Feb. 8, 1927. 1,616,612

J. H. DODDS

WRENCH

Filed May 31 1924

Fig. 1.

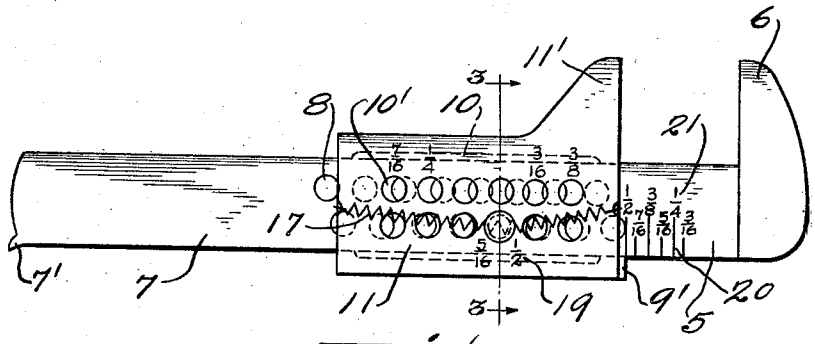


Fig. 2.

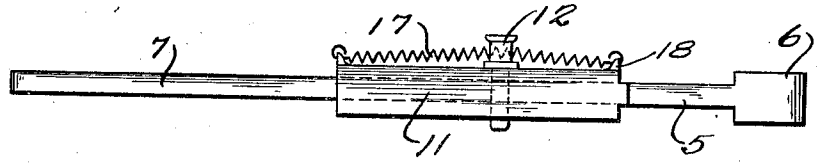


Fig. 3.

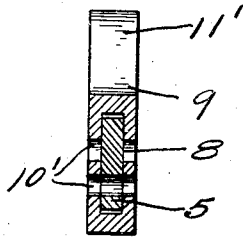
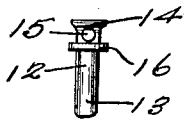


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN H. DODDS, OF ELIZABETH, NEW JERSEY.

WRENCH.

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This invention relates to improvements in wrenches and more particularly to a wrench having a movable jaw.

An important object of the invention is to provide a wrench wherein the movable jaw will be positively locked in relation to the stationary jaw.

A further object of the invention is to provide a wrench of this character wherein very fine adustments may be made and positively retained.

A still further object of the invention is to provide a wrench of this character which is comparatively simple, yet durable in construction and efficient for the purpose intended.

Other objects and advantages of this invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a top plan view of the device embodying my invention,

Figure 2 is a side elevation of the same,

Figure 3 is a transverse sectional view taken on the line 3—3 of Figure 1, showing the pin removed, and

Figure 4 is a side elevation of one of the details.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 5 indicates the shank of the wrench and has a fixed jaw 6 formed integrally on the extremity thereof. The opposite extremity of the shank 5 extends outwardly from the body of the wrench and forms the handle 7, an arcuate projection 7′ being formed at the extreme end. The shank 5 of the wrench is provided with a plurality of apertures being aligned in two rows as shown at 8 and spaced as closely as desired.

A movable section 9 is provided with a bore suitable to receive the shank 5 preferably rectangular as shown, the central portion being somewhat enlarged as shown at 10 to permit ready movement of the same. The movable section 9 comprises a substantially rectangular casing 11 and a jaw 11′ formed on one extremity of the casing adapted to co-act with the jaw formed upon the shank 5. On the opposite side of the casing a projecting lug 9′ is provided the purpose of which will be later described. The casing 11 is also provided with a plurality of apertures 10′ which may be arranged in two rows oppositely disposed as shown in the drawing in Figure 1 or in any suitable manner depending largely upon the application of the wrench and the particular work for which it is constructed.

The casing 11 is locked with the wrench shank 5 by means of a movable pin 12 comprising a shank 13 adapted to easily fit the apertures formed in the casing and wrench shank, and has an enlarged head 14 formed on the upper extremity, provided with an opening. A collar 16 is formed on the lower portion of the enlarged head 14 and rests upon the movable casing 11 thereby retaining the pin in position. The apertures 10′ in the casing 10 are spaced a different distance apart than the apertures 8 in the shank 5, thus permitting the aligning of an aperture in the casing with an aperture in the shank upon very slight adjustment of the jaws.

A coil spring 17 is held longitudinally upon the central portion of the movable casing 11 by means of upwardly extending brackets 18 formed on the casing 11. The spring 17 extends parallel with the rows of apertures in the casing and has its opposite ends attached to the ends of the casing between the two rows of apertures. The spring 17 is passed through the opening 15 formed in the pin 12 and forces the same tightly upon the movable casing, the pin being raised for removal from the apertures and inserted as desired. While I have shown and described the coil spring mounted upon the movable casing to retain the pin securely in position I do not wish to restrict my invention to this particular construction as it is obvious that numerous means may be employed for preventing removal of this pin.

In order to enable the wrench to be readily employed upon standard size nuts and bolts I consider it desirable to affix numerals as shown at 19 opposite any desired number of the openings in the casing 11 indicating numerous size nuts to which the wrench may be applied. Corresponding marks 20 are impressed upon the shank 5, these numerals indicate the openings into which the pin 12 is to be positioned when the particular size nut is to be engaged by the wrench, corresponding marks 20 being impressed upon the shank 5 having numerals 21 denoting the

bolt sizes marked thereover, these marks being spaced suitable distances from the jaw 6 to permit the jaw to engage standard size nuts mounted upon the bolt.

In use, the wrench may be constructed in any desired size suitable for the work upon which it is to be applied and positively grip the object upon which it is used. To change the adjustment it is merely necessary to withdraw the pin from the aperture against the tension of the spring and insert through either aperture in the casing and a suitable opening in the shank 5, the openings both in the casing and shank may be spaced very closely if desired to provide fine adjustment if necessary three or four rows of apertures may be employed if necessary.

It is to be understood that the form of my invention herewith shown and described is to be taken as the preferred example of the same, and that various changes as to the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention, or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A wrench of the character described, comprising a longitudinal shank, a casing movably mounted upon said shank, a jaw formed upon the said casing, the said casing and the said shank each having a pair of rows of spaced apertures arranged therein, the apertures in said casing being spaced a different distance apart than those in said shank, a pin for engaging in aligning apertures in said casing and shank, a spring extending parallel with said rows of apertures and having its opposite ends attached to the ends of said casing between the two rows of apertures therein, said pin being attached to said spring in such a manner that said pin may be moved longitudinally on said spring so as to engage in any aligning apertures independent of the location thereof.

2. A wrench comprising a longitudinal shank rectangular in cross section and provided with a plurality of apertures therethrough, a rigid jaw formed on one extremity of the shank, the other extremity of the shank being adapted to form a handle, a rectangular casing slidably mounted upon the shank and provided with a plurality of apertures therethrough aligning with the apertures in the shank in certain positions, a jaw formed on the rectangular casing co-acting with the jaw formed upon the shank, a pin comprising a cylindrical shank, an enlarged head portion formed on the upper extremity of the cylindrical shank of said pin, said head portion having a bore formed transversely therethrough, and a collar formed on the upper extremity of the cylindrical shank, the said cylindrical shank being adapted to engage in the apertures formed in the casing and rectangular shank, a coil spring passing through the bore formed in the pin, and a pair of lugs formed on the casing for retaining the coil spring in position.

In testimony whereof, I have affixed my signature.

JOHN H. DODDS.