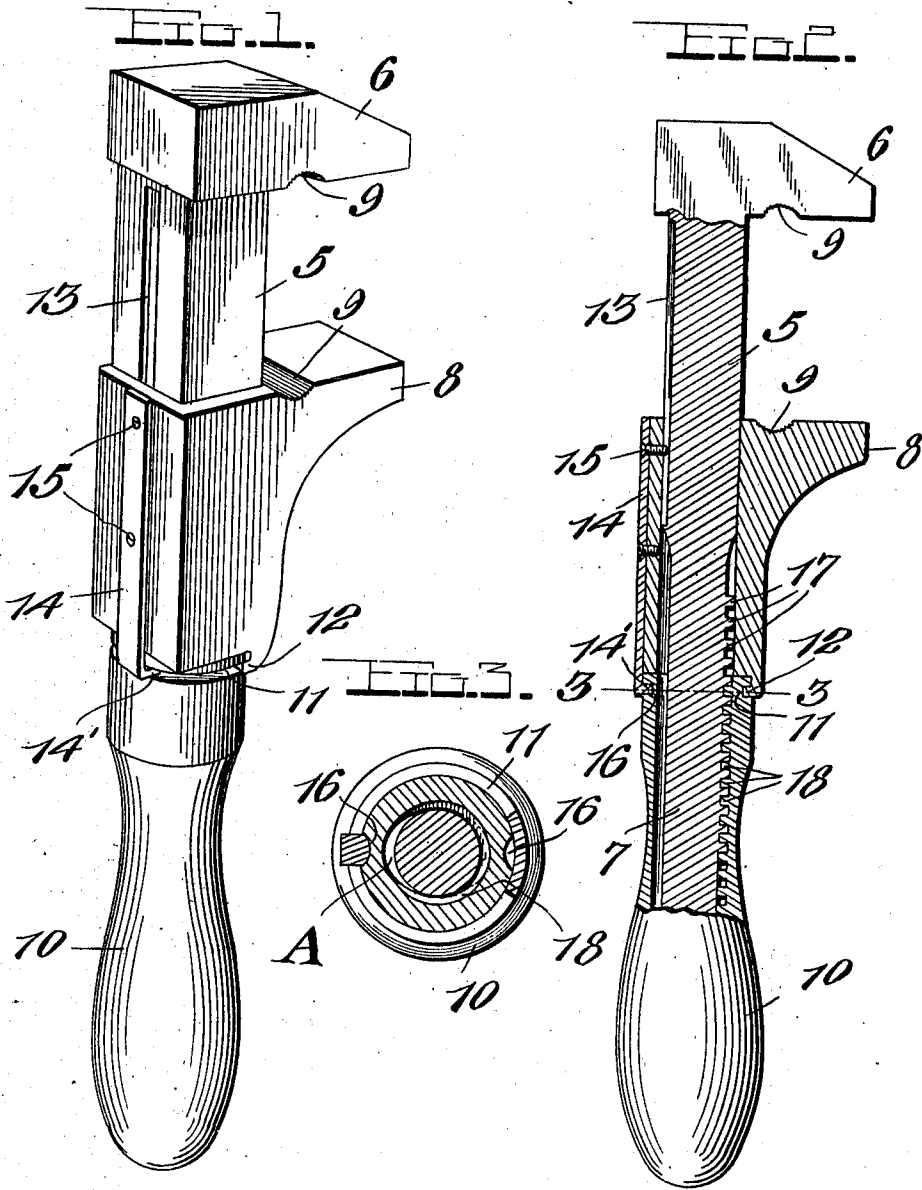


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WRENCH.

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Witnesses

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WRENCH.

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To all whom it may concern:

Be it known that I, OLE STENERSON, a citizen of the United States, residing at Superior, in the county of Douglas and State of Wisconsin, 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 an improved wrench and more particularly to a wrench of the quick adjusting type of very simple and novel construction whereby the sliding wrench jaw may be adjusted upon the shank to securely grip the nut, the head of the bolt or the like.

A further object of the invention resides in the provision of a wrench comprising a shank having a stationary head formed on its end and a sliding jaw arranged on the shank, means being carried by the handle co-acting with the shank to lock said jaw in its adjusted position.

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

Figure 1 is a perspective view of a wrench constructed in accordance with the present invention; Fig. 2 is a longitudinal section through the sliding jaw and the handle; Fig. 3 is a section taken on the line 3—3 of Fig. 2.

Referring more particularly to the drawings 5 indicates the shank of the wrench, and 6 the stationary head formed thereon. The greater portion of the wrench shank is cylindrically formed, as shown at 7, the portion of said shank adjacent to the jaw 6 being of rectangular cross sectional form to be received in the similarly shaped opening of the sliding jaw 8. The opposed faces of the stationary jaw and the sliding jaw at one side of the shank 5 are formed with the transverse grooves 9 which are provided with the teeth or serrations, as shown, for gripping engagement with a rod, pipe or other cylindrical object.

A hollow handle 10 receives the cylindrical portion 7 of the wrench shank and has formed upon one end thereof an annular groove or channel 11. This groove receives a lip or extension 12 formed upon the end of the sliding jaw 8 at one side thereof.

The handle 10 is adapted to be rotated on the cylindrical portion of the shank 5 with relation to the sliding jaw 8, but the lip 12, as will be observed, prevents relative longitudinal movement of the jaw and the handle upon said shank. The outer face of the shank 5 in its rectangular portion is provided with a longitudinal groove 13.

To the adjacent face of the sliding jaw 8 a resilient bar 14 is secured by means of the screws 15. One of these screws extends entirely through the side of the sliding jaw and into the longitudinal groove 13 of the wrench shank. This screw acts as a guide for the jaw in its sliding movement and also limits such movement of the jaw. The resilient bar 14 extends beyond the end of the jaw 8 and has its extremity 14' laterally disposed and extended into the annular groove 11 of the handle. The body of the handle at the base of said groove is formed at diametrically opposite points with the notches or recesses 16 which receive the rounded end of the laterally disposed extremity 14' of the resilient bar. This resilient bar yieldingly holds the handle against turning movement on the wrench shank when the sliding jaw is in a locked or released condition. The manner of locking the jaw 8 after the same has been adjusted is very simple and renders the wrench extremely quick in its action. This locking means will now be described in detail.

The cylindrical portion 7 of the shank 5 has formed thereon a segmental screw thread 17. These threads are disposed upon the same side of the shank as the stationary jaw 6 and are adapted to co-act with similar segmental threads 18 which are formed in one end of the tubular handle 10. The bore of said handle at its threaded end is of oval cross sectional form, the threads 18 thereof being cut into the body of the handle. Thus when the handle is turned upon the shank, the threads 17 will be disposed in that portion of the bore of the handle which extends beyond a line indicating a true circle, as shown at A in Fig. 3. When the threads 17 are so arranged in the handle, it will be obvious that the wrench shank may be moved longitudinally through the jaw 8 and the handle 10, or the shank held stationary by grasping the jaw 6 and the movable jaw 8 and handle 10 moved thereon. This sliding movement is limited by the engagement of the screw 15 in the end of the groove 13 in

the shank, the groove 13 being of such length as to allow the segmental teeth 17 and 18 to be engaged to lock the jaw 8 on the shank when the screw 15 is at the end of said groove. When the jaw has thus been released for sliding movement the end 14' of the resilient bar 14 is disposed in one of the notches 16 in the base of the groove 11. After the jaw has been moved to its desired position on the shank, the operator turns the handle 10 on the shank, thereby forcing the end 14' of the resilient bar out of the notch 16. As the handle is rotated the threads 18 in the end thereof receive the threads 17 on the cylindrical portion 7 of the shank, thus locking the jaw against further movement.

It will be noted that the portion A of the bore of the tubular handle is directly opposite the teeth 18 therein and that it will therefore require a half turn or rotation of the handle to properly engage the threads therein with those on the shank. The other of the notches 16 will thus be moved into position to receive the end 14' of the bar 14 so that the handle and jaw are again securely locked against movement on the shank or with relation to each other. The engagement of the lip 12 in the annular groove 11 of the handle and the end 14' of the bar 14 effectually overcomes any liability of the jaw and handle being separated, said bar being of sufficient tension to prevent the movement of the end portion thereof entirely out of the groove 11.

From the foregoing it will be seen that I have provided a wrench of comparatively simple construction and one which is very quick in its action. The sliding jaw may be released from locked engagement with the shank with but little effort on the part of the operator, the handle 10 turning very readily upon the shank so that the segmental threads may be disengaged. It may be as quickly locked after the proper adjustment has been made and separation of the jaws

effectually prevented. It will be understood that any desired number of the threads 17 and 18 may be provided, and that the wrench jaws may also be of other forms than that shown in the drawings. The device may be manufactured at a comparatively low cost and is extremely durable and efficient in practical operation.

While I have set forth the preferred construction of my improved wrench, it will be obvious that the same is susceptible of a great many minor modifications without departing from the essential features or sacrificing any of the advantages of the invention.

Having thus described the invention what is claimed is:

In a wrench, the combination of a shank having a stationary jaw formed on one end, said shank adjacent to the jaw being rectangular in cross section, the remainder of said shank being cylindrically formed, the rectangular shank portion having a longitudinal slot in its outer face, a sliding jaw on said shank, a handle rotatable on the cylindrical portion of the shank, means connecting the sliding jaw and the handle, means formed on the cylindrical shank portion and the handle for locking engagement to secure the jaw in its adjusted position, a resilient bar secured to said sliding jaw, the end of said bar being laterally disposed, said handle having a notch therein to receive the end of the bar whereby the handle is yieldingly held against rotation, and screws securing the bar to the sliding jaw, one of said screws extending into the longitudinal groove in the shank to limit the sliding movement of said jaw.

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

OLE STENERSON.

Witnesses:

F. B. MORGAN,
J. L. JOHNSON.