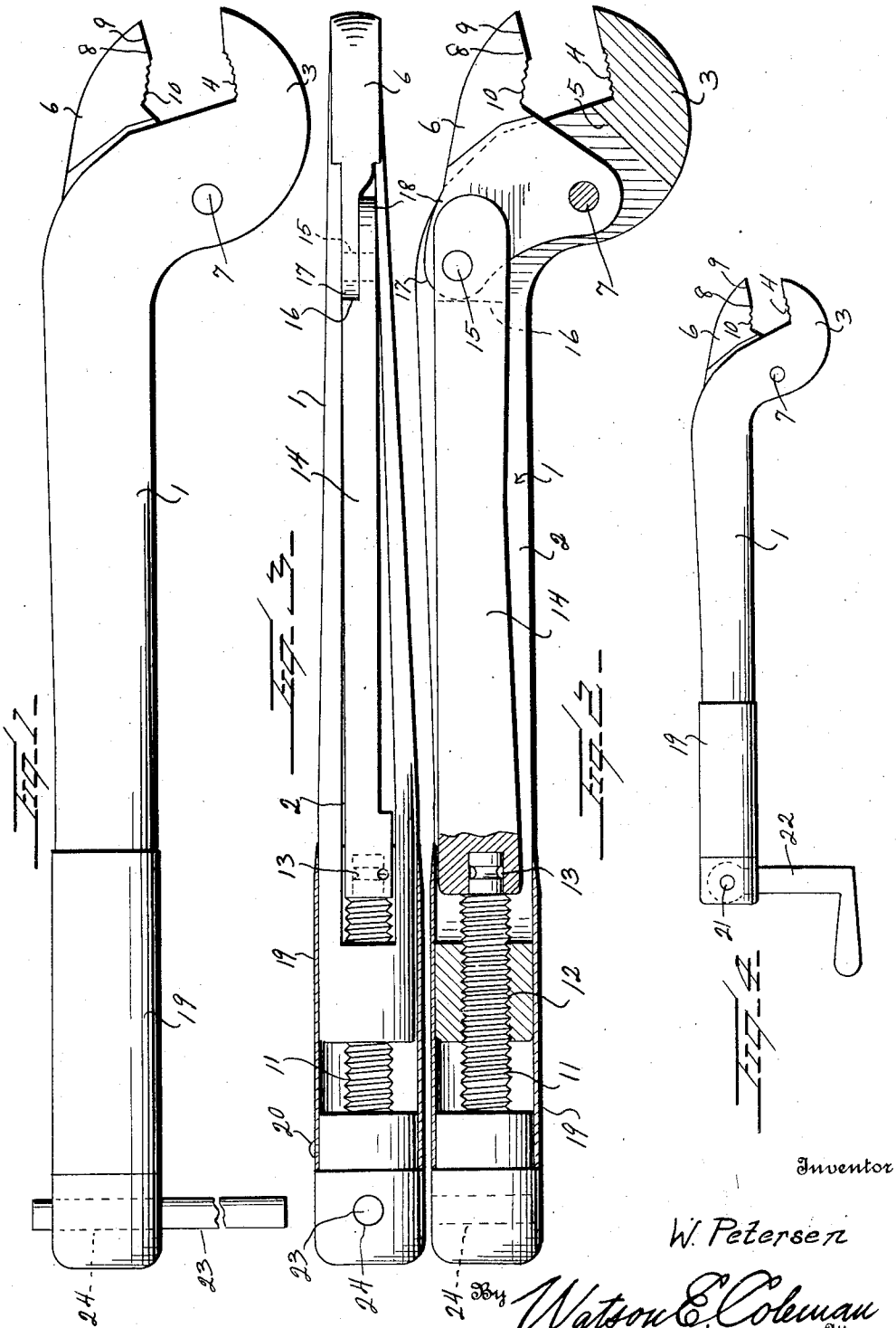
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WRENCH.

APPLICATION FILED FEB. 26, 1921.

1,392,443. Patented Oct. 4, 1921.



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WRENCH.

1,392,443. Specification of Letters Patent. Patented Oct. 4, 1921.

Application filed February 26, 1921. Serial No. 447,940.

To all whom it may concern:

Be it known that I, WILLIAM PETERSEN, a citizen of the United States, residing at De Witt, in the county of Saline and State of Nebraska, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had to the accompanying drawings.

The present invention has for its purpose, the provision of a wrench, wherein the jaws thereof have a vise gripping action, so as to hold an object firm and rigid, and also wherein one end of the movable jaw bears against a shoulder of a connecting link between the movable jaw and the actuating means, in order to relieve the strain on the pivot between the link and the movable jaw.

Another purpose involves a construction of a wrench wherein the actuator for the movable jaw is provided with means telescoping the handle of the fixed or stationary jaw, not only for keeping out foreign matter, such as grit and the like from the threads of the actuator, but also for providing an actuator, which is substantially uniform with the handle of the fixed jaw, so as to insure better gripping surface for the hand of the operator.

Still another purpose consists in the provision of either a pivoted crank for handling the actuator, or a transverse fixed crank. In the latter case the transverse fixed crank may extend through an opening of the rear end of the actuator, whereby the movable jaw may be operated to insure a vise like grip on the work.

While the design and construction at present illustrated and set forth is deemed preferable, it is obvious that as a result of a reduction of the invention to a more practical form for commercial purposes, the invention may be susceptible of changes, and the right to these changes is claimed, provided they are comprehended within the scope of what is claimed.

The invention comprises further features and combination of parts, as will be hereinafter set forth, shown in the drawings and claimed.

In the drawings:—

Figure 1 is a view in side elevation, showing the wrench constructed in accordance with the invention, and illustrating the sleeve as telescoping the handle of the fixed or stationary jaws.

Fig. 2 is a longitudinal sectional view.

Fig. 3 is a view in elevation at right angles to that shown in Fig. 1, clearly showing the shoulder upon which one end of the movable jaw bears, to relieve strain upon the pivot.

Fig. 4 is a view in elevation of a modified construction of wrench, wherein a crank is pivotally mounted on the actuator.

Referring to the drawings, 1 designates a handle of the wrench, which is elongated and which is provided with an elongated bifurcation 2. The walls or sides of the bifurcation at one end of the wrench terminate in and are connected by a stationary or fixed wrench jaw 3. This fixed or stationary wrench jaw is offset laterally out of alinement with the handle 1, and its gripping face is partly provided with teeth 4. The bifurcation of the handle terminates adjacent the fixed or stationary jaw, as indicated at 5. A movable jaw 6 which may be any suitable shape or contour, preferably as shown, is pivoted on the pivot pin 7 which extends transversely of and mounted in bearings on the sides of the fixed jaw. The gripping face 8 of the movable jaw is partly plain as at 9 and partly provided with teeth 10, so as to coöperate with the corresponding face of the fixed jaw.

An actuator, which consists of a screw 11 is threaded at 12 through the butt end of the handle, and swivelly connected at 13 to the actuator is a link 14, which is pivotally connected upon the pivot pin 15 of the movable jaw. This link has a shoulder 16, with which the end 17 of a leg 18 of the movable jaw contacts, thereby relieving the strain on the pivot pin 15.

It is obvious that by turning the actuator or screw to the right the movable jaw closes, and when turned to the left, said jaw opens.

The actuator has a sleeve 19 secured thereto as at 20, it being noted that the head of the actuator is substantially the same size or a trifle larger in diameter than the end of the handle 1, so that the diameter of the sleeve is such that it telescopes the handle 1. The sleeve is tapered toward the handle, and for this reason the handle and the actuator provides a wrench grip, which is substantially uniform throughout its length. In other words this construction provides a hand grip for the operator, which is substantially uniform. In Fig. 4 the actuator has pivoted thereto as at 21 a crank 22 whereby

the actuator may be rotated for manipulating the movable jaw.

It is to be noted that the gripping faces of the fixed and movable jaws may be used to engage nuts, piping, rods and the like for turning the same, and by means of the crank, or the transverse rod or crank 23 (which extends through the opening 24 of the actuator), the jaws may be operated in order to insure a vise like grip on the work.

The invention having been set forth, what is claimed as being useful is:

1. In a wrench, a handle having a fixed jaw, a movable jaw pivotally mounted at the base of the fixed jaw, said jaws having member engaging gripping faces, a link engaging in and longitudinally of the handle and connected to the movable jaw for operating the same toward and from the fixed jaw, an actuator threaded through the other end of the handle and being swiveled to the link, said actuator having a sleeve telescoping the handle and being substantially of uniform diameter with the handle.

2. In a wrench, a handle having a fixed jaw, a movable jaw pivotally mounted at the base of the fixed jaw, said jaws having member engaging gripping faces, a link engaging in and longitudinally of the handle and connected to the movable jaw for operating the same toward and from the fixed jaw, an actuator threaded through the other end of the handle and being swiveled to the link, said actuator having a sleeve telescoping the handle and being substantially of uniform diameter with the handle, and means on the actuator for turning it, so as to insure a vise like gripping action on the jaws.

In testimony whereof I hereunto affix my signature.

WILLIAM PETERSEN.