

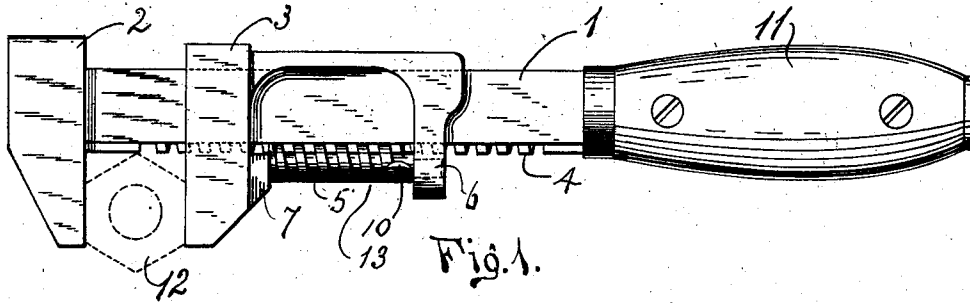
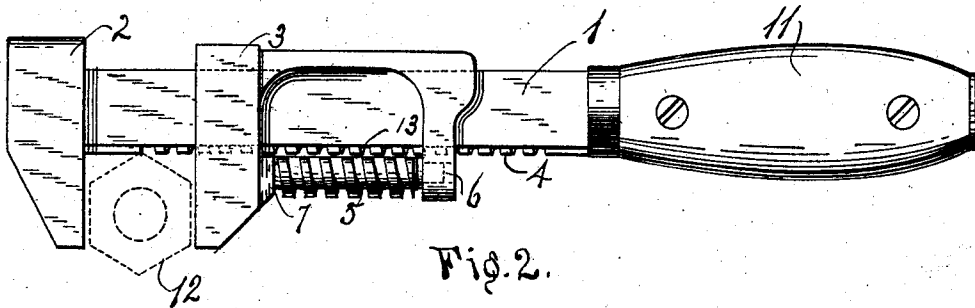
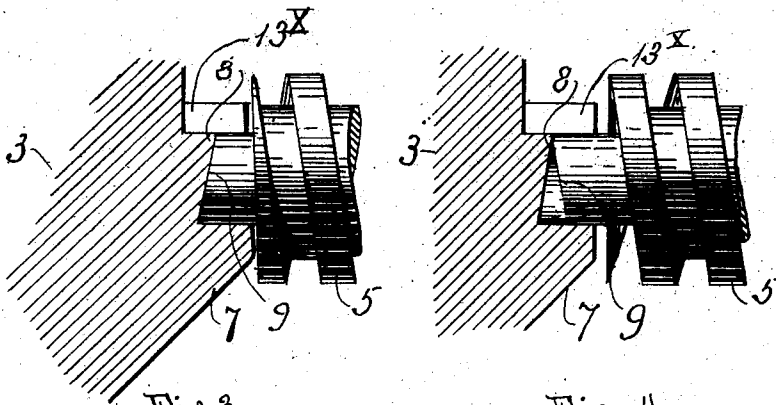
No. 753,869.

PATENTED MAR. 8, 1904.

G. E. FOX.
WRENCH.

APPLICATION FILED MAY 7, 1903.

NO MODEL.



WITNESSES
H. M. Willis
J. B. Lewis

INVENTOR
George E. Fox
BY
C. D. Lewis Attorney

UNITED STATES PATENT OFFICE.

GEORGE E. FOX, OF PITTSBURG, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 753,869, dated March 8, 1904.

Application filed May 7, 1903. Serial No. 156,027. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. FOX, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Wrenches, of which improvement the following is a specification.

My invention relates to wrenches; and its object is to provide a novel form of wrench which shall be especially adapted for quick adjustment and secure locking.

My invention consists of certain novel forms of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings like characters refer to like parts in the several views.

Figure 1 is a side view of my wrench in its locked position. Fig. 2 is a similar view unlocked. Fig. 3 is an enlarged detail of my movable jaw, showing my increased-motion device. Fig. 4 is a similar detail in another position.

The numeral 1 indicates the shank or bar of my device. A fixed head 2 is formed at the end of the bar 1. A movable head 3 is provided to slide over the bar 4. A rack 4 is formed on the bar 1, and a segmental screw 5, having a reduced end 6, is held to engage the rack 4 between the ends of the movable jaw 3. An extended socket 7, having the internal cam-surface 8, is provided for the end of the screw 5 on the movable jaw 3. An opposing cam-surface 9 is formed on the end of the screw. At 10 is provided a thumb-piece, by means of which the screw may be turned to bring the cut-away side 13 into the desired position.

A handle 11 is provided and may be of any desired construction.

At 12 is indicated a nut in position for turning. It will be plain by an inspection of the drawings that when the screw is in the position shown in Fig. 1 the jaw 3 will be held from moving, while when it is rotated to the position of Fig. 2 it will release the rack 4, and by reason of the cut-away portion being next the rack the jaw 3 will be free to slide upon the bar 1. The screw 5 is made of such length as to allow a certain amount of longitudinal motion, and this assists in forcing the

jaws together in the following manner: When the segmental screw begins to engage the rack 4, the cam-surfaces 8 and 9 are in the position shown at Fig. 3; but when the screw is turned to move the jaw forward the cam-surface takes the position of Fig. 4, and thus causes the movable jaw to advance an increased distance, since the screw moves along the bar and at the same time the jaw moves on the screw.

At 13^x is shown a slot in the socket 7, and this slot enables me to assemble my wrench without difficulty. To accomplish this, I insert the reduced end 6 of the screw 5 in its socket before the movable jaw 3 is placed on the bar 1 and slide the cam-surface end 9 of the screw through the slot 13. I then place the jaw 3 on the bar 1, and the screw 5 is securely held in its proper position.

While the screw-threads shown here are square and with square ends, yet it is obvious that the ends may be narrowed or the shape of the threads changed without departing from the principle of my invention. It is plain that other changes may also be made in the form and shape of various parts without altering the essential construction of my device. I do not, therefore, desire to confine myself to the exact form herein shown and described, but wish to include all the variations thereof which properly come within the scope of my invention.

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

In a wrench, the combination of a bar having a fixed head attached thereto a rack formed on said bar, a movable jaw, a slotted socket formed in said jaw provided with a cam-surface, a segmental screw carried by said movable jaw, a cam-surface formed on one end of said screw to oppose the before-mentioned cam-surface, and means to rotate said screw.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

GEORGE E. FOX.

In presence of—

JNO. R. SPEER,
H. J. LEVIS.