R. M. SNYDER.

WRENCH.

APPLICATION FILED JUNE 28, 1912.

1,039,458. Patented Sept. 24, 1912.

Fig. 1.

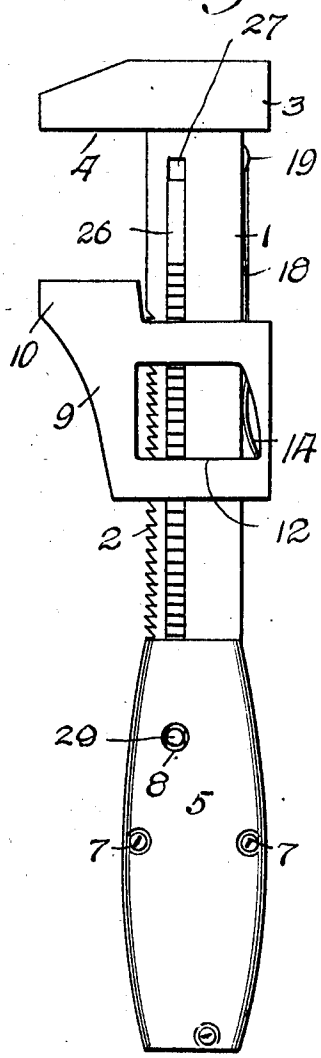


Fig. 2.

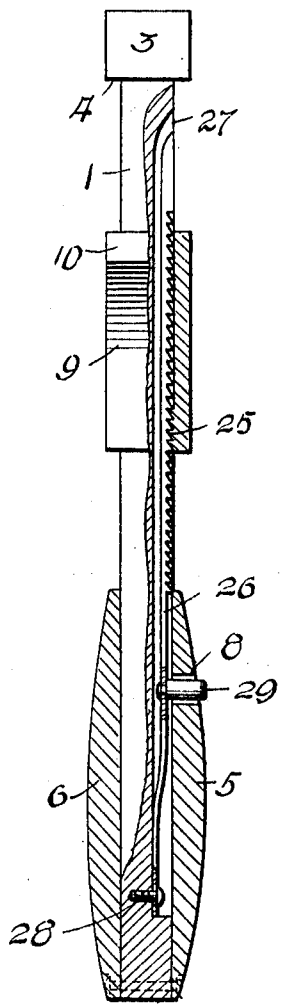
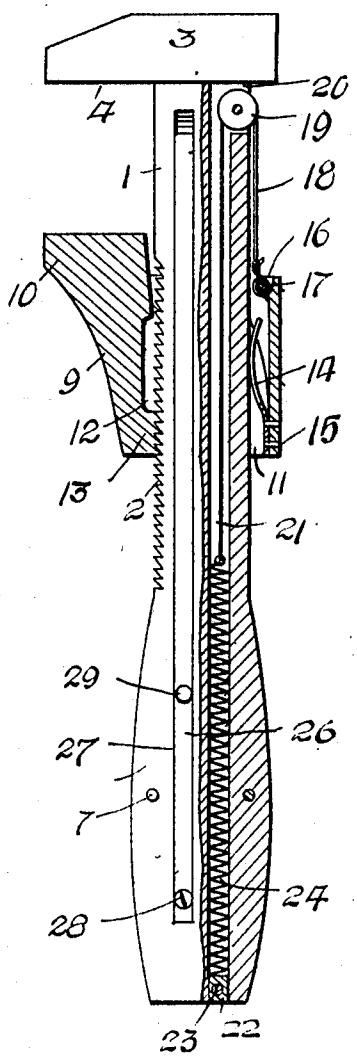


Fig. 3.



WITNESSES

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WRENCH.

1,039,458. Specification of Letters Patent. Patented Sept. 24, 1912.

Application filed June 28, 1912. Serial No. 706,390.

To all whom it may concern:

Be it known that I, RALPH M. SNYDER, a citizen of the United States of America, residing at Hawthorne, in the county of Clarion and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to quick acting wrenches, and the primary object of my invention is to provide a nut wrench with a double locking mechanism for firmly holding the adjustable jaw of a wrench in a locked position relatively to the stationary jaw thereof.

Another object of this invention is to furnish a nut wrench with simple and effective means for closing the adjustable jaw of the wrench, when said jaw is released by the locking mechanism.

A still further object of this invention is to provide a wrench of the above type that is simple in construction, durable, easy to manipulate and highly efficient for the purposes for which it is intended.

With the above and other objects in view, the invention resides in a novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing, wherein:—

Figure 1 is a side elevation of the wrench. Fig. 2 is a front elevation of the same partly broken away and partly in section, and Fig. 3 is a longitudinal sectional view of the same.

A wrench in accordance with this invention comprises a shank 1 that is rectangular in cross section and has the front side thereof provided with transverse ratchet teeth 2. The outer end of the shank 1 has an integral stationary jaw 3 that presents a flat gripping surface 4 at right angles to the front side of the shank 1. The inner end of the shank 1 is provided with detachable handle plates 5 and 6 that are connected to the shank 1 by screws 7 or other fastening means. The handle plate 5 has an opening 8, for a purpose that will presently appear.

Movably mounted upon the shank 1 is an adjustable jaw body 9 having a jaw 10 presenting a flat gripping surface that confronts the gripping surface 4 of the stationary jaw 3 and coöperates therewith in engaging the facets of a nut for rotation purposes. The adjustable jaw body 9 has a longitudinal opening 11 providing clearance for the shank 1 and the side walls of the jaw body are cut away, as at 12 to reduce the weight of said jaw body. The front wall of the opening 11, at the inner end thereof, is provided with transverse teeth 13 and these teeth are adapted to engage the transverse teeth 2 of the shank 1. The teeth 13 are normally retained in engagement with the shank 1 by a flat compression spring 14 that has one end thereof secured to the rear wall of the opening 11, as at 15 and the opposite end of said spring bearing against the rear side of the shank 1. The rear wall of the opening 11, at the outer end thereof, is provided with lugs 16 that are connected by a pin 17 and attached to said pin is a cord or cable 18. The cord or cable 18 passes over a sheave 19 revolubly mounted in an opening 20 provided therefor in the outer end of the shank 1 adjacent to the jaw 3. The opening 20 is in communication with a longitudinal bore 21 formed in the shank 1, said bore extending to the inner end of the shank, where said bore is closed by a plug 22 that is mounted in the inner end of a bore by a transverse pin 23. Attached to the plug 22 is a coiled retractile spring 24 having the opposite end thereof attached to the cord or cable 18.

One of the side walls of the opening 11, at the inner end thereof, is provided with transverse teeth 25 as best shown in Fig. 2, and engaging these teeth is a toothed resilient bar 26 that is arranged in a longitudinal groove 27 provided therefor in the front of the shank 1. The inner end of the resilient bar 26 is secured to the shank 1 by a screw 28 or other fastening means, and said bar has a push-pin 29 that extends through the opening 8 of the handle plates 5.

To release the adjustable jaw body, it is necessary that the rear side of said body be pressed toward the shank 1 to move the teeth 13 out of engagement with the teeth 2 of said shank, also, to press upon the push-pin 29 to move the toothed bar 26 out of engagement with the teeth 25 of the adjustable jaw body. Immediately upon these two locking elements being unlocked, the adjustable jaw body 9 is released and the spring 24 can close the adjustable jaw body

relatively to the stationary jaw 3. The teeth 13 and the toothed bar 26 recede over the teeth 2 and the teeth 25 respectively, and as the adjustable jaw body 9 is automatically set in engagement with a nut, said jaw body cannot recede during the operation of the wrench.

It is thought that the operation and utility of the wrench will be apparent without further description, and while in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements are susceptible to such variations and modifications as fall within the scope of the appended claims.

What I claim is:—

1. In a wrench of the type described, the combination with a shank having the front side thereof toothed, a stationary jaw carried by the outer end of said shank, and said shank having the longitudinal bore formed therein with the outer end thereof open at the rear side of said shank, of an adjustable jaw body slidably mounted upon said shank, said jaw body having a longitudinal opening providing clearance for said shank, the front wall of said opening at the inner end thereof having teeth adapted to engage said toothed shank, a flat compression spring connected to the rear wall of the opening of said jaw body and bearing against the rear side of said shank, a sheave revolubly mounted in the outer end of said shank, a cord attached to the rear wall of said jaw body and extending over said sheave into the bore of said shank, and a coiled retractile spring arranged in the bore of said shank and connected to said cord and adapted to close said adjustable jaw body when said body is released.

2. In a wrench of the type described, the combination with a shank having the front side thereof toothed, a stationary jaw carried by the outer end of said shank, and said shank having the longitudinal bore formed therein with the outer end thereof open at the rear side of said shank, of an adjustable jaw body slidably mounted upon said shank, said jaw body having a longitudinal opening providing clearance for said shank, the front wall of said opening at the inner end thereof having teeth adapted to engage said toothed shank, a flat compression spring connected to the rear wall of the opening of said jaw body and bearing against the rear side of said shank, a sheave revolubly mounted in the outer end of said shank, a cord attached to the rear wall of said jaw body and extending over said sheave into the bore of said shank, a coiled retractile spring arranged in the bore of said shank and connected to said cord and adapted to close said adjustable jaw body when the said body is released, and means arranged in the side of said shank and including a resilient toothed bar adapted to engage the side wall of said adjustable jaw body to cooperate with the teeth thereof in locking said adjustable jaw body relatively to said shank.

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

RALPH M. SNYDER.

Witnesses:
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W. D. SNYDER.