No. 669,904. Patented Mar. 12, 1901.

G. SIBERT.

WRENCH.

(Application filed Nov. 6, 1900.)

(No Model.)

Fig. I.

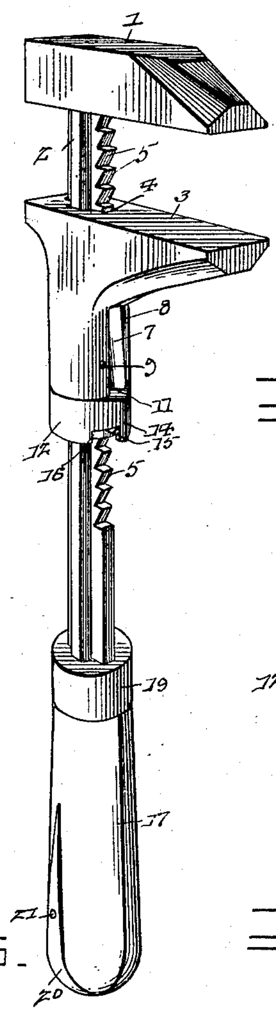


Fig. 2.

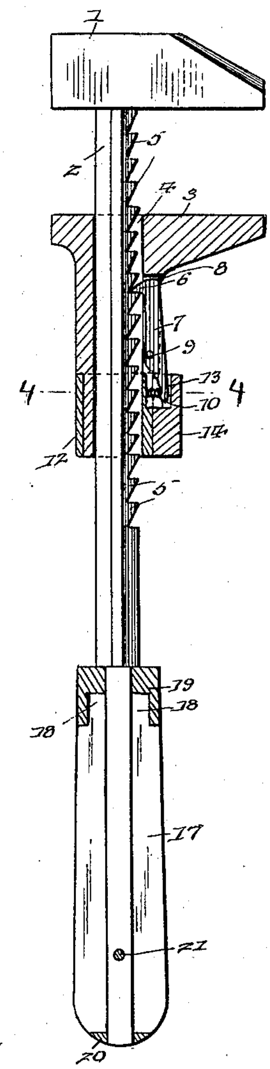


Fig. 3.

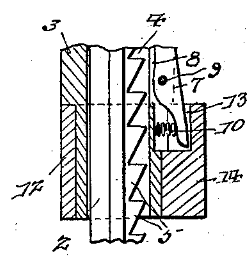


Fig. 4.

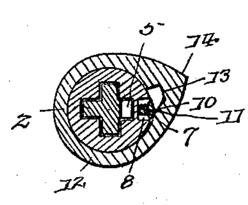
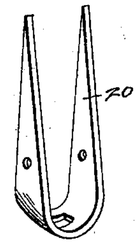


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE SIBERT, OF WATERLOO, NEBRASKA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 669,904, dated March 12, 1901.

Application filed November 6, 1900. Serial No. 35,639. (No model.)

To all whom it may concern:

Be it known that I, GEORGE SIBERT, a citizen of the United States, residing at Waterloo, in the county of Douglas and State of Nebraska, have invented a new and useful Wrench, of which the following is a specification.

The invention relates to improvements in wrenches.

The object of the present invention is to improve the construction of wrenches and to provide a simple and comparatively inexpensive one which will be capable of ready adjustment to engage it with a nut or other object and which will not become clogged with accumulation and refuse to operate.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a wrench constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an enlarged sectional view illustrating the construction for locking the pawl or dog out of engagement with the shank or bar. Fig. 4 is a sectional view on line 4 4 of Fig. 2. Fig. 5 is a detail perspective view of the U-shaped strap.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a stationary jaw located at one end of a shank or bar 2 and coöperating with a movable jaw 3, which is slidingly mounted on the shank or bar 2 and which is provided with a longitudinal opening 4 for the reception of the same. The shank or bar 2 is provided with front, rear, and side flanges and is approximately the shape of a cross in cross-section, as clearly illustrated in Fig. 4 of the accompanying drawings. The opening 4 of the movable jaw conforms to the configuration of the shank or bar, and the front flange of the latter is provided with a series of shouldered teeth 5, forming a ratchet and adapted to be engaged by a tooth 6 of a pawl or dog 7, which is provided with a shank extending longitudinally of the wrench, as clearly shown in Fig. 2. The pawl or dog 7 is pivoted between its ends in a longitudinal slot 8 of the movable jaw by a pin 9, which passes through registering perforations of the dog and the said movable jaw. The tooth of the dog or jaw is located at the outer end thereof, and it is adapted to engage the ratchet-teeth to resist the inward movement of the movable jaw, and it is beveled at its outer edge to enable it to slide freely over the beveled edges of the ratchet-teeth in moving the sliding jaw toward the fixed jaw 1. The dog or pawl is held in engagement with the teeth of the shank 2 by means of a coiled spring 10, seated in a recess of the movable jaw at the lower end of the slot 8 and interposed between the said movable jaw and the inner arm of the pawl or dog. The inner arm of the pawl or dog is arranged to be engaged by a cam or projecting portion 11 of a sleeve 12, mounted on a reduced portion of the movable jaw and carried by the same. The sleeve, which is capable of a limited rotary movement, is provided with a recess 13, formed in an enlarged portion 14 and adapted to receive the inner arm of the pawl or dog to provide the necessary play for enabling the outer arm of the said pawl or dog to engage the shank or bar 1. The enlargement 14 is adapted to be readily engaged by the thumb of the operator to rotate the sleeve to engage the inner projecting or cam portion 13 with the inner arm of the dog and to carry such cam or projecting portion out of engagement with the pawl or dog. The sleeve is rotated to the right to engage the cam or projecting portion with the pawl or dog, and it is moved to the left to release the pawl or dog. The movement of the sleeve is limited by a suitable pin 15, mounted on the movable jaw and arranged in a slot or recess 16 of the sleeve. The slot or recess is preferably formed at the lower edge of the sleeve, as clearly illustrated in Fig. 1 of the accompanying drawings.

The movable jaw is adapted to be readily released by moving the sleeve to the right, and when the pawl or dog is disengaged from the ratchet-teeth of the shank the jaw 3 is capable of free movement on the shank in either direction to engage the wrench with a nut or other object, and when the dog or pawl is in engagement with the shank the movable jaw is firmly locked against backward movement. The jaw 3 is adapted to

move freely on the shank or bar, and there is no liability of the parts becoming clogged.

The inner portion of the shank or bar is reduced to receive a handle 17, composed of two sections, of wood or other suitable material, and these sections have their inner ends 18 reduced and arranged within a ferrule 19. The outer ends of the handles are grooved to receive an approximately U-shaped strap 20, having tapering sides and secured to the handle-sections by means of a transverse fastening device 21.

It will be seen that the wrench is simple and comparatively inexpensive in construction, that it possesses great strength and durability, and that it is capable of ready adjustment and is not liable to stick.

What is claimed is—

1. A wrench comprising a shank provided with a ratchet, a stationary jaw, a movable jaw, a spring-actuated dog pivotally mounted between its ends and having one arm engaging the ratchet of the shank, and a sleeve mounted on the movable jaw and receiving the other arm of the pawl or dog and provided with means for engaging the same, substantially as described.

2. A wrench comprising a shank provided with ratchet-teeth, a stationary jaw, a movable jaw, a spring-actuated pawl or dog pivotally mounted between its ends on the movable jaw and having one arm engaging the ratchet-teeth, a rotary sleeve mounted on the movable jaw and receiving the other arm of the pawl or dog and provided with a recess for the same and having an inner projecting or cam portion for engaging the pawl or dog, substantially as described.

3. A wrench comprising a stationary jaw, a shank provided with ratchet-teeth, a movable jaw, a spring-actuated pawl or dog mounted on the movable jaw and engaging the ratchet-teeth, a sleeve arranged on the movable jaw in position for engaging the pawl or dog and provided with an opening 16, said sleeve being provided with a projecting or cam portion for holding the pawl or dog out of engagement with the shank, and a pin mounted on the movable jaw and arranged in the opening 16, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in the presence of two witnesses.

GEORGE SIBERT.

Witnesses:
A. S. SIBERT,
C. GOODWIN.