No. 635,767. Patented Oct. 31, 1899.

W. GLEASON.

WRENCH.

(Application filed Mar. 16, 1899.)

(No Model.)

Fig. 1.

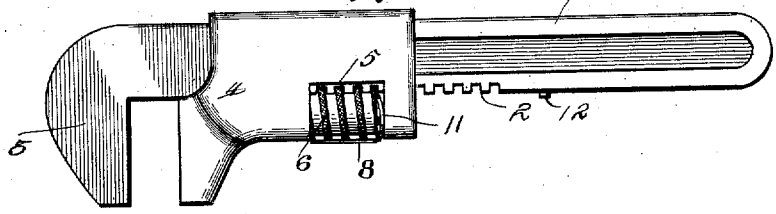


Fig. 2.

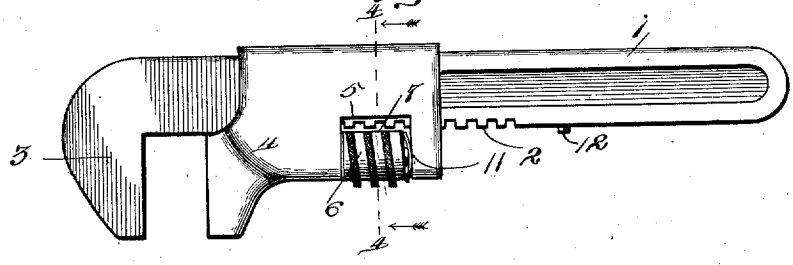


Fig. 4.

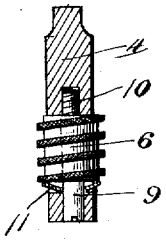


Fig. 3.

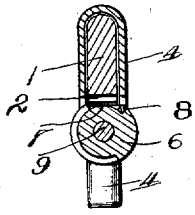


Fig. 5.

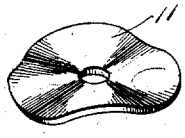
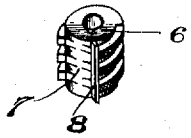


Fig. 6.



Witnesses
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By his Attorneys,
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UNITED STATES PATENT OFFICE.

WALTER GLEASON, OF MANISTIQUE, MICHIGAN.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 635,767, dated October 31, 1899.

Application filed March 16, 1899. Serial No. 709,327. (No model.)

To all whom it may concern:

Be it known that I, WALTER GLEASON, a citizen of the United States, residing at Manistique, in the county of Schoolcraft and State of Michigan, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to wrenches of that class known as "sliding-jaw" wrenches, and has for its objects to provide improved means for locking the movable jaw against accidental movement and which may be readily released to permit of a quick adjustment of the jaw.

To these ends the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claim.

In the drawings, Figure 1 is an elevation of a wrench having the improvements applied thereto and in locked position. Fig. 2 is a similar view showing the jaw released and adapted to be quickly adjusted. Fig. 3 is a transverse sectional view taken on the line *x x*, Fig. 2. Fig. 4 is a detail sectional view showing the mounting of the locking thumb-nut. Fig. 5 is a detail view of the spring-washer. Fig. 6 is a detail perspective view of the lock-nut.

Like numerals of reference denote like and corresponding parts in each of the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the handle of the wrench, having the toothed edge 2 and the fixed jaw 3. Mounted to slide upon the handle and to coöperate with the fixed jaw 3 is a slidable jaw 4, having an opening or recess 5, in which is mounted an externally-threaded locking-nut 6, which is adapted to be engaged with the teeth of the rack 2 and lock the movable jaw as adjusted. This much of the device may be of any well-known or preferred form, as the novelty of the present invention resides in the details of construction and mounting of the lock-nut.

A portion of the threads of the lock-nut are cut away for the entire longitudinal length of the nut, forming a smooth groove 7, which produces a mutilated nut. At one side of the groove thus formed and extending the entire length of the nut, across the threads thereof, is provided a longitudinal stop-shoulder 8, which is flush with or extends beyond the exterior peripheral edges of the threads and fills the space between the adjacent threads of the nut. It will be understood that when the threads are engaged with the teeth of the rack on the handle the movable jaw is locked against accidental movement; but by turning the nut until the groove 7 is alined with the rack, as shown in Figs. 2 and 3, the threads of the nut are entirely disengaged from the teeth of the rack and the movable jaw is free to be quickly adjusted as desired. The purpose of the shoulder 8 is to engage the teeth of the rack, as shown in Fig. 3, and form a stop to limit the turning movement of the lock-nut and cause the groove to be alined with the rack without the necessity of closely examining the device to see that the nut is properly adjusted. By reason of the fact that the shoulder 8 is located at one side of the mutilated portion or groove 7 of the nut and closes the space between the adjacent threads the latter at the shouldered side of the groove are effectually prevented from being engaged with the teeth of the shank, whereby the threads of the nut can be engaged with the teeth of the shank only at one side of the groove 7. Thus the lock-nut is automatically stopped at the proper point in its rotating movement.

The lock-nut is mounted to rotate in the opening formed in the slidable jaw upon a removable pivot-pin 9, passing upward through the sides of the opening and centrally through the nut, having its inner extremity 10 threaded and engaging a threaded recess formed in the upper face of the opening. Fitted upon the pivot-pin, next to one face of the opening in the movable jaw and frictionally engaging against the contiguous end of the lock-nut, is a convolute spring-washer 11. The purpose of this washer is to frictionally engage the nut and hold the same against accidental rotary movement both in the released position of the nut and when the threads of the nut have been engaged with the teeth of the rack, whereby the movable jaw will be positively

held as set or adjusted and will be prevented from working open or loosening its grip upon the object to which it may be fitted.

It will be understood that the nut has a longitudinal slidable movement upon the pivot-pin thereof, as well as an axial movement thereon, so that the spring-washer may force the opposite end of the nut into frictional engagement with the adjacent wall of the recess in the sliding jaw.

The movable jaw is prevented from being lost from the handle by means of a suitable lug 12 provided upon the handle and against which the said jaw is adapted to engage and limit the downward movement thereof. The threads of the nut and the teeth of the rack are preferably fine to permit of a close and accurate adjustment of the movable jaw, and the nut may have a double thread, which will also add to the adjustment of the jaw.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claim may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

In a sliding-jaw wrench, the combination with a handle or shank having a fixed jaw, a movable jaw slidable upon the handle or shank and provided with an opening or recess exposing the adjacent side of the handle or shank, of a smooth relatively-fixed pivot-pin having its opposite ends removably fitted in opposite walls of the recess or opening in the slidable jaw, a locking-nut slidably mounted upon the pivot-pin, and also having an axial movement thereon, and a spring-washer fitted upon the pivot-pin and bearing in opposite directions against one end of the nut and the adjacent wall of the recess or opening in the slidable jaw, and normally maintaining the opposite end of the nut in frictional engagement with the contiguous wall of the recess or opening, substantially as and for the purpose set forth.

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

WALTER GLEASON.

Witnesses:
W. L. LORANGER,
ED ASHFORD.