

(No Model.)

V. J. McDONNELL.
WRENCH.

No. 415,183.

Patented Nov. 12, 1889.

Fig. 1.

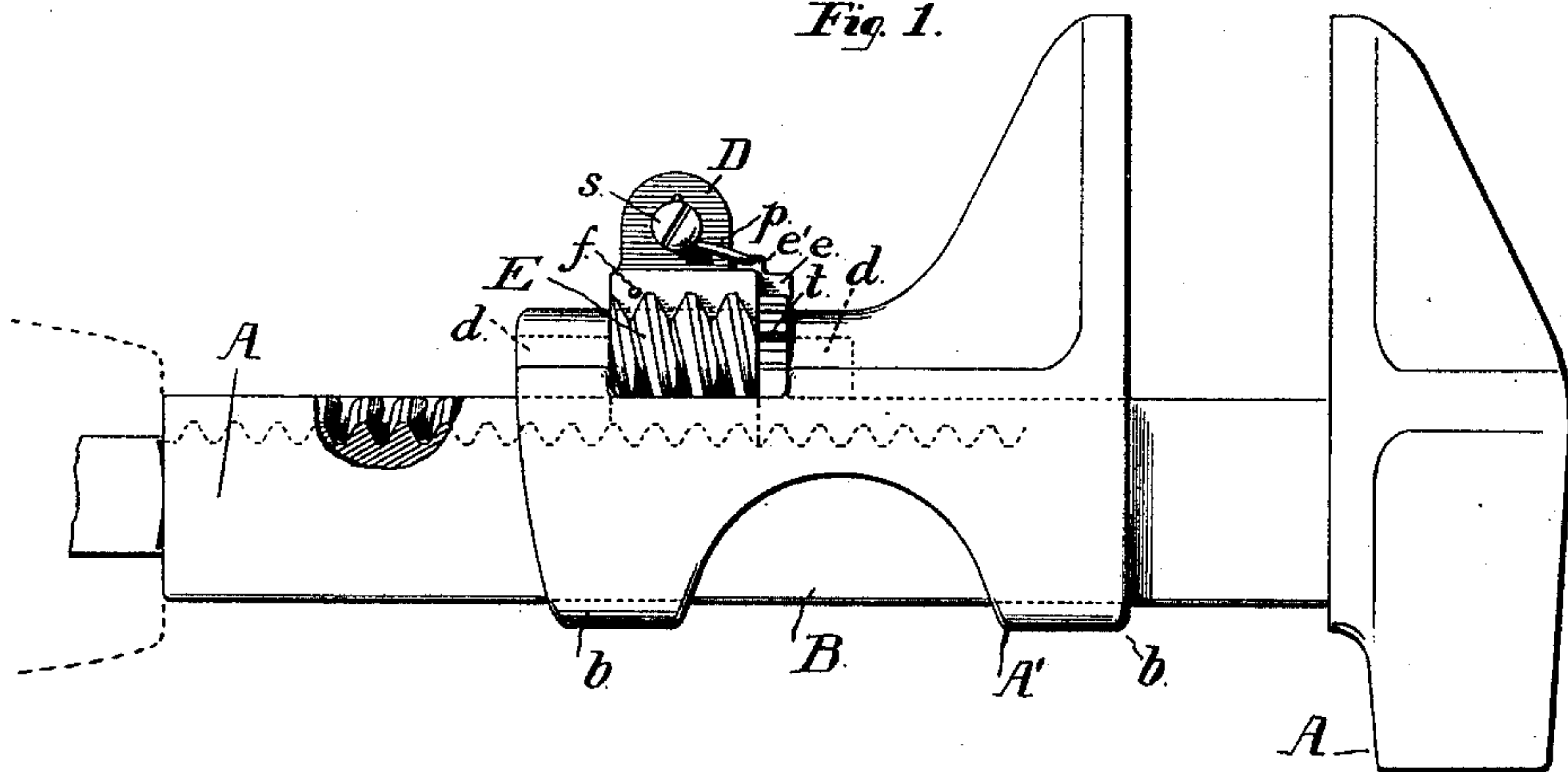


Fig. 2.

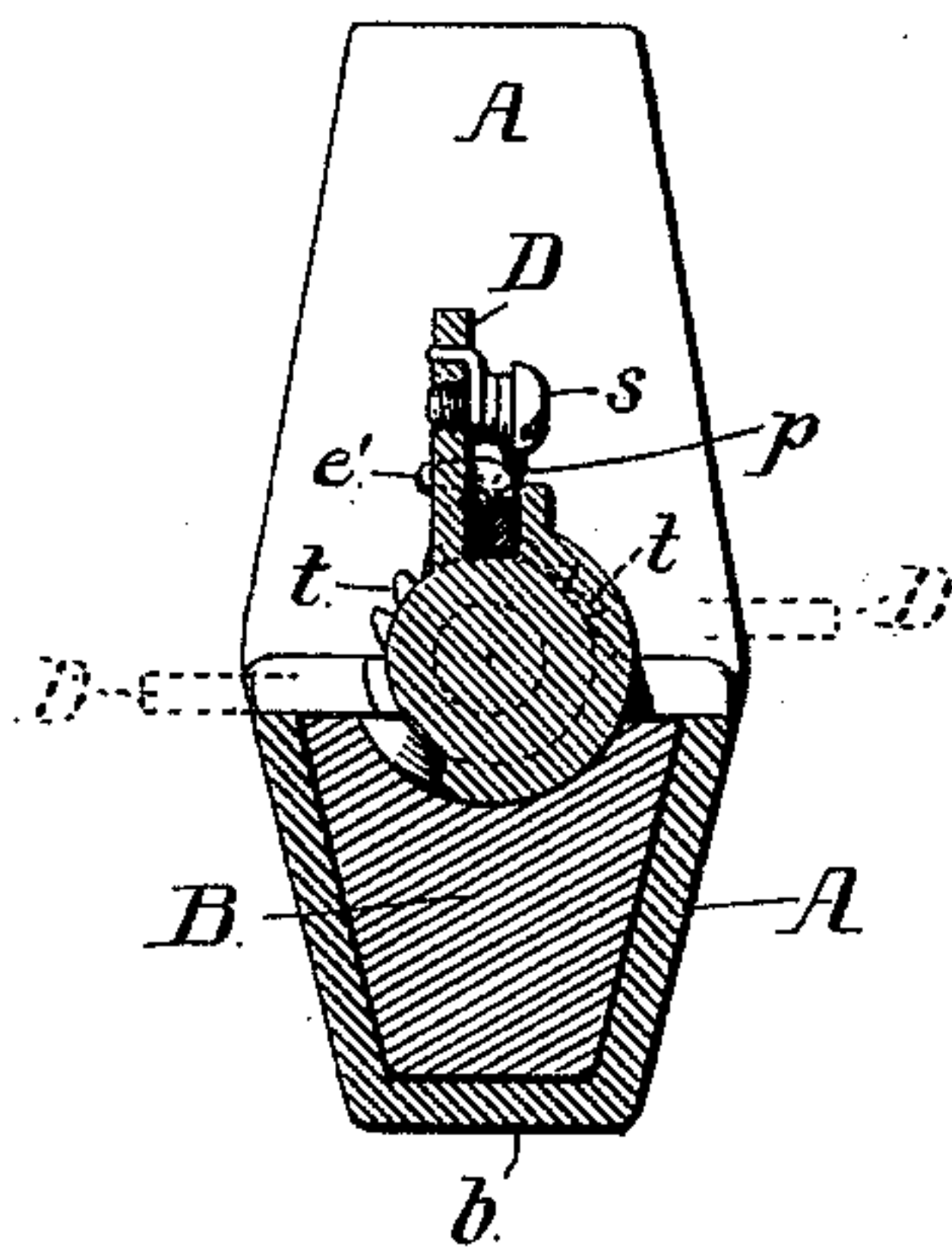


Fig. 3.

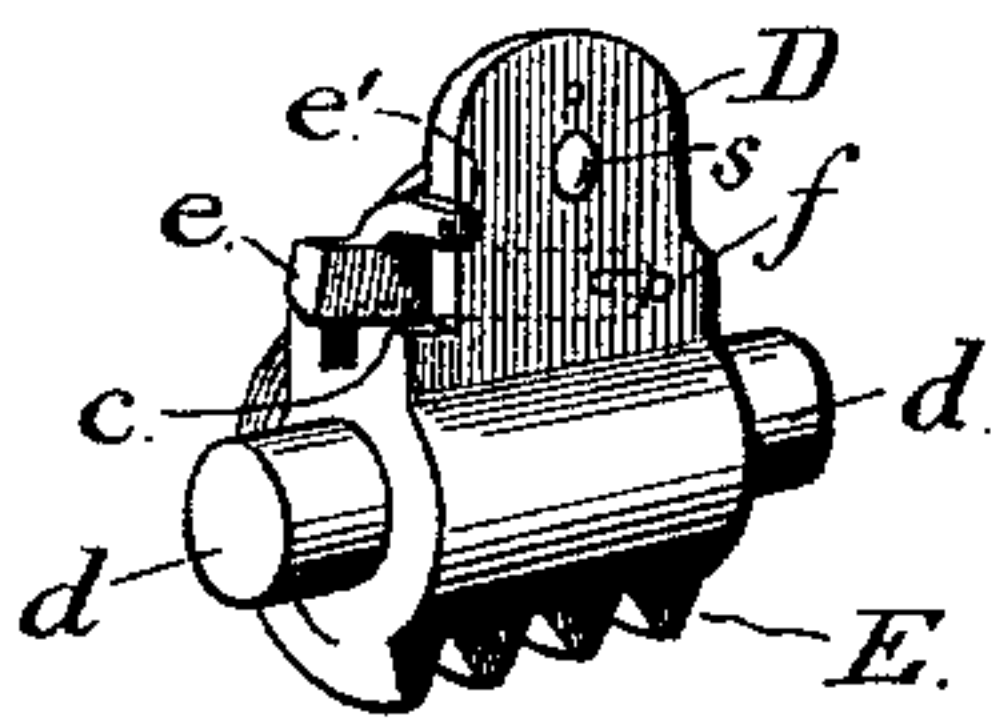
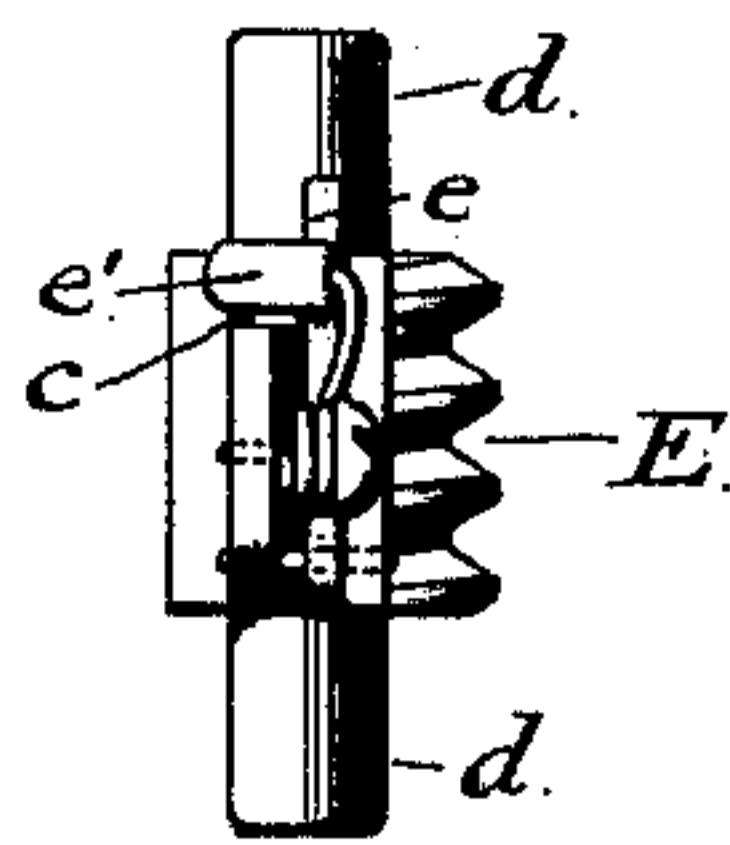


Fig. 4.



WITNESSES:

Per M. Obermann
Geo. A. New Jersey

INVENTOR

Vincent J. McDonnell
By his Attorneys
Horace Little

UNITED STATES PATENT OFFICE.

VINCENT J. McDONNELL, OF PHILADELPHIA, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 415,183, dated November 12, 1889.

Application filed May 23, 1889. Serial No. 311,774. (No model.)

To all whom it may concern:

Be it known that I, VINCENT J. McDONNELL, of the city of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Wrenches; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification.

My invention has relation to that class of wrenches commonly known as "monkey-wrenches;" and it consists in an improved adjusting and securing device, as hereinafter particularly described, and is an improvement upon my invention as described and claimed in Letters Patent No. 402,265, to me issued, of date April 30, 1889, for a wrench.

The object of my invention, as herein described, is to provide a simpler, more effectual, and less expensive securing device than that described in my previous invention.

In the accompanying drawings similar letters of reference refer to similar parts throughout.

Figure 1 is a longitudinal partially-sectional view of a wrench with my improved securing device applied thereto. Fig. 2 is a cross-sectional view of the wrench with my improved securing device attached thereto, showing the extreme operative positions of the lever in dotted lines to the right and to the left. Fig. 3 is a front perspective view of the securing device detached. Fig. 4 is a top elevation of the securing device detached, as shown in Fig. 3.

A is the main body of the wrench, and A' is the movable jaw secured on the plane-sided shank B by the casing or loops b b, upon which shank the movable jaw A' slides in being adjusted. As in my former invention, above noted, the plane-sided shank B has provided on its upper surface a screw-threaded semicircular-shaped groove or gutter a, extending from the handle to within an inch, or thereabout, of the hammer end. I also employ, as in my former invention, the short circular tube E, having provided on one-half of its circumference a mutilated screw-thread. This circular tube is adjusted to the movable jaw A' through the medium of the axis or pin d, as shown in Fig. 1.

The lever D is attached to the circular tube

in the position shown in the drawings, and is employed as a means to readily rotate the circular tube E and to slide it in the groove a to the desired position when the mutilated screw-threads are disengaged. To the right of the lever and partially countersunk is pivotally secured by the pin f the catch or pawl e. A spring p, secured to the lever D by the screw s, operates upon and presses down the pawl e and has a tendency to keep it in that position. The spring p is also so adjusted upon the pawl e as to give it a lateral motion, as to the left, which, when the pawl e is raised above the shoulder c, throws it onto the shoulder c and prevents it from returning to its normal position in its recess or chamber. The projection e' is provided on the pawl e for the purpose of releasing it from the shoulder c when the lever D is thrown in the position shown to the left by the dotted lines in Fig. 2, as hereinafter described. The teeth t are provided around the outer circumference of the inner end of the movable jaw A', over and into which the pawl e operates and engages as the tubular section E is rotated.

The operation is substantially as follows: When it is desired to set the wrench to fit a particular nut, supposing the lever D to be in the position shown in the dotted lines to the right in Fig. 2, the pawl e is raised by the thumb engaging in the projection e', extending to the left from the pawl e, until the pawl e is engaged on the shoulder c by reason of the lateral pressure of the spring p and held in that position above and over the teeth t, and thus disengaged therefrom. The tubular section E is then rotated by the lever D to the position shown by the dotted lines to the left in Fig. 2. The projection e' then coming in contact with the upper surface of the shank B is jarred back and the pawl e released from the shoulder c and returned by the spring p down into its normal position. The screw-threads of the circular tube E are thus disengaged from the screw-threads of the groove a, and the circular tube E, connected with the movable jaw A', is free to be readily slid along in the groove a by means of the lever D to the desired position required for the nut to be turned. The lever D is then turned into the position shown in

Fig. 1, and then down to that shown in the dotted lines to the right in Fig. 2, the pawl *e* clicking over the teeth *t*, thus securing the circular tube *E* and the movable jaw *A'* in that position.

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

1. In a wrench, a longitudinal semicircular-shaped screw-threaded groove provided in the main shank or stem, in combination with a tubular-shaped section provided on a portion of its outer circumference with a mutilated screw secured to the movable jaw of the wrench and provided with a handle projection, and a spring-operated pawl pivotally hinged, as by the pin *f*, which acts as an axis upon which the said pawl operates, and which said pawl is adapted to be engaged in or released at will from teeth provided upon the movable jaw, substantially as hereinbefore set forth and described.

2. In a wrench, a longitudinal screw-threaded groove *a*, in combination with the tubular section *E*, provided with a mutilated screw on a portion of its outer circumference secured on its axis to the movable jaw *A'*, adapted to engage in and be released at will from the screw-threads of the groove *a*, lever *D*, a pawl *e*, having the projection *e'*, the said pawl *e* hinged by the pin *f* and moving upon the pin *f* as an axis, the spring *p*, and the teeth *t*, provided on the movable jaw *A'*, substantially as hereinbefore set forth and described.

In witness whereof I have hereunto set my hand this 22d day of May, A. D. 1889.

VINCENT J. McDONNELL.

Witnesses:

HORACE PETTIT,

REESE M. FLEISCHMANN.