

(No Model.)

T. WILSON.
WRENCH.

No. 565,318.

Patented Aug. 4, 1896.

Fig: 1.

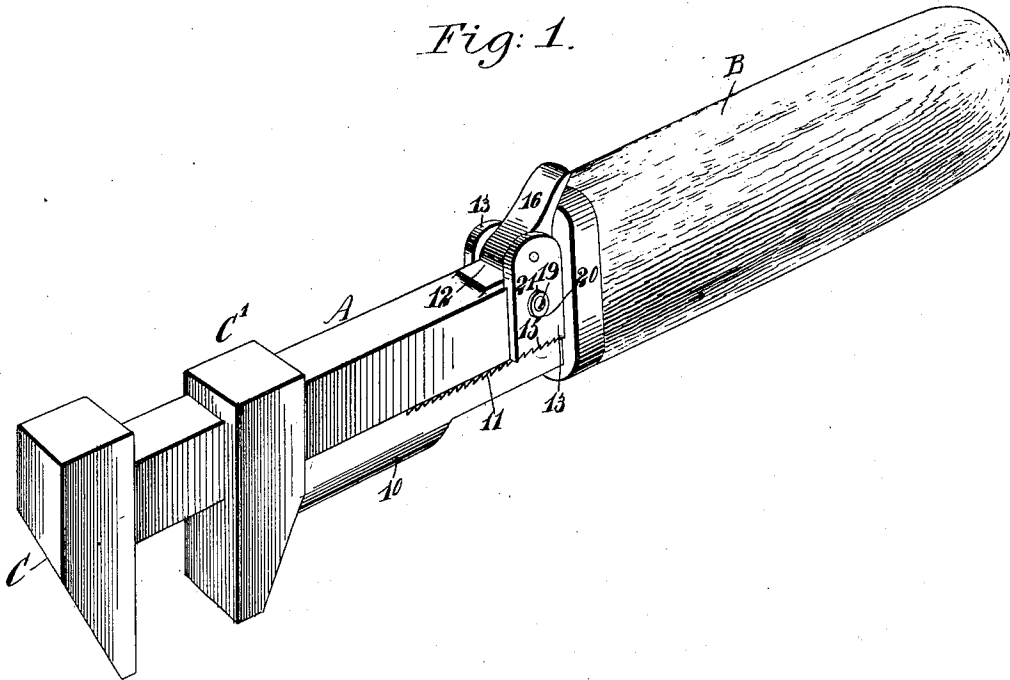
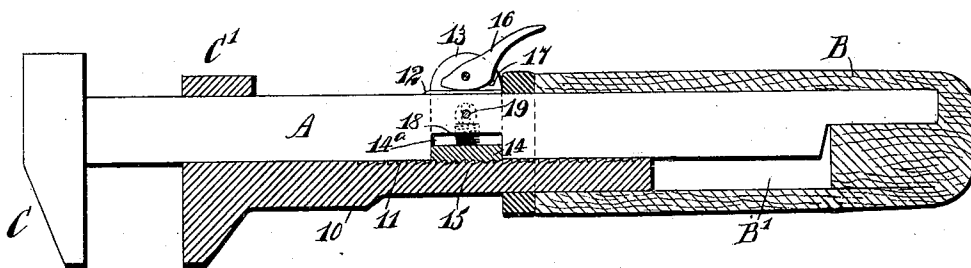


Fig: 2.



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WRENCH.

SPECIFICATION forming part of Letters Patent No. 565,318, dated August 4, 1896.

Application filed April 2, 1896. Serial No. 585,883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS WILSON, of Dillon, in the county of Beaverhead and State of Montana, have invented a new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

The object of the invention is to provide a simple, durable, and economic wrench, especially adapted as a nut-wrench, which will be quick in action and of great scope, and provided with a ratchet-latch capable of automatically locking and of being unlocked in an expeditious and convenient manner with the fingers of the hand grasping the handle of the wrench.

A further object of the invention is to protect the ratchet-teeth of the locking device of the wrench from possible injury by contact with objects with which the wrench may be brought in engagement.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a perspective view of the improved wrench, and Fig. 2 is a longitudinal vertical section through the same.

In carrying out the invention the stem A of the wrench is polygonal in cross-section, usually square, and is secured in any suitable or approved manner in a handle B. At the outer end of the stem a jaw C is rigidly secured, and a second jaw C' is mounted to slide on the stem of the wrench, the said sliding jaw having a shank 10 attached to it, extending parallel with the inner or front face of the stem A and into a chamber B', formed in the handle. The inner face of the shank 10 of the sliding jaw, for the major portion of its length and especially near its inner end, is provided with ratchet-teeth 11 upon its inner side face or the face opposed to the stem of the wrench. Near the handle on the back of the stem of the wrench a boss 12 is usually formed, and at each side of this boss an ear 13 is mounted to slide transversely on the side faces of the said stem, the two ears be-

ing connected at their lower ends by a cross-bar 14, having ratchet-teeth 15 in its outer face to engage with the teeth 11 on the shank of the sliding jaw, and a recess 14^a is made in the front face of the stem of sufficient depth to admit of the cross-bar 14 moving to and from the shank of the sliding jaw, and the aforesaid ears 13 and toothed cross-bar 14 constitute, practically, a yoke. The sides or ears of the yoke extend beyond the back of the wrench-stem, and have pivoted between their rear ends a lever 16, having a cam or rocking surface 17 arranged for engagement with the boss 12 on the stem, as shown in Fig. 2.

A spring 18 engages the bottom or cross bar 14 of the aforesaid yoke, the said spring entering and being seated in a suitable cavity made in the rear wall of the recess 14^a of the stem, as shown in Fig. 2, and a guide-pin 19 is passed through the said stem and through longitudinal openings 21, made in the sides of the yoke, the said guide rod or pin terminating at its outer end in suitable heads 20.

In operation the sliding jaw may be carried in direction of the fixed jaw without manipulating the lever 16, since the teeth connected with the sliding jaw will simply pass the teeth on the lever-controlled yoke; but wherever the sliding jaw is stopped the lever-controlled yoke will be in locking engagement with the shank of the sliding jaw, holding that jaw in its adjusted position.

When the space between the two jaws is to be widened, the lever 16 is pressed downward, carrying the toothed yoke from engagement with the teeth of the shank of the sliding jaw, permitting the said sliding jaw to be dropped as far as may be desirable; and immediately upon releasing the lever 16 the yoke will be carried to locking engagement with the aforesaid sliding jaw. It is therefore evident that the wrench may be manipulated by one hand in a convenient and expeditious manner, and that the ratchet-teeth are fully protected, and, again, since the teeth 15, connected with the movable jaw, cover the major portion of the shank of the said jaw a maximum bearing-surface is provided for the locking device, and likewise a maximum of range is obtained for the sliding jaw.

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

1. In a wrench, the combination, with the stem and the fixed jaw attached to the stem, of a sliding jaw having a shank provided with teeth upon its inner face, a toothed spring-controlled yoke located on the stem adjacent the handle, the toothed portion of the yoke being adapted for engagement with the teeth formed upon the movable jaw, and a lever connected with the yoke and arranged when depressed to disconnect the yoke from the toothed portion of the movable jaw, as and for the purpose specified.

2. In a wrench, the combination with a stem, a handle attached to the stem, a jaw fixed to the said stem, a second jaw mounted to slide on the stem and provided with a shank having sliding movement in the handle, the said stem having teeth upon its rear or inner face, of a spring-controlled yoke located on the stem at its junction with the handle and toothed for engagement with the teeth formed upon the movable jaw, and a lever connected with the said yoke and arranged to carry it out of engagement with the

teeth of the movable jaw, substantially as shown and described.

3. In a wrench, the combination, with a stem, a handle attached to the stem, a jaw secured to the stem, a second jaw mounted to slide on the stem and provided with a shank having ratchet-teeth upon its inner face, the said shank having movement in the handle of the wrench, of a yoke attached to said stem at its junction with said handle having guided movement on the stem to and from the shank of the sliding jaw, the said yoke being provided with ratchet-teeth coinciding with the teeth attached to the sliding jaw, a spring normally serving to hold the yoke against the stem of the sliding jaw, and a lever pivoted between the side members of the yoke and having a cam-face bearing upon the stem, whereby upon pressing the said lever the yoke may be carried out of controlling engagement with the shank of the movable jaw, substantially as shown and described.

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Witnesses:

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