H. G. KREGER.

WRENCH.

APPLICATION FILED NOV. 18, 1911.

1,019,806. Patented Mar. 12, 1912.

FIG. 1.

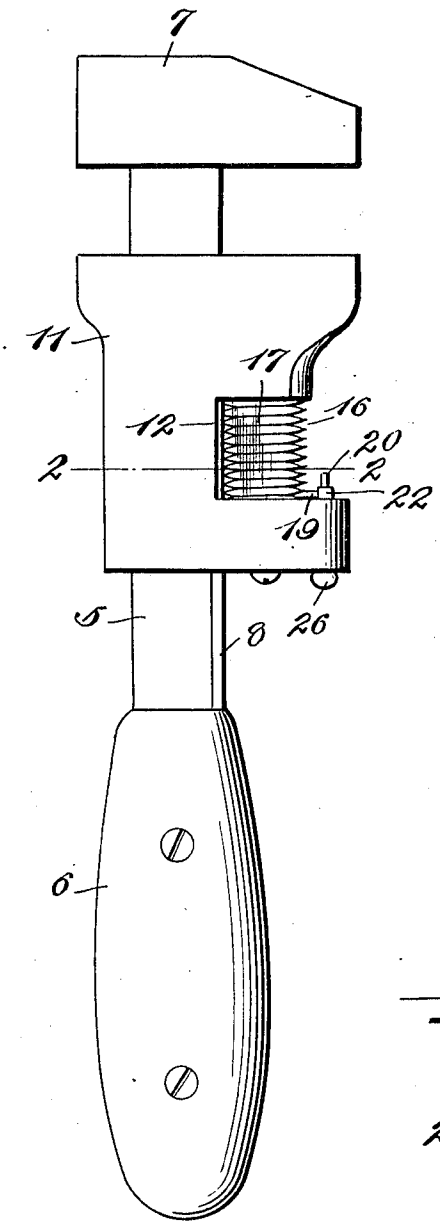


FIG. 2.

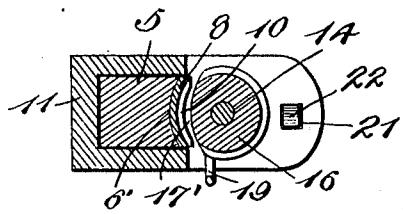


FIG. 3.

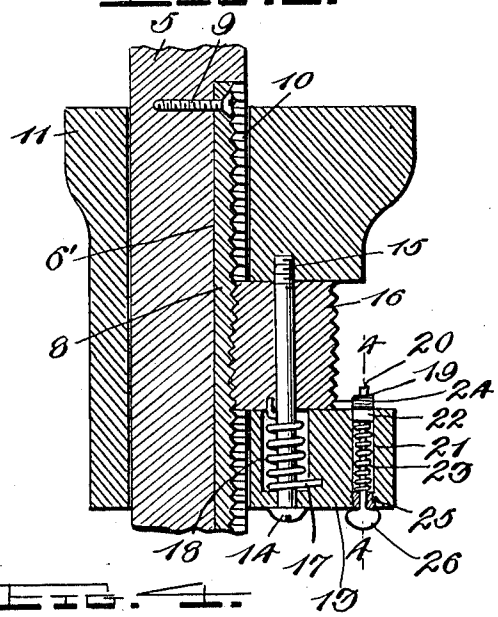
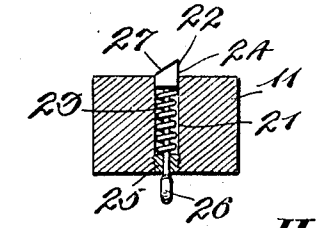


FIG. 4.



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WRENCH.

1,019,806. Specification of Letters Patent. Patented Mar. 12, 1912.

Application filed November 18, 1911. Serial No. 661,017.

To all whom it may concern:

Be it known that I, HERMAN G. KREGER, a citizen of the United States, residing at Dodge City, in the county of Ford and State of Kansas, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in wrenches and has for its object to provide a wrench of the quick adjusting type which is capable of minute adjustment for application to nuts of various sizes and which may be easily and quickly removed from the nut.

Another object of the invention is to provide a comparatively simple and efficient wrench of the above character which is extremely durable in practical use and one wherein the various parts may be replaced at small cost.

With the above and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a wrench embodying my improvements; Fig. 2 is a section taken on the line 2—2 of Fig. 1, the sliding jaw being released for movement on the wrench shank; Fig. 3 is an enlarged longitudinal section of the sliding jaw and the shank; and Fig. 4 is a section taken on the line 4—4 of Fig. 3.

Referring in detail to the drawing 5 designates the wrench shank which is provided upon one end with a handle 6 and upon its opposite end with a stationary jaw 7. One of the longitudinal edges of the shank 5 is recessed as indicated at 6′ to receive a plate 8 which is removably secured therein by means of the screws 9. This plate is provided with a concave threaded face 10 for engagement by a locking member carried by the sliding jaw as will presently appear.

The sliding jaw 11 is provided with a rectangular opening to receive the shank of the wrench, and said jaw is provided in its lower end and in one side thereof with an aperture 12 which communicates with the shank receiving bore. The lug or extension 13 formed on the end of the jaw by the provision of the aperture 12 therein is provided with an opening to receive a bolt 14, one end of which is threaded in the sliding jaw as indicated at 15, said bolt extending in longitudinal relation to the wrench shank and across the aperture 12 of the sliding jaw. Upon this bolt a semi-cylindrical locking member 16 is loosely mounted for rotative movement, said locking member being provided with peripheral threads to engage the threaded concave face 10 of the plate 8. This locking member is, however, further provided with a flattened face 17′ which is not provided with screw threads so that when said face is disposed adjacent to the plate 8, the jaw 11 may be freely moved longitudinally upon the wrench shank.

In order to provide means for quickly releasing the sliding jaw, a coiled spring 17 is arranged in the opening 18 through which the bolt 14 extends and one end of this spring is fixed to the locking member 16, the other end thereof being secured to the extension 13. A laterally extending finger-piece 19 is formed upon one end of the locking member 16 and is provided with a right angular extension 20 which is disposed in parallel relation to the longitudinal axis of the locking member. In the outer end of the lug or extension 13 of the sliding jaw a longitudinal opening 21 is formed in which a bolt 22 is movably arranged, said bolt being yieldingly held against movement by means of a spring 23 which is secured to the head 24 on one end of said bolt and to a threaded plug 25 which is arranged in the end of the opening 21. Upon the other or inner end of the bolt 22 a finger-piece 26 is formed whereby said bolt is retracted or drawn through the opening 21 to release the rotatable locking member 16. The head or enlargement 24 on the outer end of the bolt 22 is provided with a beveled face 27 which is adapted for engagement by the extension 19 on the locking member 16. By means of this construction it will be readily seen that when the member 16 is rotated to the right from the position shown in Fig. 2, the engagement of the finger-piece 19 thereof with the beveled face 27 will force the bolt 22

inwardly against the tension of the spring 23. This rotation of the locking member places the spring 17 under tension or coils the same within the opening 18. Thus when the finger-piece 19 is moved over the beveled face 27 and behind the head 24, the spring 23 immediately forces said head outwardly and holds the locking member 16 against reverse rotation under the action of the spring 17. It will thus be seen that accidental turning movement of the member 16 which would release the sliding jaw after the wrench has been applied to the nut, is effectually prevented. Said jaw may, however, be easily and quickly released after the nut has been loosened by simply grasping the finger-piece 26 on the end of bolt 22 and moving said bolt inwardly out of the path of movement of the extension 19 on the member 16. The spring 17 will then immediately rotate the locking member and return the same to its normal released position. The sliding jaw can now be freely moved upon the wrench shank and adjusted as desired.

From the foregoing it is thought that the construction and manner of operation of my improved wrench will be fully understood. As the plate 8 is removably secured to the shank of the wrench, when the same becomes worn from frequent engagement of the locking member therewith, said plate may be readily removed and replaced by a new one at an insignificant expense. The wrench is extremely quick in its action, and the sliding jaw may be released for movement on the shank by the same hand in which the wrench is held. Owing to the comparatively few parts employed in the construction of the device, the same is rendered extremely efficient and durable in practical use.

While I have shown and described the preferred construction and arrangement of the various parts, it will be understood that the invention is susceptible of a great many minor modifications without departing from the essential feature or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

1. In combination, a shank having a stationary jaw formed on one end, a sliding jaw on said shank, a plate removably secured to the shank and having a threaded face, a semi-cylindrical locking member provided with threads for co-action with the threaded face of the plate, said member also having a flat unthreaded surface, means normally holding said flat surface of the locking member in opposed relation to the threaded face of the plate whereby said sliding jaw may be adjusted on the shank, and additional means to hold the threads of said member in engagement with the threads on said plate against the action of said first named means whereby the jaw is locked in its adjusted position on the shank.

2. In combination, a shank having a stationary jaw formed on one end, a sliding jaw adjustable on the shank, a plate removably secured to the shank and provided with a threaded face, a rotatable locking member mounted in the sliding jaw having a threaded portion to engage the threads upon said plate to lock the jaw in its adjusted position, said member also having a flattened unthreaded portion, a spring mounted in the jaw and normally holding the flattened face of said member in opposed relation to the threads on said plate whereby the sliding jaw may be moved on the shank, and means mounted in said jaw and co-acting with said locking member to hold the same in its locking position against the action of said spring.

3. In combination, a shank having a stationary jaw formed on one end, a sliding jaw adjustable on the shank, a plate longitudinally arranged on one face of the shank and secured thereto, said plate having a threaded face, a locking member rotatably mounted in the jaw and having a threaded portion to co-act with the threads on said plate whereby the jaw is locked in its adjusted position, said member also having a flat unthreaded portion, a spring mounted in the jaw and connected to said locking member to normally maintain the flat face thereof in opposed relation to the threads upon said plate, and means mounted in the jaw and automatically actuated in the movement of said locking member to its effective locking position to hold said member in such position against the action of said spring.

4. In combination, a shank having a stationary jaw formed on one end, a sliding jaw adjustable on said shank, a plate secured to one face of the shank and having a concave threaded face, a locking member rotatably mounted in the sliding jaw and having a threaded portion to engage the threads of said plate and lock the jaw in its adjusted position, said member also having a flat unthreaded portion, a spring arranged in the jaw and connected to said locking member to normally hold the flat portion thereof in opposed relation to the threaded face of said plate, a finger-piece laterally extending from one end of said locking member, and a spring held bolt having a head formed on one end normally projected by said bolt into the path of movement of said finger-piece, said head

having a beveled face to be engaged by said finger-piece in the rotation of the locking member to its effective locking position, said finger-piece engaging the head on said bolt whereby the locking member is held against rotation under the action of the spring connected thereto.

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

HERMAN G. KREGER.

Witnesses:
L. D. FLANAGAN,
J. L. RANKIN.