

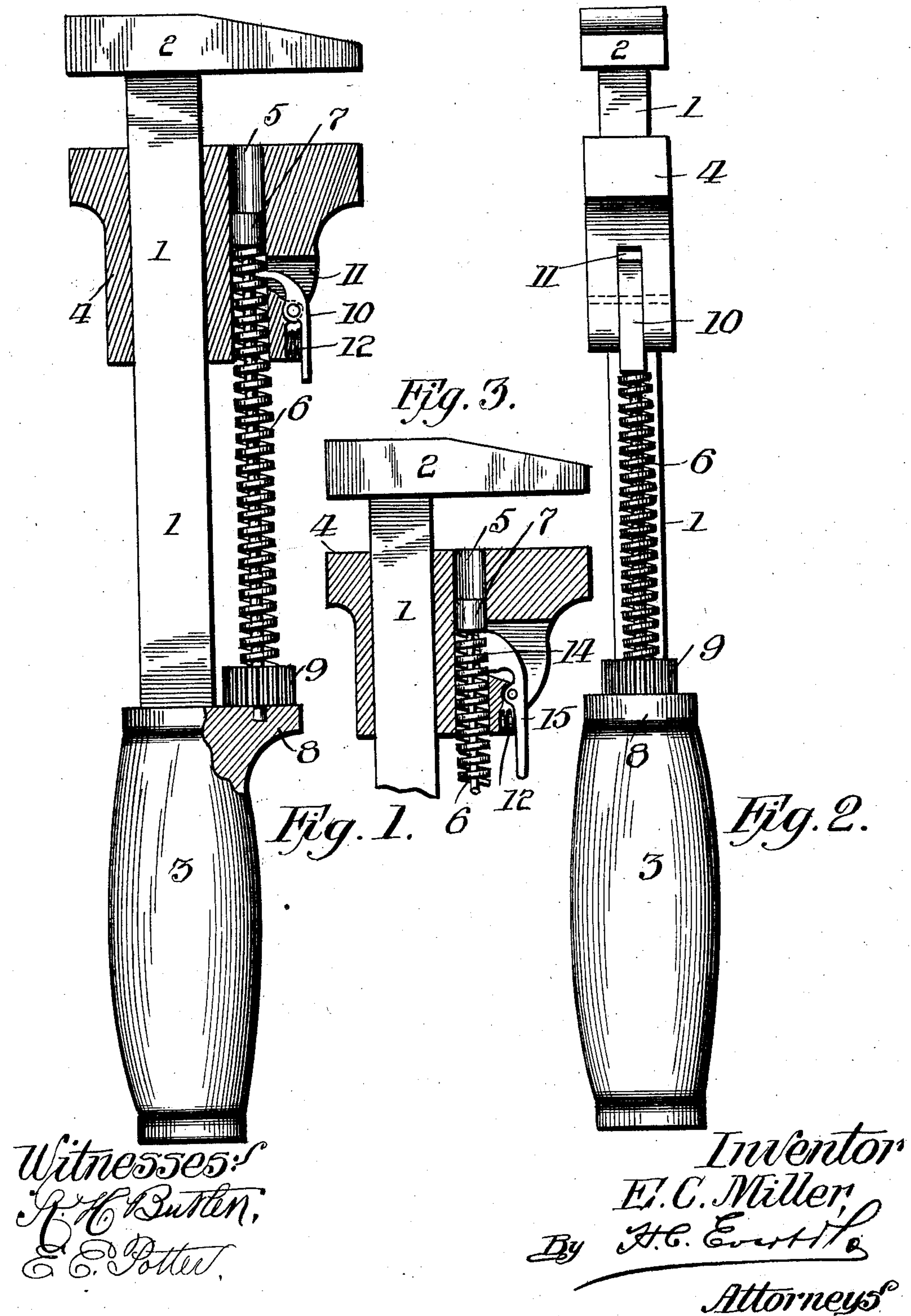
No. 756,679.

PATENTED APR. 5, 1904.

E. C. MILLER.  
WRENCH.

APPLICATION FILED JULY 11, 1903.

NO MODEL.





# UNITED STATES PATENT OFFICE.

EDWARD CHARLES MILLER, OF ALLEGHENY, PENNSYLVANIA.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 756,679, dated April 5, 1904.

Application filed July 11, 1903. Serial No. 165,109. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD CHARLES MILLER, a citizen of the United States of America, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in wrenches, and relates particularly to that type of wrench known in the trade as "monkey-wrenches," the object of the invention being to provide means for the easy and rapid adjustment of the wrench by means of the same hand with which the wrench is being held for use.

Briefly described, the invention comprises a wrench-shank provided at its outer end with a rigid jaw and a suitable handle at its other end. No teeth are provided on this wrench-shank, as is done in the ordinary construction of wrench, and on the shank is mounted for adjustment a movable jaw which is provided with a bore that receives the screw held in the jaw and in the lug or projection carried by the handle. The movable jaw is locked by means of a spring-pressed pawl, which is adapted to engage with the screw and hold the movable jaw against rearward movement during the time that the pawl or dog is in engagement with the screw. I preferably also employ a thumb-bur at the rear end of the screw merely for the purpose of giving a finer adjustment to the movable jaw after the same has been set to or approximately to the desired position.

All of the above construction will be hereinafter more fully described, and specifically pointed out in the claims, and in describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a plan view of my improved wrench with the movable jaw and part of the handle in section. Fig. 2 is a front view of the wrench: and Fig. 3 is a plan view of a part of the wrench with the movable jaw in

section, showing the preferred form of locking the dog or pawl.

To put my invention into practice, I provide a wrench-shank 1, which may be of any desired shape in cross-section and which carries at its outer end a rigid jaw 2, preferably made integral therewith, and at its other end has a suitable handle 3. Mounted to slide longitudinally on the wrench-shank 1 is a movable or sliding jaw 4, which is provided with a bore 5 of uniform diameter throughout its length and extending longitudinally there-through in alinement with the wrench-shank 1 and spaced a slight distance away from said shank. This bore is adapted to receive a screw 6, which telescopes into the bore of the movable or sliding jaw, the forward end 7 thereof being of a diameter to neatly fit the bore 5. The rear end of this screw is journaled in the lug or projection 8 carried by the handle member 3, and the screw has mounted thereon in close juxtaposition to said lug or projection a thumb-nut 9, knurled or roughened on its periphery, the purpose of which is merely to provide means for obtaining a finer adjustment after the movable or sliding jaw has been shifted to approximately the desired position. The movable or sliding jaw is held in the adjusted position by means of a pawl or dog 10, pivotally mounted in a recess in the front face of the jaw 4, and the engaging end of which dog or pawl projects through an opening 11 into engagement with the screw 6. The dog or pawl is normally held in engagement by means of a spring 12, interposed between the jaw and the dog or pawl. In Fig. 1 I show this dog or pawl as provided with a single engaging point at its end, and in Fig. 3 I show the preferred form of dog or pawl 15, in which the same is provided with a series of engaging teeth 14.

The dog 10 being pivoted on a rivet passing through the jaw can be readily removed and replaced if worn or broken, and the location of the dog in the recess in the jaw protects it from damage and avoids danger of injury to the fingers of the person using the wrench which would exist if the teeth of the dog were exposed.

In operation it will be observed that when



the rear end of the pawl or dog is depressed, thus compressing the spring 12, the forward end of the dog or pawl is moved out of engagement with the spiral of the screw and the jaw 4 is free to be moved in the desired direction. It is to be noted in this connection that the jaw 4 may be forced toward the rigid jaw 2 without actuating the pawl, though the movement of the jaw will be easier and more rapid if the pawl be disengaged, whether it is desired to move the jaw toward the outer or toward the inner end of the wrench-shank.

While I have herein shown and described my invention as it is practiced by me, yet it will be evident that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

In combination with a shank having a fixed

jaw, a movable jaw mounted on said shank and being provided to one side thereof with a longitudinal bore of uniform diameter throughout its length, the outer face of said movable jaw having an opening at a point above the lower edge thereof which communicates with said bore, a handle secured to said shank and being provided with a projection, a screw having its lower end journaled in the projection of said handle and its upper end telescoping in the bore of said movable jaw, the upper end snugly engaging the interior of the bore of the jaw, a thumb-nut carried by said screw, and a spring-pressed dog pivoted in the opening of said movable jaw and engaging the screw, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

EDWARD CHARLES MILLER.

Witnesses:

A. M. WILSON,  
E. E. POTTER.