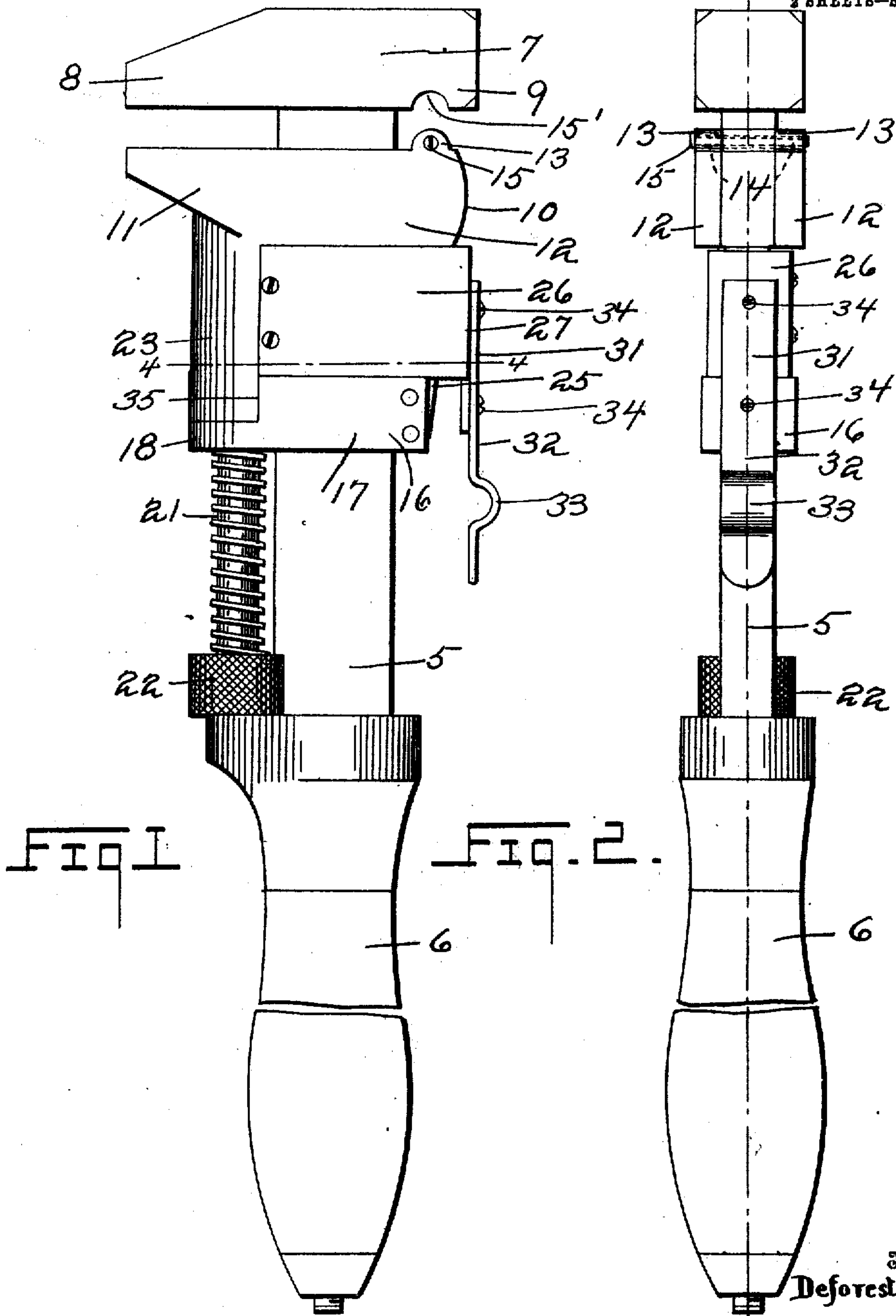


D. G. CONNELL.
WRENCH.
APPLICATION FILED NOV. 11, 1908.

912,993.

Patented Feb. 23, 1909.

2 SHEETS—SHEET 1.



Witnesses
E. E. Johansen.
E. L. Chandler

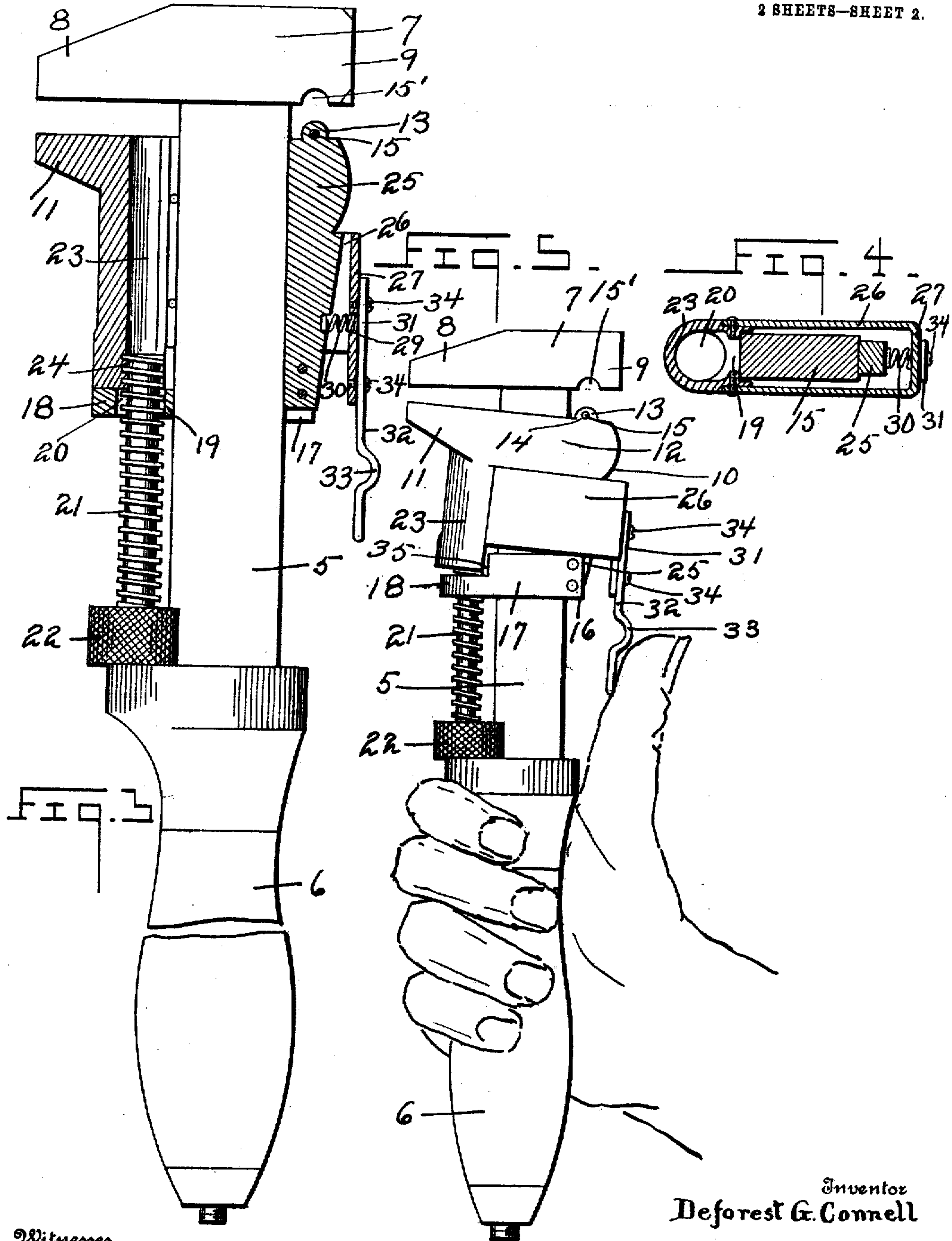
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UNITED STATES PATENT OFFICE.

DEFOREST G. CONNELL, OF CORRY, PENNSYLVANIA.

WRENCH.

No. 912,993.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed November 11, 1908. Serial No. 462,151.

To all whom it may concern:

Be it known that I, DEFOREST G. CONNELL, a citizen of the United States, residing at Corry, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to wrenches, and more particularly to quick-adjustment monkey wrenches, and has for its object to provide a wrench of this kind which may be quickly adjusted to suit different nuts, and which will be provided with the usual screw for fine adjustment after having had its movable jaw brought into engagement with the object to be gripped.

Another object is to provide a wrench having these features which will be simple in construction and thus cheap, and which will include an actuating spring so mounted that it may be readily removed when broken, to facilitate replacement.

Another object is to provide a wrench so arranged that its use will tend to more effectually set its adjustment rather than derange such adjustment.

Other objects and advantages will be apparent from the following specification and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts of the several views, Figure 1 is a side elevation of the wrench, Fig. 2 is a rear elevation, Fig. 3 is a partial vertical section taken on line 3—3 of Fig. 2, Fig. 4 is a horizontal section taken on line 4—4 of Fig. 1, Fig. 5 is a view somewhat similar to Fig. 1 showing the wrench held by a human hand, and positioned for quick adjustment of its movable jaw.

Referring now to the drawings, there is shown a wrench including a stock 5, having a handle 6 at one end portion, and having a fixed jaw 7 at its opposite end portion. This jaw 7 has a forwardly extending portion 8 and a rearwardly extending portion 9. A movable jaw 10 is provided, this jaw having a forwardly extending lip 11 for cooperation with the portion 8 of the jaw 7, and the jaw also has spaced rearwardly extending arms 12, which extend beyond the rearward face

of the stock 5 as shown. These rearwardly extending portions of the arms 12 are provided each with an upwardly extending arcuate ear 13, the ears being located opposite to each other and having horizontally alining passages 14, which receive a pivot pin 15. The rearward portion 9 of the jaw 7 is transversely recessed at its under face, as indicated at 15', to receive the ears 13 as shown.

A yoke 16, including spaced horizontally extending arms 17 and a connecting forward bight 18 is engaged with the stock 5, the bight having a horizontal web 19 which lies forwardly of the stock, and which is provided with a vertical opening 20, receiving slidably the usual vertical worm screw 21, having at its lower end a nut 22, carried by the handle 6. The arms 17 of the yoke 16 are extended vertically above the bight 18, so that this bight has the form of a forwardly extending horizontal ear through which the screw is engaged. By reason of the vertical extension of the arms 17, forwardly directed shoulders 35 are formed at the forward ends of these arms.

A depending hollow semi-cylindrical member 23 is carried by the forward portion on the jaw 10, and this member has a threaded interior as shown at 24 which lies normally in engagement with the screw 21, the face of the member 23 lying at its lower portion against the shoulders 35 as indicated. These shoulders thus limit the inward movement of the member 23 as will be understood from the following.

An arm 25 is secured at its lower portion between the rearward end of the arms 17 of the yoke 16, and extends upwardly between the rearward ends of the arms 12. The upper extremity of this arm 25 is engaged upon the pivot pin 15, and it will thus be seen that the jaw 10 and the member 23 are movable upon the pivot pin to bring the threads of the member 23 into and out of engagement with the screw 21. In order to disengage the thread from the screw 21, the lip 11 must be moved at its forward portion toward the jaw 8, and this arrangement is such that the gripping of a nut between the two jaws tends to hold the member 23 in engagement with the screw 21.

A second yoke 26 is located between the yoke 16 and the rearward portion of the jaw 10, this yoke 26 having the forward ends of its legs secured to the member 23.

The bight 27 of the yoke 26 lies rearwardly of the arm 25, and in spaced relation thereto, and this bight 27 has a passage 29 formed therethrough, which receives a helical spring 30, resting at its inner end against the arm 25 and at its outer end against the attaching portion 31 of a finger piece 32 which extends downwardly beyond the yoke 16. The finger piece, lies in spaced relation to the rearward face of the stock 6, as shown, and may thus be engaged by the operator to move the jaw 10 pivotally with respect to the arm 25, thus bringing the member 23 out of engagement with the screw 21 so that the jaw and the portions connected therewith may be moved upon the stock 5 independently of the screw 21. The finger piece 32 is transversely bent to produce a rearwardly extending projection 33, for the reception of the end of a finger or thumb of the operator to facilitate the manipulation of the mechanism. The portion 31 of the finger piece 32 is attached to the bight 27 of the yoke 26 by means of screws 34, which may thus be readily removed to permit of the removal of the spring 30.

What is claimed is:—

1. A wrench comprising a stock, a fixed jaw carried by one end of the stock, a member slidably engaged with the stock, a jaw pivotally connected with the member, a worm screw connected with the stock, a threaded member carried by the movable jaw, said movable jaw being shiftable upon its pivot to bring the threaded member into and out of engagement with the screw, and a spring arranged to hold the second named jaw normally with its threaded member in engagement with the screw.
2. A wrench comprising a stock, a fixed jaw carried by the stock, a member slidably engaged with the stock, an adjusting screw connected with the stock, a vertically extending arm carried by the slidable member and extending upwardly therefrom, a second jaw slidably engaged with the stock and pivotally connected with the upwardly extending arm, a depending threaded member carried by the second jaw, said member being movable with the second jaw when the latter is shifted upon its pivot to bring said member into and out of engagement with the adjusting screw, means for holding the jaw with its threaded member in engagement with the adjusting screw, and a finger piece connected with the jaw for movement of the jaw upon its pivot, against the action of the holding means.

3. A wrench comprising a stock, a fixed jaw carried by one end of the stock, a sliding jaw engaged with the stock and having a forwardly extending lip for coöperation with the fixed jaw, said sliding jaw having arms located at opposite sides of the stock and extending rearwardly therebeyond, a yoke engaged with the stock for sliding movement thereupon and lying in spaced relation to the sliding jaw, a vertically extending arm carried by the yoke and lying at the rearward portion of the stock, said arm being pivotally connected between the rearwardly extending portions of the arms of the sliding jaw, an adjusting screw, a depending member carried by the forward portion of the sliding jaw, said member having a threaded groove in its inner face and being movable with the jaw when the latter is moved upon its pivot to bring its thread into and out of engagement with the adjusting screw, a yoke connected with the sliding jaw and having a bight extending across the arm, said bight being provided with a perforation, a spring engaged in the perforation and resting at its inner end against the arm, and a finger piece having a portion secured against the bight of the second named yoke and extending over the opening to receive the outer end of the spring thereagainst.

4. A wrench comprising a stock, a jaw carried by the stock, a member slidably engaged with the stock, a jaw pivotally connected with the member, an adjusting member connected with the stock, a member carried by the movable jaw and arranged for coöperation with the adjusting member, said movable jaw being shiftable upon its pivot to bring the said member into and out of engagement with the adjusting member, and means arranged to hold the second named jaw normally with the said member in engagement with the adjusting member.

5. A wrench comprising a stock, a jaw carried by the stock, a member slidably engaged with the stock, an adjusting screw, and a jaw pivotally connected with the sliding member and having a portion arranged for coöperation with the adjusting screw, said jaw being movable upon its pivot to bring the said portion into and out of engagement with the screw.

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

DEFOREST G. CONNELL.

Witnesses:

ROBT. J. OSBORNE,
C. B. HODGE.