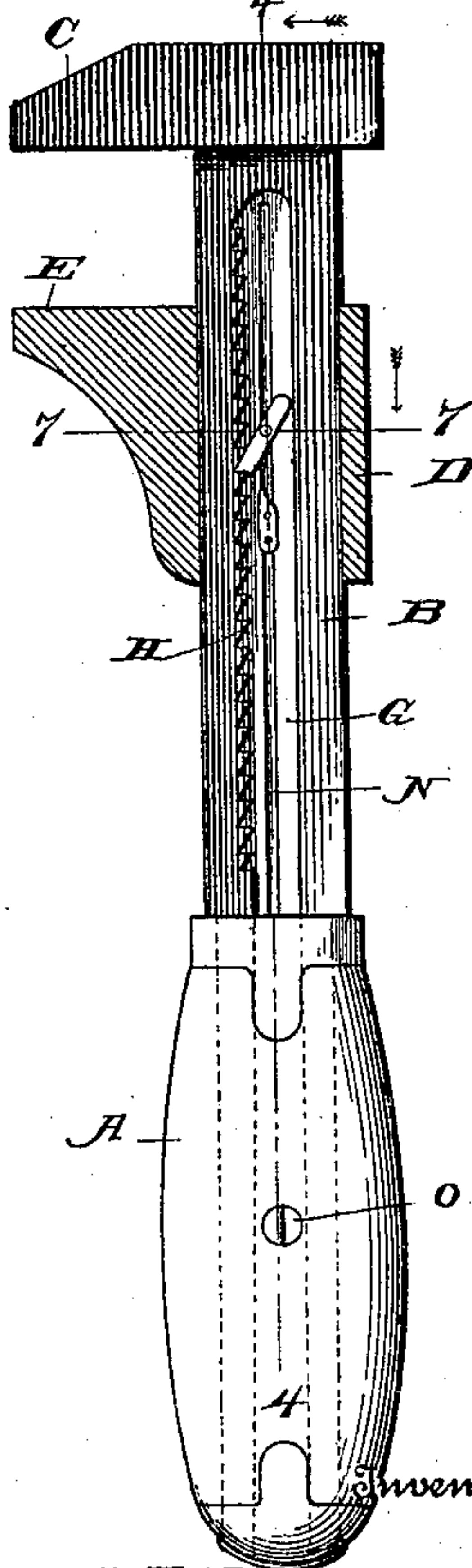


Fig. 6.

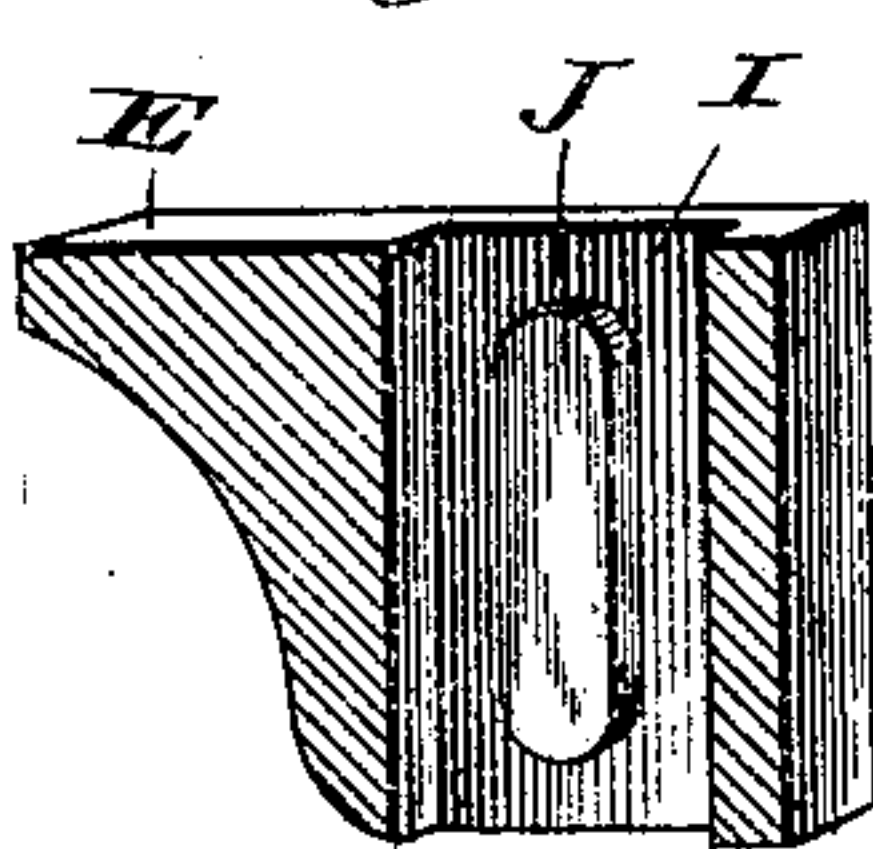
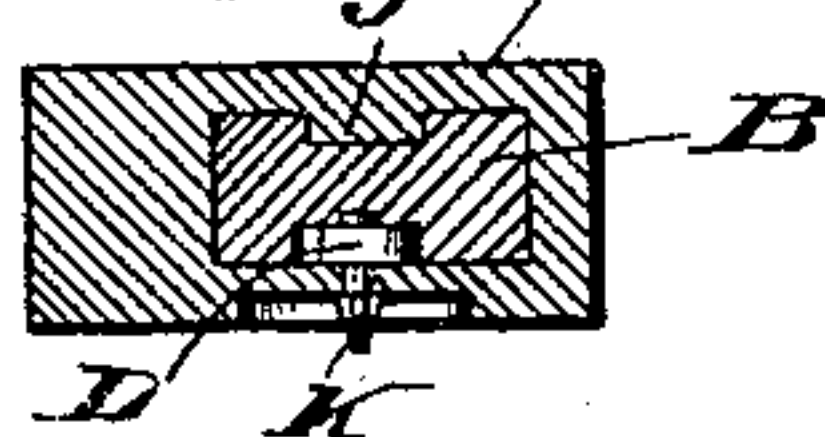


Fig. 7.



Witnesses:

J. F. Doyle

Chas. Brock

Edward J. Johnson.

By Omerat & Co. Attorneys

UNITED STATES PATENT OFFICE.

EDWARD J. JOHNSON, OF AUSTIN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ALEXANDER RAMBO, SR., OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 599,844, dated March 1, 1898.

Application filed October 14, 1897. Serial No. 655,124. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. JOHNSON, residing at Austin, in the county of Potter and State of Pennsylvania, have invented a new and useful Wrench; of which the following is a specification.

My invention relates to wrenches, and more particularly to that class of wrenches provided with a stationary and sliding jaw, known to the trade as "monkey-wrenches."

The object of my invention is to simplify and improve the construction of this class of wrenches, cheapen the cost of manufacture, and render them more reliable and durable.

With this object in view my invention consists in a monkey-wrench comprising a handle of any ordinary construction, a bar secured thereto supporting a fixed jaw at its outer end, said bar being longitudinally recessed and provided with ratchet-teeth on one side, a slide-block carrying a movable jaw and fitted to slide upon the bar which supports the fixed jaw, a pin provided with a handle of the form of a thumb-screw, projecting through a slide-block, and a spring-actuated pawl mounted on said pin inside of the slide-block to engage the ratchet-teeth of the bar to hold the slide-block and movable jaw in any desired adjustment, said spring-pawl being actuated from the outside by turning the pin by means of its handle.

My invention further consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the claims.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of a wrench constructed in accordance with my invention. Fig. 2 is a detail view illustrating the handle, the fixed jaw, and supporting-arm in elevation and the slide-block in section. Fig. 3 is a similar view of the opposite side of the parts illustrated in Fig. 2. Fig. 4 is a verti-

cal sectional view on the line 4 4 of Fig. 3, looking in the direction of the arrow. Fig. 5 is a detail perspective sectional view of the slide-block and movable jaw detached. Fig. 6 is a similar view on the same plane, looking in the opposite direction. Fig. 7 is a transverse sectional view taken on the plane indicated by the line 7 7 of Fig. 3, looking in the direction of the arrow.

Like letters of reference mark the same parts wherever they occur in the different figures of the drawings.

Referring to the drawings by letter, A is a handle of any ordinary construction, in which is secured a bar B, which supports and carries at its outer end the fixed jaw C of the wrench.

D is a block fitted to slide upon the bar B and carrying the movable jaw E of the wrench. The bar B is provided with a longitudinal recess on each side, (marked F and G,) one of the walls of the recess G being formed into ratchet-teeth H. The sliding block D is recessed at I to fit over bar B, an inwardly-projecting lug J being formed on the inside of one of the walls of the recess I to fit into and slide in the recess F in the bar B. A pin K, provided with a thumb-handle, is passed through the other wall of the recess I of the sliding block D and is provided on its inner end with a pawl L, a spring M, secured to the wall of the recess and bearing against said pawl, serving to hold its point normally in contact with the ratchet-teeth H in the recess G. The pin K projects through the pawl L and slides in a longitudinal groove N in the bottom of the recess G of the bar B.

To assemble the various parts of my improved monkey-wrench, the slide-block equipped with the pawl is passed onto the inner end of the bar B and slid into position, after which the handle A is secured in place on the bar B by means of a screw O or by any other suitable means.

In a wrench constructed in accordance with my invention the slide-block with the movable jaw may be freely moved toward the stationary jaw without manipulating the pawl, the point of the pawl sliding over the teeth H and engaging them *seriatim* to prevent the

backward movement of the movable jaw. When it is desired to move the slide-block and movable jaw away from the fixed jaw, the pin K is turned to take the point of the
 5 pawl L out of engagement with the teeth, when the slide-block may be freely moved in either direction. As soon as the pin K is released the spring M will force the point of the pawl into its normal engagement with the
 10 ratchet-teeth H.

A wrench constructed in accordance with my invention will be much stronger than one in which the bar B is slotted instead of recessed, and by provision of the lug I to snugly
 15 fit the recess F the movement of the movable jaw and its supporting slide-block is made more precise and the movable jaw prevented from wobbling. A shallow recess may be formed outside of the slide-block D to receive
 20 the thumb-head of the pin K to prevent it projecting very far beyond the surface of the block.

While I have illustrated and described the best means now known to me for carrying out
 25 my invention, I do not wish to be understood as restricting myself to the exact details of construction shown and described, but hold that any slight changes or variations, such as might suggest themselves to the ordinary mechanic,
 30 would properly fall within the limit and scope of my invention.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a monkey-wrench the combination of a 35
 bar carrying the fixed jaw and provided with a longitudinal recess in one side thereof, a slide-block carrying the movable jaw recessed to fit over and slide upon the bar B, said slide-block being provided with an elongated lug 40
 on the inside of one wall of its recess adapted to fit and slide in the recess in the side of the fixed jaw-bar, substantially as described.

2. In a monkey-wrench the combination 45
 with a bar carrying the fixed jaw and provided with longitudinal recesses in both sides, one of said recesses having both walls plain and the other having one of its walls formed into ratchet-teeth, of the slide-block carrying the fixed jaw recessed to fit and slide upon 50
 the bar, an elongated lug on the inside of one wall of the recess of the slide-block adapted to fit and slide in the plain recess of the fixed jaw, a thumb-headed pin projecting through the opposite wall of the recess of the fixed 55
 jaw, a pawl secured thereto on the inside, adapted to move in the toothed recess of the bar, and a spring engaging said pawl and holding its point normally in engagement with the ratchet-teeth, substantially as described. 60

EDWARD J. JOHNSON.

Witnesses:

AMBROSE H. SASSAMAN,
 FRANK E. BALDWIN.