June 24, 1924. 1,498,656

F. C. HERBY

WRENCH

Filed Dec. 11, 1922

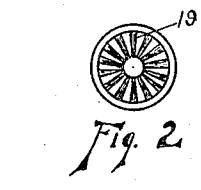


Fig. 2

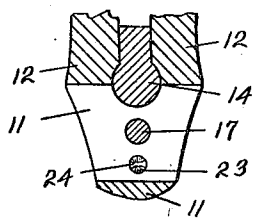


Fig. 3

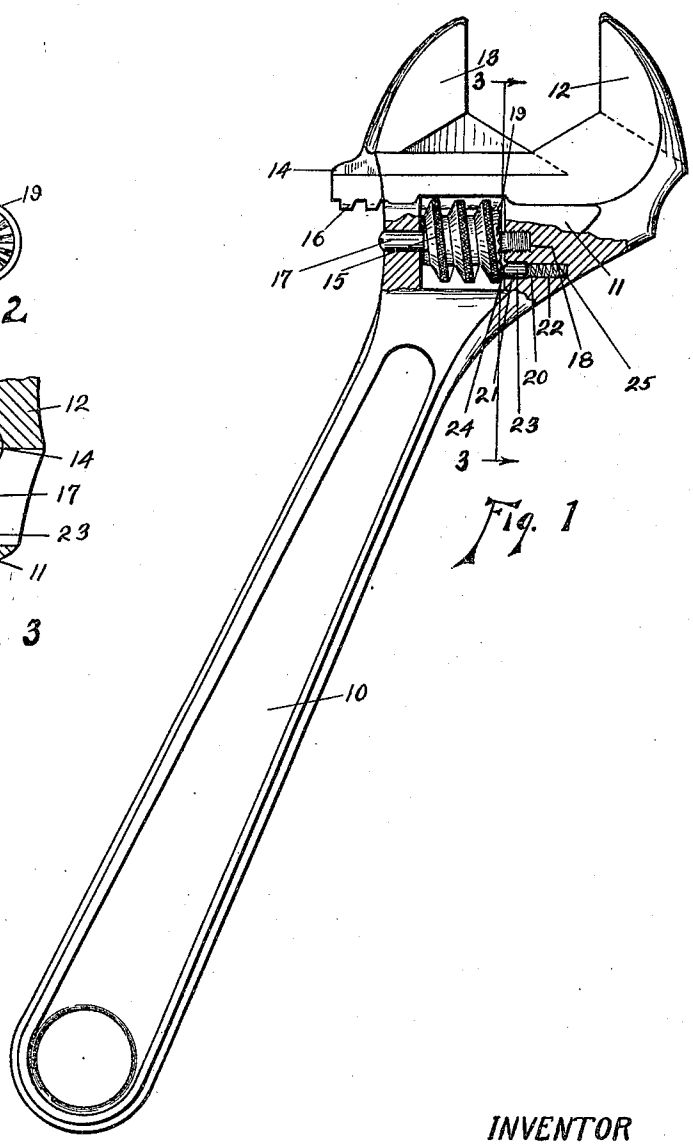


Fig. 1

INVENTOR

Frederick Charles Herby

By Clarence E. Walker.

His Attorney

Patented June 24, 1924. 1,498,656

UNITED STATES PATENT OFFICE.

FREDERICK CHARLES HERBY, OF JAMESTOWN, NEW YORK.

WRENCH.

Application filed December 11, 1922. Serial No. 606,164.

To all whom it may concern:

Be it known that I, FREDERICK CHARLES HERBY, citizen of the United States, residing at No. 610 West Seventh Street, Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Wrenches, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to an improvement in wrenches, particularly of the adjustable type in which the movable jaw is operated by the actuation of a worm.

Wrenches of this general character have been found objectionable because the worm tends, under certain circumstances, to loosen and change the adjustment of the jaws. This is particularly the case if the wrench is laid aside for a moment so that when it is again picked up it is found necessary to readjust the movable jaw.

The primary object of this invention is to provide simple automatic means which function to hold the movable jaw in the desired position by preventing any rotation of the worm and resides particularly in the provision of a spring-pressed pin which bears against a notched surface at the end of the worm.

A number of devices of this general character have been produced but they differ from the construction here shown in that either the worm is held against rotation merely by the application of friction or that the worm is positively held by holding means which must be applied positively.

Other objects reside in the details of construction disclosed in the following specification taken in connection with the drawing which forms a part thereof and in which

Figure 1 is a side elevation, partly in section, of a wrench embodying this invention.

Fig. 2 is an elevation of the rear face of the worm; and

Fig. 3 is a section taken along the line 3—3 of Fig. 1.

The wrench comprises a handle 10, preferably located at an angle to the wrench-head 11 which head comprises a fixed jaw 12 and a movable jaw 13. The jaw 13 reciprocates in the guide 14 in the wrench-head and is actuated by a worm 15 which engages teeth 16 provided in the lower edge of the movable jaw. The worm 15 is carried upon a screw 17 which is threaded into a recess 18 in the wrench-head 11. The details of construction set forth above are all old and well known in the art and no novelty is claimed therein.

The rear face 19 of the worm 15 is provided with a plurality of radial grooves or depressions, the upper faces of which are in a plane parallel to the plane of the engaging surfaces of the jaws 12 and 13. In the wrench-head 11 below the recess 18 is provided a pocket 20 which has an enlarged outer portion 21 and an inner portion 22. In the outer portion 21 is mounted a pin 23, the outer end of which terminates in a point 24. In the inner portion 22 of the pocket 20 is provided a spring 25 which bears against the rear face of the pin 23.

The pocket 20 is so located with reference to the worm 15 that the point 24 of the pin 23 is held by the spring 25 in contact with the rear face 19 of the worm 15. Therefore the pin 23 will enter the nearest depression in the face 19 and hold the worm 15 against any involuntary rotation and, consequently, hold the movable jaw 13 in the proper position.

Since the pin 23 is entirely enclosed within the wrench-head 11 it is obvious that its function cannot be impaired by contact with any article when the wrench is laid aside. Furthermore, the spring 25 is made of such strength that it will not permit a glancing blow upon the worm 15 to cause it to rotate and vary the adjustment.

While one embodiment of this invention has been shown and described, I am not to be limited thereto since it is obvious that others may be made without departing from the spirit and scope of the invention as set forth in the following claim.

Having thus set forth my invention, what I claim as new and for which I desire the protection of Letters Patent is:

In a wrench having a head comprising a fixed jaw and a movable jaw, said head having a guide in which projects the lower edge of said movable jaw said edge having teeth, a transverse slot opening into said guide, a worm mounted to rotate in said slot in engagement with said teeth whereby said movable jaw is moved toward or away from said fixed jaw, radial grooves in the rear face of said worm, a pocket formed in said

head below said fixed jaw, parallel to said guide and opening into the rear wall of said slot, a pin and a spring in said pocket said spring acting at all times to force said pin against the rear face of said worm and into said grooves therein whereby said worm is yieldingly held against rotation, the pin being concealed and so located that any strain transmitted during the use of the wrench by the movable jaw to said worm moves the latter away from said pin.

In testimony whereof I have affixed my signature.

FREDERICK CHARLES HERBY.