No. 786,844. PATENTED APR. 11, 1905.

W. J. SANDERS.

WRENCH.

APPLICATION FILED MAY 6, 1904.

2 SHEETS—SHEET 1.

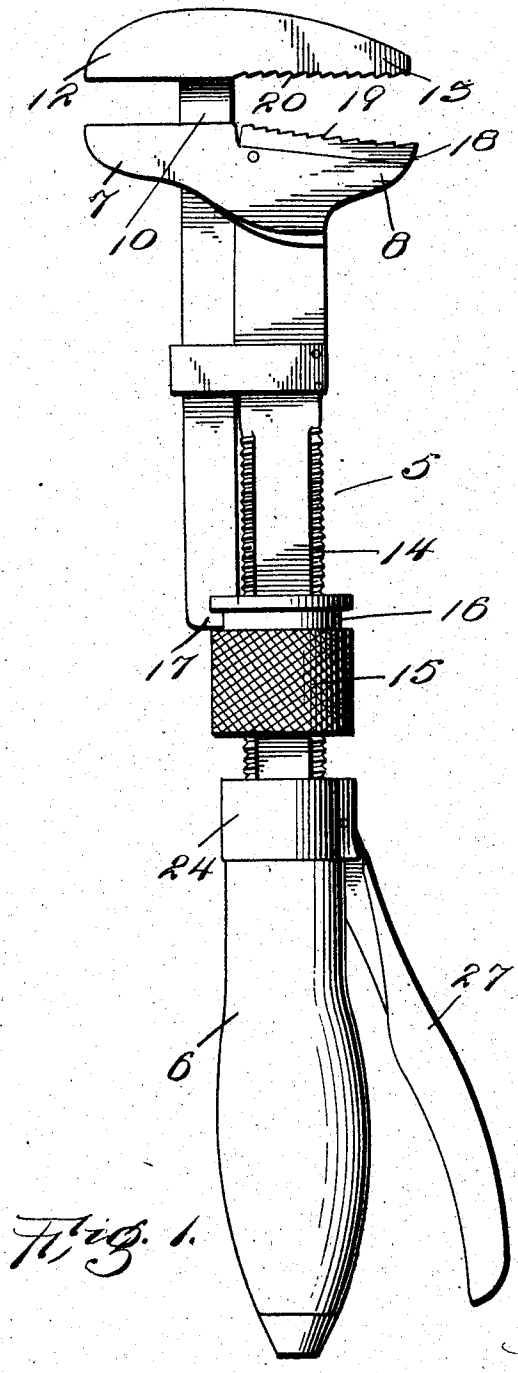


Fig. 1.

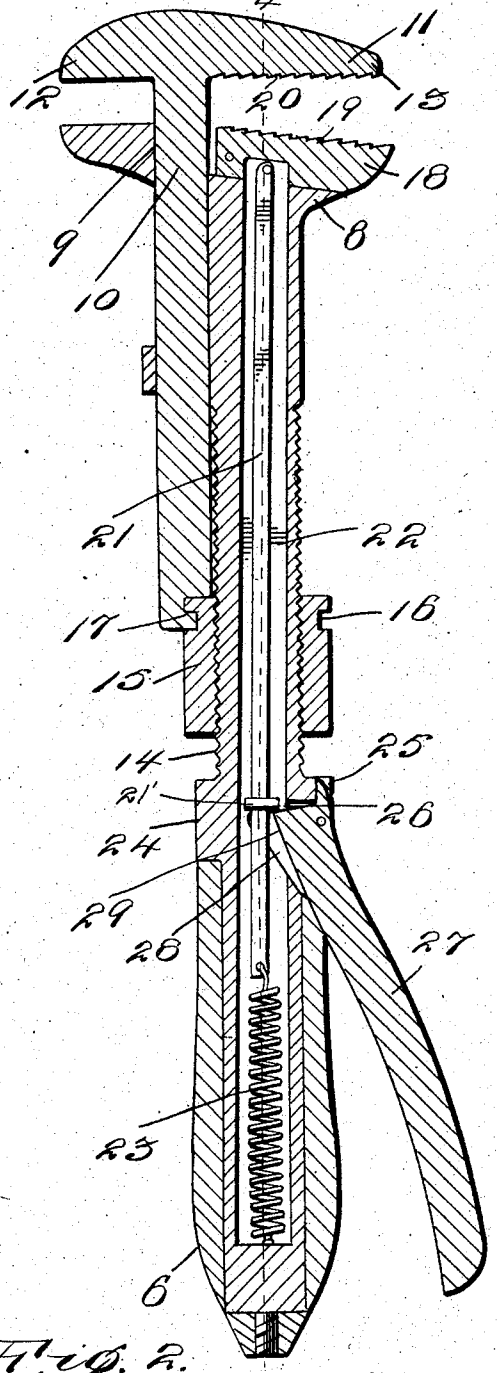


Fig. 2.

Witnesses
A. M. Simpson
W. C. O'Keyes

Inventor
W. J. Sanders
By Chandlee & Chandlee
Attorneys

No. 786,844. PATENTED APR. 11, 1905.

W. J. SANDERS.

WRENCH.

APPLICATION FILED MAY 6, 1904.

2 SHEETS—SHEET 2.

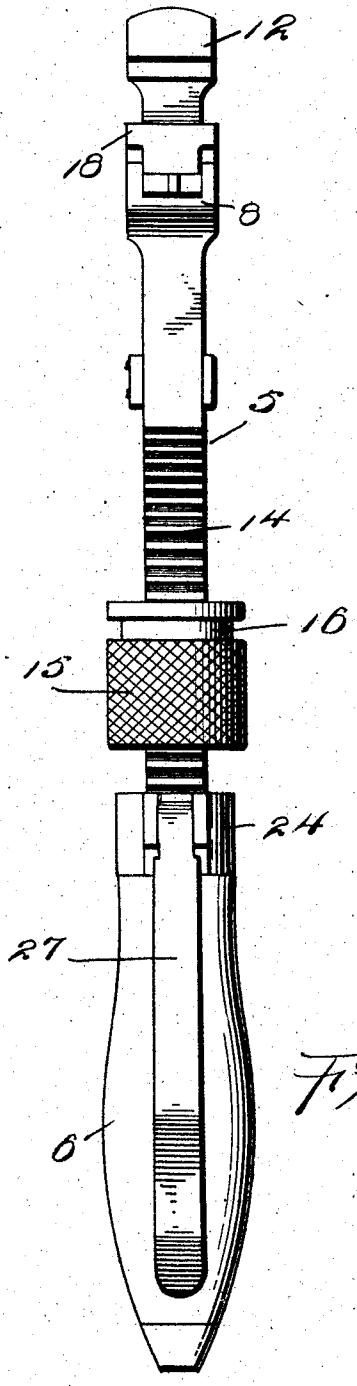


Fig. 3.

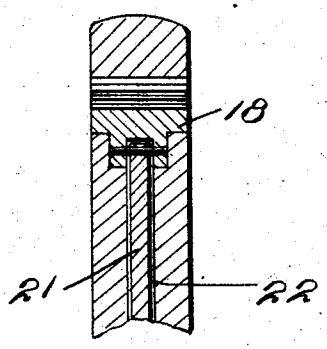


Fig. 4.

Witnesses
Chas. Simpson
W. C. A. Keyes.

Inventor
W. J. Sanders
By
Chandlee & Chandlee
Attorneys

No. 786,844. Patented April 11, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM JOSIAH SANDERS, OF MURFREESBORO, TENNESSEE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 786,844, dated April 11, 1905.

Application filed May 6, 1904. Serial No. 206,739.

To all whom it may concern:

Be it known that I, WILLIAM JOSIAH SANDERS, a citizen of the United States, residing at Murfreesboro, in the county of Rutherford, State of Tennessee, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to wrenches, and more particularly to sliding-jaw wrenches, and has for its object to provide a device of this nature which may be adjusted to grasp bodies of different sizes and which will combine both a pipe and a nut wrench in a single instrument.

Other objects and advantages will be apparent from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of the complete wrench. Fig. 2 is a longitudinal section of Fig. 1. Fig. 3 is an edge view showing the pipe-jaw just raised. Fig. 4 is a detail longitudinal sectional view, partly broken away, taken on line 4 4 of Fig. 2.

Referring now to the drawings, there is shown a wrench comprising a stock 5, provided with the usual wooden handle 6 at one end and with oppositely-extending lateral jaws 7 and 8 at the remaining end. The jaw 7 has a passage 9 therethrough with which is engaged a stem 10, having a head 11 at its outer end, which includes two jaws 12 and 13 for coöperation with the jaws 7 and 8, respectively.

The stock 5 is provided with threads 14, with which is engaged a cylindrical thumb-nut 15, having a circumscribing peripheral groove 16, with which is engaged a finger 17 on the lower end of the stem 10. The finger is loosely engaged in the groove so as to permit of rotation of the thumb-nut, which results in movement thereof longitudinally of the stock, and by reason of the engagement of the finger in the groove the stem is also moved longitudinally of the stock to vary the distance between the jaws 7 and 8 and the head 11.

The jaw 8 is provided with a movable jaw-face 18, which is pivoted at its inner end to the jaw and has serrations 19 for coöperation with similar serrations 20 upon the jaw 13. Pivoted to the jaw-face 18 is a rod 21, which lies in a longitudinal passage 22 in the stock, the rod terminating short of the bottom of the passage between which and the rod there is disposed a helical spring 23, which is attached both to the rod and to the bottom of the passage, and adjacent to its lower end the rod is provided with a collar 21′.

Secured to the stock adjacent to the upper end of the handle 6 is a collar 24, having a recess 25 therein, which registers with a passage 26, formed in the stock and which communicates with the longitudinal passage 22. Pivoted between the sides of the recess 25 is the upper end of a hand-lever 27, having a laterally-extending finger 28, which lies in the passage 26 and has a slot 29 at its free end into which the rod 21 extends, the collar 21′ resting upon the finger 28. The lever 21 extends downwardly over the handle 6 and lies normally spaced therefrom at its lower end, in which position it is held by the pressure of the upper end of the slot 29 against the finger 28, this pressure being the result of the tension of the spring 23. The lever 27 may be pressed inwardly to lie against the handle 6, which will move the rod 21 upwardly and will move the jaw-face 18 upon its pivot to bring the serrations 19 into engagement with a cylindrical or irregularly-shaped body engaged between the jaw-face 18 and the jaw 13. It will thus be apparent that the jaw-face 18 and the jaw 13 coöperate to form an efficient pipe-wrench, while the jaws 7 and 12 may be used to grasp nuts and other angular bodies.

In practice modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. A wrench comprising a stock having oppositely-extending lateral jaws at one end, a head having laterally-extending jaws arranged for coöperation with the first-named jaws and for movement toward and away from said jaws, one of the jaws of the head being serrated, a serrated jaw-face pivoted to one of the first-mentioned jaws for movement toward and away from the serrated jaw of the head, means for holding the jaw-face yieldably at the limit of its movement away from its coöperating second-named jaw, and means for moving the jaw-face against the action of the last-named means.

2. A wrench comprising a stock having a laterally-extending jaw at one end and a longitudinal passage therein communicating with the face of the jaw, a stem slidably connected with the stock and having a laterally-extending jaw at one end arranged for coöperation with the first-named jaw, means for moving the stem to vary the distance between the jaws, a jaw-face pivoted to the first-named jaw for movement toward and away from the second-named jaw, a rod pivoted to the jaw-face and lying within the longitudinal passage of the stock, said rod having a slot therein, a hand-lever pivoted to the stock and having a finger engaged in the slot, said lever being movable upon its pivot to move the rod within the passage to move the jaw-face toward and away from the second-named jaw, and means for holding the jaw-face yieldably at the limit of its movement away from said jaw.

3. In a device of the class described, the combination with a stock having a laterally-extending jaw at one end and having a longitudinal passage therein opening through the upper face of the jaw, of a stem slidably connected with the stock for coöperation with the first-named jaw, a jaw-face pivoted to the stock and arranged to lie upon the first-named jaw, a rod pivoted to the jaw-facing and slidably disposed in the passage of the stock, a spring connected to the rod and to the bottom of the passage to hold the rod yieldably at the downwardly limit of its movement and with the jaw-facing against the first-named jaw, and a band-lever pivoted to the stock and engaged with the rod for movement of the latter against the action of the spring to move the jaw-facing upon its pivot.

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

WILLIAM JOSIAH SANDERS.

Witnesses:

F. E. PITTS,

F. SMITHSON.