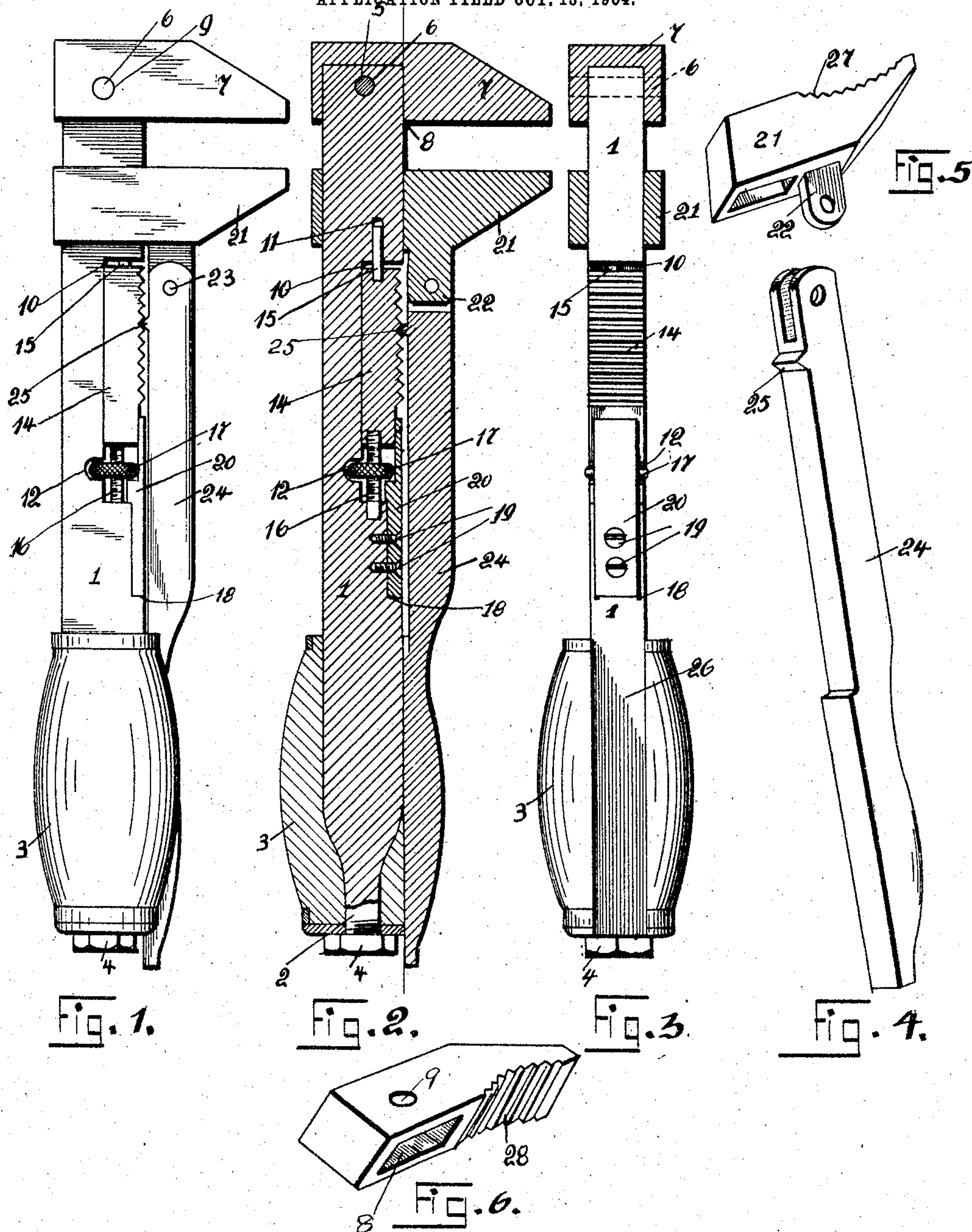


No. 780,743.

PATENTED JAN. 24, 1905.

S. J. CLOKEY.  
WRENCH.

APPLICATION FILED OCT. 13, 1904.



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## UNITED STATES PATENT OFFICE.

SAMUEL J. CLOKEY, OF WASHINGTON, PENNSYLVANIA.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 780,743, dated January 24, 1905.

Application filed October 13, 1904. Serial No. 228,271.

*To all whom it may concern:*

Be it known that I, SAMUEL J. CLOKEY, a citizen of the United States of America, residing at Washington, in the county of Washington 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 has relation to certain new and useful improvements in wrenches, and more particularly to that type commonly known as a "monkey-wrench."

15 This invention has for its object the provision of a novel form of wrench which may be readily used as a pipe-wrench, and I have provided novel means whereby said wrench may be quickly changed to a pipe-wrench, also means whereby the sliding jaw of said 20 wrench may be quickly adjusted to any desired position and then more finely adjusted to place the sliding jaw in a more firm engagement with an object.

25 Briefly described, my improved wrench comprises a shank having a handle secured upon its one end and a detachable jaw upon its other end. Upon this shank is slidably mounted an adjustable jaw having a pivoted handle which is adapted to engage with a 30 toothed bar adjustably mounted within the shank of the wrench.

The above construction will be hereinafter more fully described, and specifically pointed out in the claims.

35 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference indicate like parts throughout the several views, in which—

40 Figure 1 is a side elevation of my improved wrench. Fig. 2 is a vertical sectional view of the same. Fig. 3 is an edge view of the wrench, the jaws thereof being shown in vertical section. Fig. 4 is a perspective view of a handle carried by the adjustable jaw. Fig. 45 5 is an underneath perspective view of a modified form of adjustable jaw detached from the shank and from the handle. Fig. 6 is an un-

derneath perspective view of a modified form of stationary jaw detached from the shank. 50

To put my invention into practice, I employ a shank 1, having a tapering screw-threaded end 2, upon which the handle 3 is secured by a nut 4. The upper end of the shank is provided with an aperture 5, and 55 upon this end is secured by a pin 6 a jaw 7, which upon its under face is provided with a recess 8, with which communicate apertures 9 9, whereby the pin 6 may be placed in said apertures and the aperture 5 to secure the 60 jaw upon the upper end of the shank. The shank upon its one edge is cut away, as indicated at 10, and the upper edge of the cut-away portion is provided with a recess, 11 and 65 the rear wall of the cut-away portion near the lower end is provided with a recess 12. In said cut-away portion is mounted a toothed bar 14, which is held in said recess by a pin 15, which protrudes into the recess 11, and by a screw 16, which is mounted in the cut-away 70 portion between the lower end of the toothed bar and the base of said cut-away portion. The screw 16 is provided with a knurled nut 17, which is fixed on the screw and which is adapted to lie within the recess 12 of said cut- 75 away portion. The shank is further cut away, as indicated at 18, and secured upon said cut-away portion by screws 19 is a retaining guide-plate 20, said plate extending upwardly a sufficient distance to bear against the toothed 80 bar 14 and retain the same in the cut-away portion 10 of the shank.

Upon the shank 1 is mounted a sliding jaw 21, which upon its under face is provided with a depending lug 22, and to this lug is pivotally connected by a pin 23 the handle 24. 85 The said handle near its pivoted end and upon its inner face is provided with a tooth 25. This tooth is normally adapted to engage two of the teeth of the toothed bar 14, and in order that said tooth 25 may be held in engagement with the toothed bar I have provided the slot 26 in the handle 3, whereby the handle 24 may be drawn into engagement with the handle 3 and retained therein by the hand 95 of the person manipulating the wrench.



In Figs. 5 and 6 of the drawings I have illustrated detachable jaws which are similar in all respects to the jaws 7 and 21, with the exception that said jaws are provided with the serrated concave surfaces 27 and 28, and these jaws are employed when the wrench is to be used as a pipe-wrench or for gripping curved surfaces. By removing the jaw 7 and then removing the jaw 21 from the shank of the wrench these auxiliary jaws may be placed upon the shank to provide a pipe-wrench. By the construction of the adjustable jaw it will be seen that the same may be quickly adjusted upon the shank and held in engagement with any desired object. Should the teeth of the bar 14 not be sufficient to permit of a perfect engagement of the adjustable jaw with the object, the knurled nut 17 is rotated to raise said toothed bar and the adjustable jaw into further engagement with said object. From the foregoing description it will be observed that I have constructed my improved wrench upon as simple lines as possible and that the wrench may be quickly adjusted to grip a desired object, and while I have herein shown the preferred form of constructing the wrench it is obvious 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—

1. A wrench comprising a recessed shank, a jaw rigidly attached to said shank, a slotted handle attached to the shank, a toothed bar mounted in the recess of the shank, an adjusting-screw mounted in the recess in the shank below said toothed bar, a slidable jaw mounted on the shank, a lever pivotally attached to said slidable jaw, the said lever being provided with a tooth adapted to engage the said teeth of the said toothed bar and the said lever seating in the slot in the handle.

2. A wrench comprising a shank, a removable jaw fixed on one end of the shank, a handle secured upon the other end of the shank, a movable jaw mounted on the shank, a toothed bar arranged in a recess in the shank, a screw arranged in a recess in the shank below said toothed bar, a guide-plate attached to the shank and extending in front of said screw and over a portion of the toothed bar, and a lever pivotally attached to the sliding jaw and having a tooth engaging said toothed bar.

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

SAMUEL J. CLOKEY.

Witnesses:

W. T. POLLOCK,

W. H. MARTIN.