

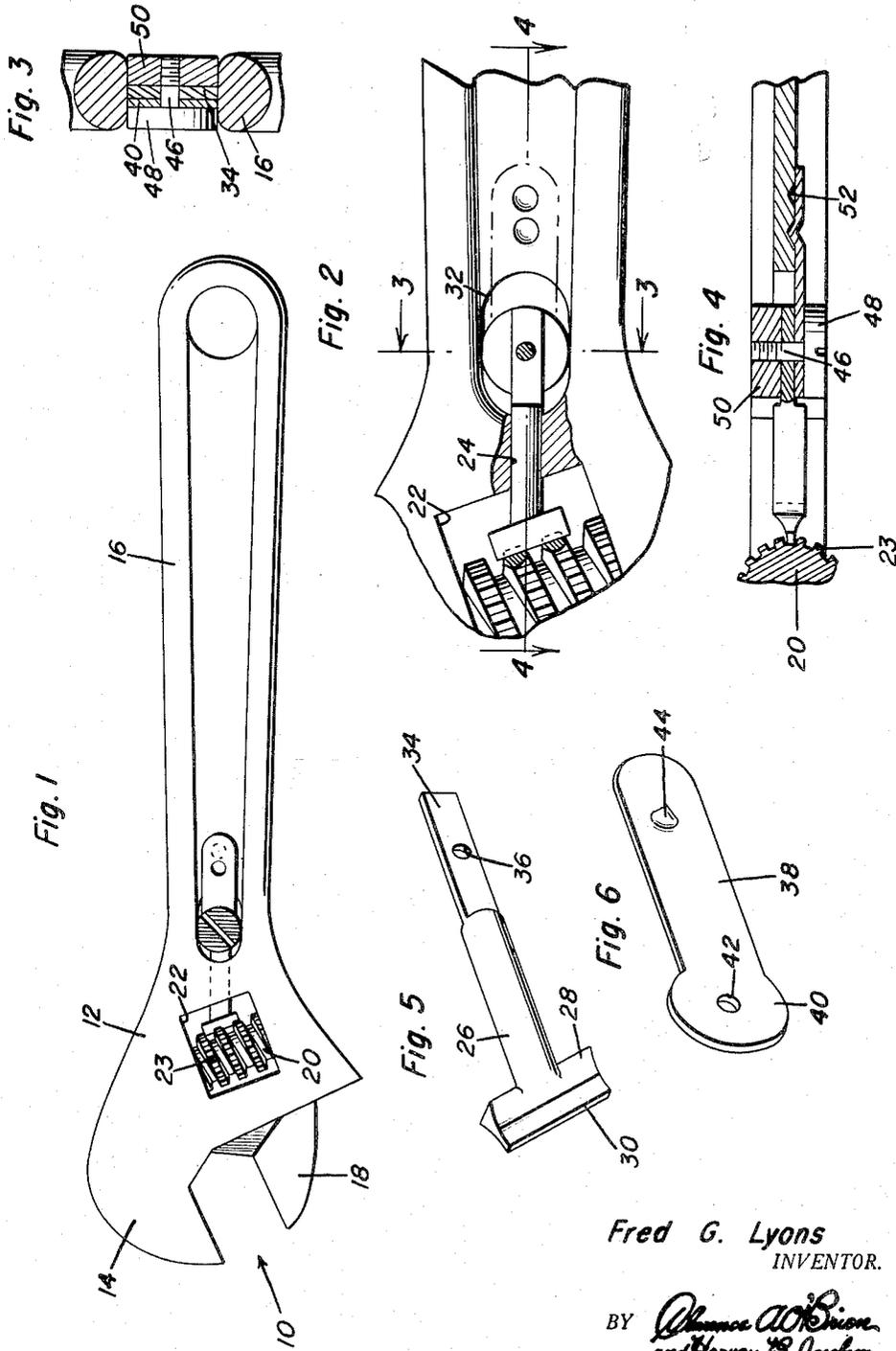
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LOCK FOR ADJUSTING WORM OF A MOVABLE JAW WRENCH

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LOCK FOR ADJUSTING WORM OF A MOVABLE JAW WRENCH

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1 Claim. (Cl. 81-165)

This invention generally relates to a wrench, and more specifically provides an improved and novel locking means for the adjusting worm of a movable jaw wrench for selectively locking the movable jaw of the wrench in adjusted position.

An object of this invention is to provide an abutment locking member for selectively contacting the thumb screw or worm adjusting means for locking a movable jaw of a movable jaw wrench in position.

Another object of this invention is to provide a slidable member for engaging the adjustment means of a wrench for retaining the adjustment means in a definite position.

Yet another object of the present invention is to provide a movable jaw wrench having means for locking the movable jaw in adjustable position wherein the locking means is simple in construction, easy to operate, positive in action and inexpensive to manufacture.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view illustrating a wrench employing the novel lock means for the adjusting worm of the present invention;

Figure 2 is an enlarged detail elevational view of the latching means with portions thereof broken away illustrating the details of construction;

Figure 3 is a transverse, vertical sectional view taken substantially upon a plane passing along section line 3-3 of Figure 2 illustrating the guide means together with the positioning of the handle for moving the lock means;

Figure 4 is a longitudinal, plan sectional view taken substantially upon a plane passing along section line 4-4 of Figure 2 illustrating further structural details of the locking device;

Figure 5 is a perspective view of the abutment member together with the shank projecting therefrom; and

Figure 6 is a perspective view of the locking spring illustrating the projection on one end thereof.

With reference to the drawings, the numeral 10 generally designates a movable jaw wrench, with the numeral 12 designating the body thereof wherein the body 12 is provided with a stationary jaw 14 and an elongated handle 16 together with a movable jaw 18 in opposition to the stationary jaw 14 together with an adjusting worm 20 rotatably journaled in an enlarged opening 22 in the body 12 of the wrench 10. The wrench 10, as illustrated, is that type of wrench known as a crescent wrench, and by rotation of the worm 20 having the serrated spiral ribs 23 thereon, the movable jaw 18 may be moved towards and away from the stationary jaw 14 for adjusting the wrench to the desired size.

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The body 12 at its junction with the handle 16 is provided with a longitudinal bore 24 slidably receiving a cylindrical shank 26 having an abutment member 28 on one end thereof, wherein the abutment member is disposed in slightly inclined relation and provided with a generally sharpened outer edge 30 for engagement with the serrations or knurled ribs 23 of the adjusting worm 20.

The bore 24 terminates in the enlarged opening 22 and the abutment 28 moves within the limits defined by the opening 22. The other end of the bore 24 terminates in an elongated oval-shaped opening 32 in the handle 16 and the end of the shank 26 remote from the abutment member 28 is reduced and substantially rectangular in cross-sectional area, as indicated by the numeral 34 and is provided with a transversely extending aperture 36 therein. Mounted against the outer surface of the reduced portion 34 of the shank 26 is an elongated flat spring 38 having a circular end portion 40 with an aperture 42 therein at one end thereof and an inwardly extending projection 44 adjacent the other end thereof. Extending through the aligned apertures 36 and 42 is a screw threaded member 46 having enlarged headed portions 48 and 50 for securing the shank 26 and spring 38 together, and the enlarged headed portion 50 is slidable in the enlarged opening 32 for limiting the movement of the shank 26 and also forming a handle for movement of the shank 26 and abutment 28.

The central portion of the handle 16 adjacent the opening 32 is provided with a pair of indentations 52 which are complementary in shape to the projection 44 on the spring 38 for fractionally receiving the projection 44 thereby frictionally locking the spring 38, shank 26 and abutment 28 in adjusted position thereby selectively engaging the pointed end 30 of the abutment member 28 with the serrated ribs 23 of the adjusting worm 20 thereby locking the worm 20 in adjusted position for selectively locking the movable jaw 18 in adjusted position. The positioning of the enlarged headed portions 48 and 50 provides easy access for moving the locking device to the desired position without the person utilizing the other hand, thereby permitting the wrench to be utilized in the normal manner and to eliminate the usual maladjustment of the wrench 10. The device may be constructed of any suitable tool steel normally utilized in such wrench structures, and the locking device may be utilized in any type of adjustable wrench.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

A lock for a movable jaw wrench having a rotatable worm for adjusting the movable jaw and a body having a stationary jaw in opposed relation to the movable jaw and an elongated handle integrally formed therewith, said lock comprising an abutment member for engaging the periphery of the worm, a shank extending from said abutment member, the body of said wrench having a longitudinal bore therein terminating at one end in an enlarged opening adjacent the worm for slidably receiving said shank, said abutment member being movable in said enlarged opening for selectively engaging said worm, the other end of said bore terminating in an elongated longitudinal opening in the handle, stop means attached to said shank and movably positioned in said elongated opening for limiting the movement of said shank and

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abutment member, and spring means frictionally inter-
 connecting the end of the shank positioned in the elon-
 gated opening and the handle for retaining the abutment
 member in selective positions, said handle being pro-
 vided with a pair of longitudinally spaced indentations,
 said spring means including a flat spring attached to the
 shank and extending longitudinally alongside said handle
 in intimate contact therewith, a projection on the inner
 surface of the spring for frictional engagement in one of
 said indentations for releasably retaining the abutment
 member in engagement with the worm for releasably
 locking the movable jaw in adjusted position, including
 a pair of cylindrical members with one of said cylindrical
 members having a threaded member extending through
 the flat spring and the shank and received in the other
 cylindrical member for retaining the shank and spring in
 assembled relation, said cylindrical members projecting
 from opposite side of the opening in the handle for form-

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ing a handle member on each side of the wrench handle
 for manipulation of the abutment, one of said cylindrical
 members having a portion slidable in the longitudinal
 opening in the wrench handle whereby the opening forms
 a guide and limit means for the movement of the spring
 and shank.

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