

J. RYAN.  
WRENCH.

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912,177.

Patented Feb. 9, 1909.

Fig. 1.

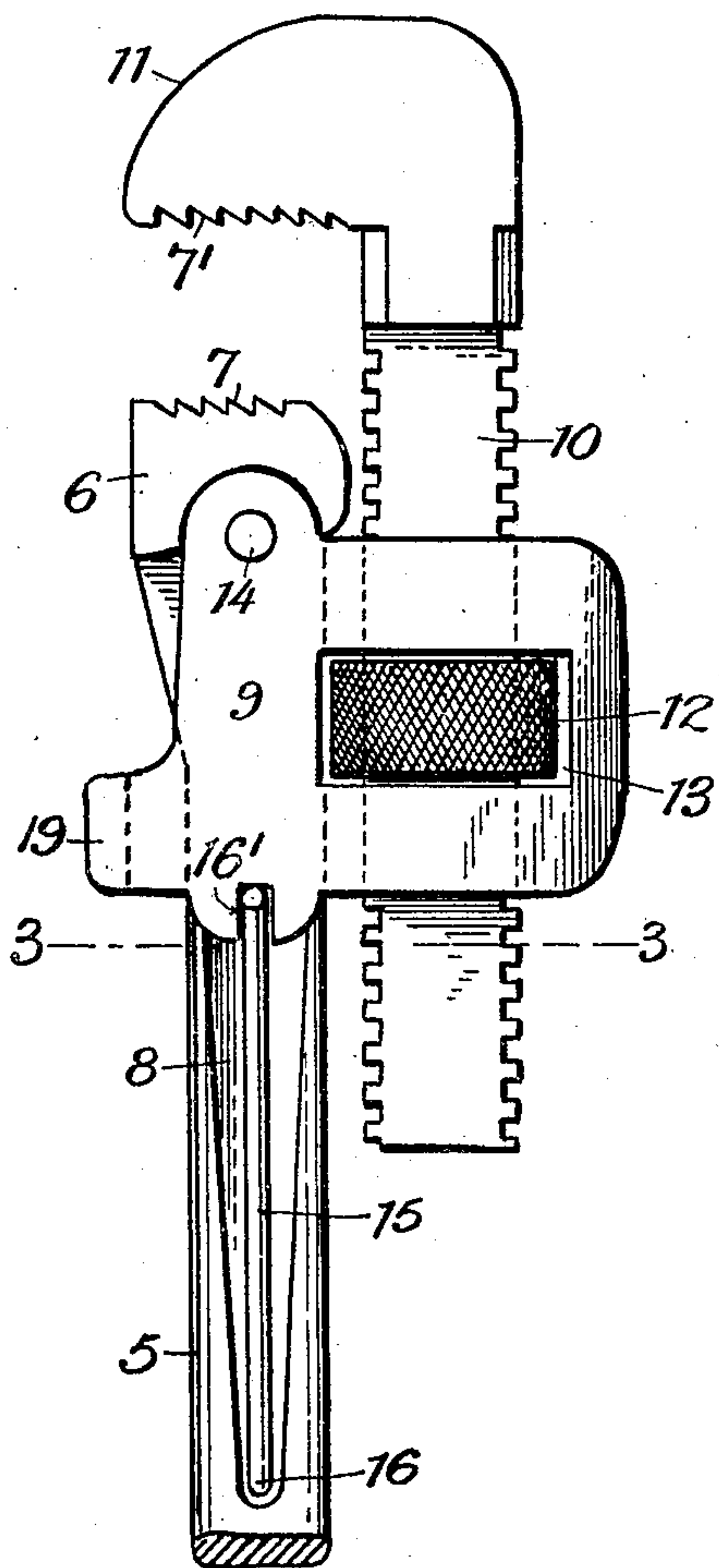


Fig. 2.

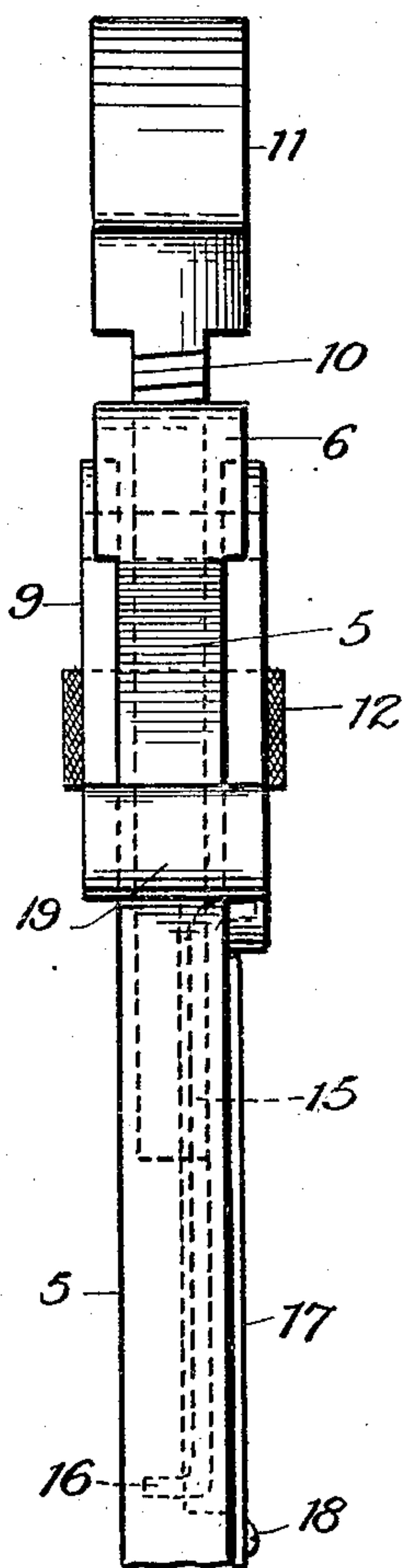
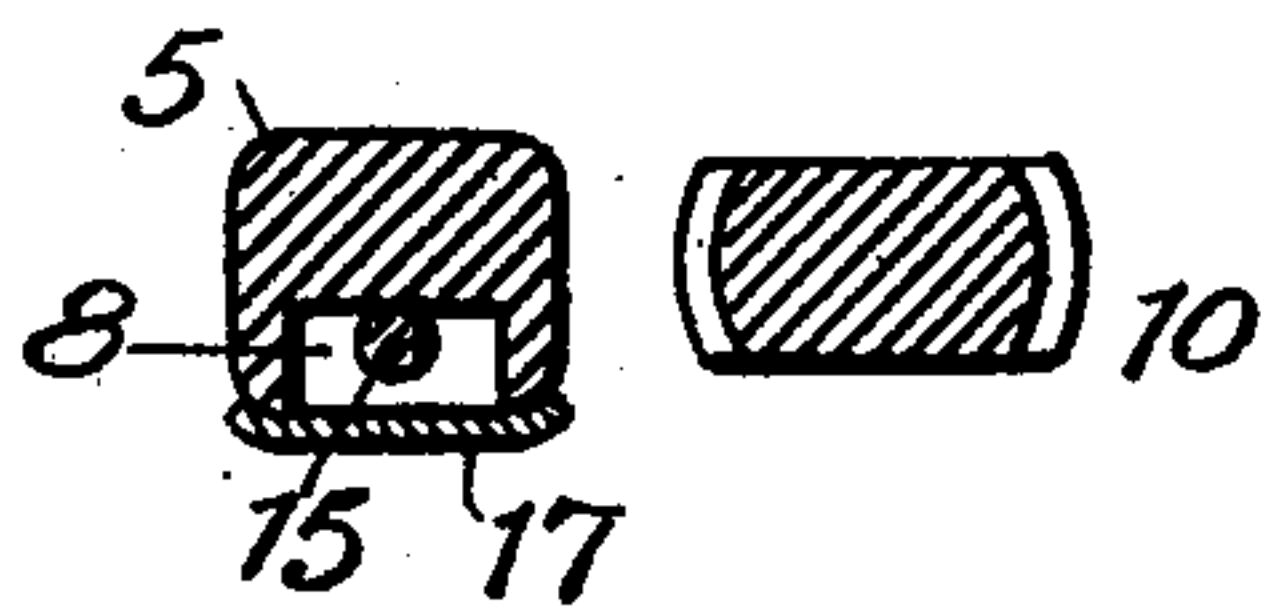


Fig. 3.



WITNESSES

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JOHN RYAN, OF NEW YORK, N. Y.

## WRENCH.

No. 912,177.

Specification of Letters Patent.

Patented Feb. 9, 1909.

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*To all whom it may concern:*

Be it known that I, JOHN RYAN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to wrenches and more particularly to what is known as pipe wrenches where in addition to the adjustment of the jaws to provide for the variation in the sizes of pipes a rocking movement is necessary to permit of a grip and release action when rotating the pipe.

The object of the invention is to provide means for restoring the pivoted jaw to its normal position when relieved of its strain as will be more fully described in the following specification, set forth in the claim and shown in the drawings, where:

Figure 1 is a side elevation of my improved wrench. Fig. 2 is a front view of same. Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

The handle 5 of this wrench may be of any desired length, but for convenience of illustration the lower end of the handle is shown as being broken off, and at its upper end is located the stationary jaw 6 with the teeth or serrations 7 on its upper face. In the side of the handle is a triangular recess 8 and pivoted at the upper end of the handle and just beneath the jaw 6 is a frame 9 slotted to surround the handle and carry the stem 10 of the movable jaw 11. The stem is a mutilated screw as is usual in this class of tools and closely fits the slot in the frame 9 and is provided with the nut 12 playing in a horizontal opening 13 and when rotated it carries the jaw 11 upward or downward according to the direction of rotation.

The frame 9 is free to swing on the pivot 14 but it is retained normally in the position shown by a spring 15 secured at its lower end 16 to the handle and in the slot 8, the upper end of the spring being off set and working in the slot 16'. The spring and its recess are ex-

posed in Fig. 1 but as will be seen in Figs. 2 and 3 a cover 17 of sheet metal may be secured to the handle by a screw or rivet 18 and held in place by its overlapping sides which partly embrace the adjacent sides. The movement of the frame 9 is limited in one direction by the stem 10 and on the other side by the cross piece 19 at the front end of said frame.

It is evident that the spring 15 is influenced by the movement of the frame in either forward or backward movement and tends to return it to the intermediate position so that the wrench may be easily located on the pipe and by a reverse movement caused to firmly grip the same, the teeth 7 and 7' insuring a firm hold.

The use of a single spring to effect the two movements of the movable jaw affords not only a simple arrangement but the spring is sufficiently large to give the same the necessary strength to make the wrench a very serviceable one, finally the covering of the spring prevents the same from accumulating grease and dirt and gives the tool a compact and substantial appearance.

It is obvious that minor alterations in the shape and location of the various parts may be made without departing from the essential features above described.

What I claim as new and desire to secure by Letters Patent is:

In a wrench, the combination with a handle having a recess and having a stationary jaw at its upper end, of a frame pivoted on the handle and carrying the adjustable jaw, and a spring in the recess and operating on the frame in both directions to retain it in one position when the tension of the spring is neutral.

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

JOHN RYAN.

Witnesses:

JAMES F. DUHAMEL,  
MAE W. CLINTON.