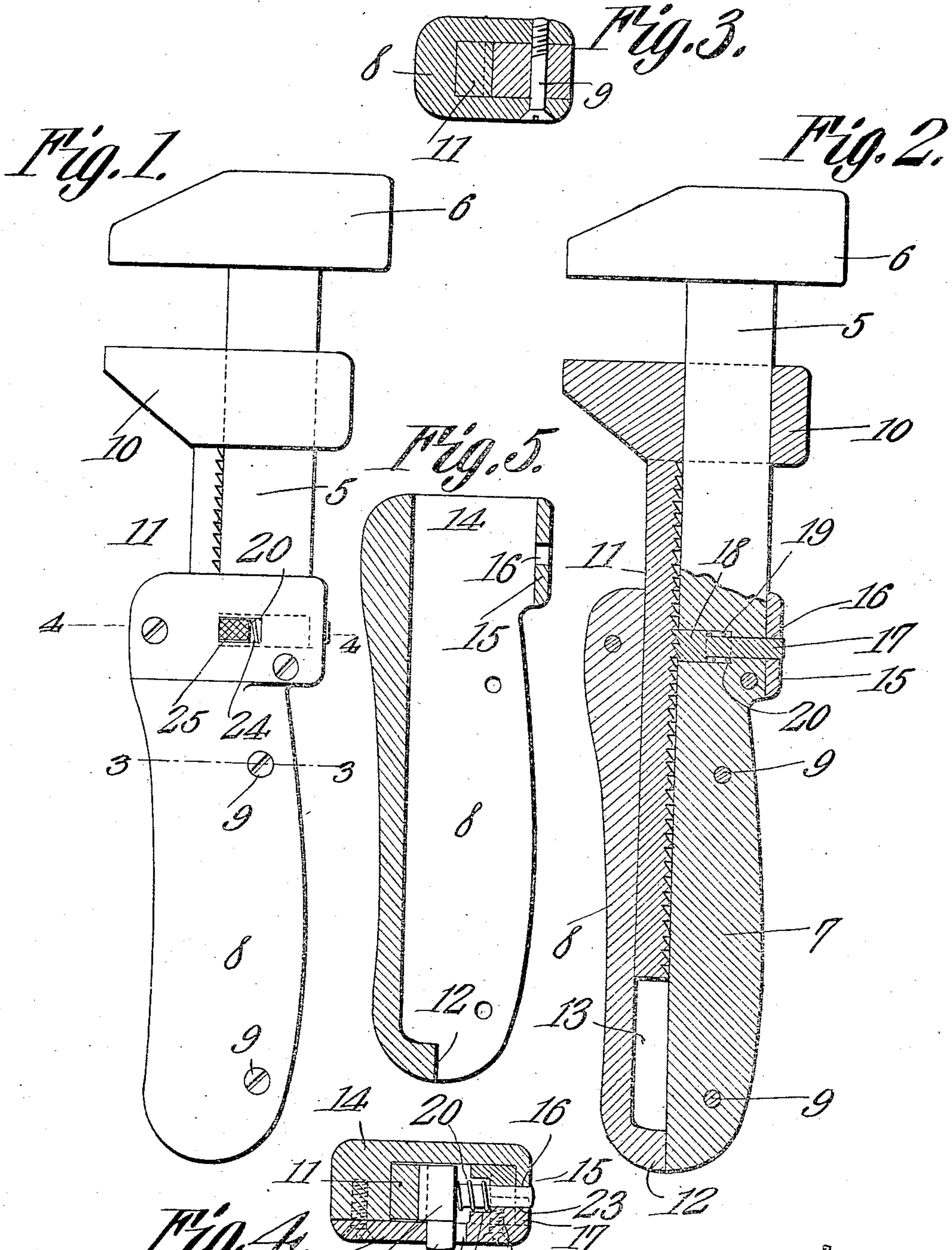


943,781.

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WRENCH.  
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# UNITED STATES PATENT OFFICE.

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## WRENCH.

943,781.

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*To all whom it may concern:*

Be it known that I, WILLIAM N. JAY, a citizen of the United States, residing at Moscow, in the county of Latah and State of Idaho, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to wrenches and has for its object to provide a comparatively simple and thoroughly efficient device of this character capable of being quickly adjusted to grip nuts and other objects of different sizes.

A further object is to provide a quick acting wrench including a shank having a stationary jaw secured to one end thereof and provided with a movable jaw slidably mounted on the shank and having a depending rack for engagement with a spring pressed pawl, whereby the movable jaw may be locked in different positions of adjustment.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification:—Figure 1 is a side elevation of a wrench constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a similar view taken on the line 4—4 of Fig. 1. Fig. 5 is a longitudinal sectional view of the handle detached.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved wrench forming the subject matter of the present invention comprises a shank 5 having a stationary clamping jaw 6 secured to one end thereof and provided at its opposite end with a longitudinal extension 7 which forms one wall of the handle 8. The handle 8 may be formed of wood or other suitable material but is preferably constructed of metal and comprises a body

portion substantially U shaped in cross section and between the opposite side faces of which is secured the extension 7 of the shank, the latter being retained in position on the handle by means of screws, bolts or similar fastening devices 9.

Slidably mounted on the shank 5 is a movable jaw 10 having an opening formed therein for the reception of said shank and provided with a depending rack 11, the teeth of which are arranged along the inner longitudinal edge thereof so as to prevent the same from becoming mutilated or otherwise injured by contact with the work or foreign objects when the wrench is being transported from place to place.

The lower end of the handle 8 is provided with a stop lug 12 which bears against the inner longitudinal edge of the extension 7 and serves to space the latter from the inner face of the handle, thereby forming an intermediate chamber 13 for the reception of the rack 11, the adjacent walls of the handle and shank 7 serving to assist in guiding the rack when the latter is moved to different positions of adjustment.

The upper end of the handle 8 is provided with a cap-piece 14 having a laterally extending arm 15 formed with a segmental recess 16 to permit the passage of the cylindrical extension 17 of a locking pawl 18, the latter being provided with an enlarged head having teeth or serrations formed therein for engagement with the teeth on the rack 11, thereby to lock the movable jaw 10 in different positions of adjustment.

The shank 5 is provided with a recess 19 in which is seated one end of a coiled spring 20, the opposite end of which bears against the head of the locking pawl and serves to normally and yieldably support the teeth on said head in engagement with the teeth of the depending rack.

Extending transversely across one side of the handle at the cap-piece 14 is a removable plate 21 having one end thereof provided with an inwardly extending lug 22, the free edge of which is formed with a segmental recess 23 adapted to register with the recess 16, there being an elongated slot 24 formed in the plate 21 to permit the passage of a finger-piece 25 formed integrally with the pawl so that by pressing rearwardly on the finger-piece against the tension of the spring 20, the pawl may be readily disengaged from



the rack 11 to permit the latter to be adjusted to accommodate nuts of different sizes. Thus it will be seen that by pressing rearwardly on the finger piece 25 with the thumb, the movable jaw 10 may be adjusted longitudinally of the shank with the forefinger, the spring pawl serving to automatically lock the movable jaw in adjusted position as soon as pressure is removed from the finger-piece.

Attention is here called to the fact that by removing the face plate 21 access may be readily had to the pawl so as to permit the replacement of the spring or pawl-proper should either, for any reason, become broken or otherwise injured. It will also be noted that the inwardly extending lug 22 of the face plate 21 by engagement with the cylindrical extension of the locking pawl serves to guide the latter and also serves to prevent accidental displacement of the same.

The wrenches may be made in different sizes and shapes and nicked, japanned or otherwise coated to give the same a neat ornamental appearance.

Having thus described the invention what is claimed is:—

1. A wrench including a shank having a stationary jaw and provided with a longitudinal extension, a substantially U shaped handle embracing the extension of the shank and having its inner wall spaced from the extension to form an intermediate compartment, the upper end of the handle being provided with an angular portion having a segmental recess formed therein, a movable jaw slidably mounted on the shank and provided with a depending rack, the teeth of which are arranged next to the shank, a face plate secured to the handle and having an inwardly extending lug provided with a segmental recess arranged to register with the recess in the extension of

the handle, and a spring pressed locking pawl having one end thereof provided with a toothed head arranged to engage the teeth on the rack and its opposite end provided with a cylindrical portion operating in the segmental recesses.

2. A wrench including a shank having a stationary jaw secured to one end thereof and provided at its opposite end with a longitudinally disposed shank, a substantially U shaped handle embracing the extension of the shank and having its inner wall spaced from the adjacent longitudinal edge of the extension to form an intermediate compartment, one end of the handle being formed with an angular portion having a segmental recess formed therein, a detachable face plate secured to the handle and having an inwardly extending lug, the inner face of which is formed with a segmental recess arranged to register with the segmental recess in the angular portion of the handle, there being an elongated slot formed in the face plate, a movable jaw slidably mounted on the shank and provided with a depending rack, the teeth of which are disposed adjacent the inner face of the shank, a locking pawl having a cylindrical extension operating in the segmental recesses, a finger piece extending laterally from one side of the pawl and projecting through the slot in the face plate, and a coiled spring surrounding the cylindrical extension of the pawl for normally and yieldably holding the latter in engagement with the teeth on the rack.

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

WILLIAM N. JAY.

Witnesses:

M. J. ATKINS,  
B. E. BUSH.