

Nov. 18, 1924.

1,515,618

F. RUESCH

WRENCH

Filed July 17, 1923

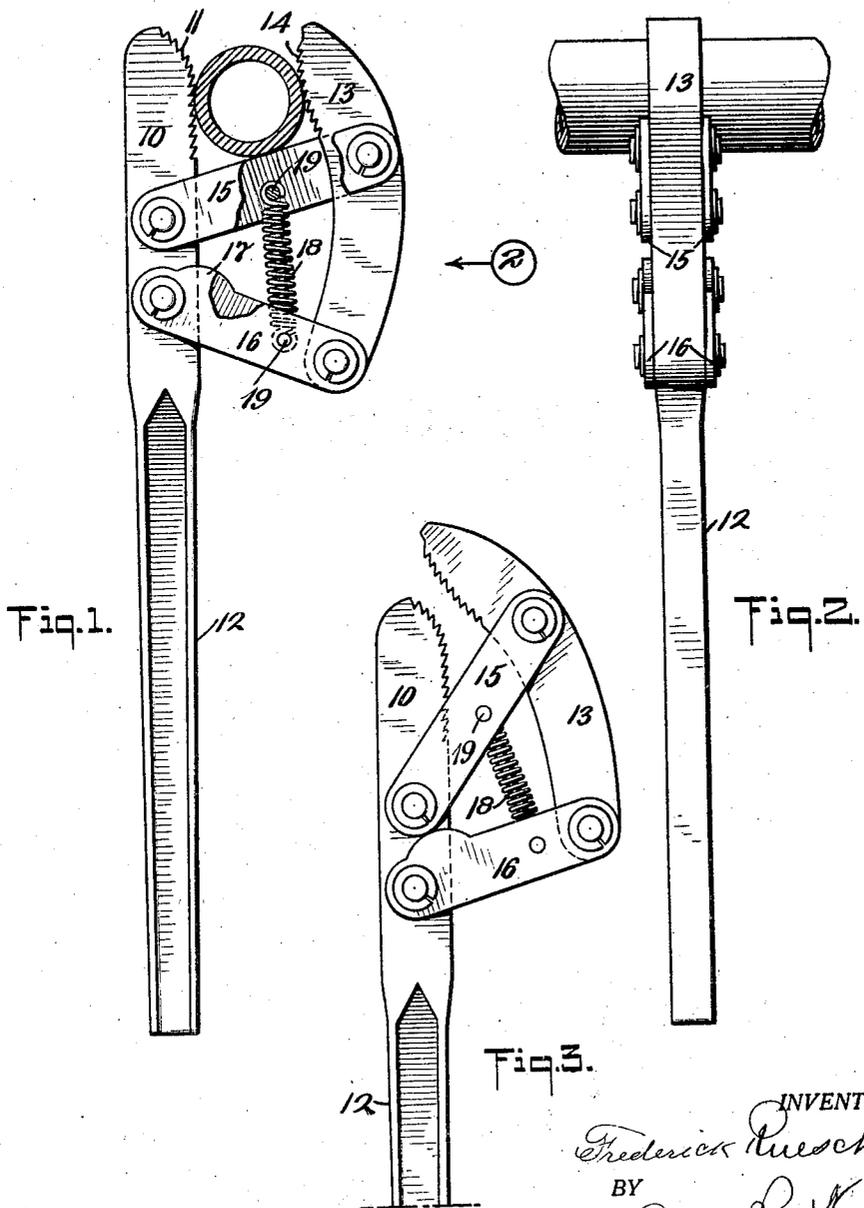


Fig. 1.

Fig. 2.

Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## WRENCH.

Application filed July 17, 1923. Serial No. 652,017.

*To all whom it may concern:*

Be it known that I, FREDERICK RUESCH, a citizen of the United States, residing at Poughkeepsie, county of Dutchess, and State of New York, have invented certain new and useful Improvements in Wrenches, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to improvements in wrenches.

It is the aim of the present invention to provide an improved wrench of the general type shown in United States Letters Patent No. 1,407,578, dated February 21, 1922. Briefly stated, the improvement consists in providing efficient and durable means for accurately positioning the wrench jaws with respect to each other in their inoperative position, so that they may be easily and quickly placed in engagement with an object such as a nut or pipe located in a confined space, and wear by contact of the jaw teeth be prevented.

With the above objects in view, the invention will now be described in detail in connection with the accompanying drawings showing the invention in a preferred form, and the novel features thereof will then be specifically pointed out in the claims.

In the drawings—

Figure 1 is a side elevation of the improved wrench in operative position on a pipe;

Figure 2 is an edge view thereof, looking in the direction of the arrow 2, and

Figure 3 is a view similar to Fig. 1, but showing the wrench jaws held in place by the stop.

Referring now to the drawings, the numeral 10 indicates the stationary or rigid jaw of the wrench, which is provided with serrations 11 upon its inner face at the outer end thereof. This jaw 10 is also provided at its opposite end with a shank or handle 12. The numeral 13 indicates the swinging or movable jaw, which is also provided with serrations 14 upon its inner face. Links 15, 16, arranged in pairs and pivoted to the side faces of the jaws 10, 13, secure the jaws movably together, the pivotal points of the links on the stationary jaw 10 being arranged closer together than the pivotal points of such links on the movable jaw 13. To stop the closing of the wrench in the desired par-

tially open position and prevent contact and wear on the teeth, there is provided on one of the links, and preferably on each link of a pair, as 16, a raised portion or stop 17. Such stops should be of such size as to contact with the edges of the links 15 at or near the pivotal points of the latter before the jaws 10, 13 meet, so that in the inoperative position of the parts the jaws will remain slightly open, as shown in Fig. 3. The jaws are normally held in this position by a spring 18 having its ends secured to pins 19 carried by the links 15, 16.

It will be obvious from the foregoing that when the wrench is to be applied to an object to be gripped, it is only necessary to lay the projecting end of the jaw 13 against such object and apply slight pressure on the handle 12, which will force the jaws apart against the pull of the spring, when the wrench will automatically adjust itself in position on such object. The provision of stops on the links not only simplifies the manufacture of the device as against a stop formed on one or the other of the wrench jaws, and thereby reduces cost of production, but also provides a stop which is not subject to breaking off, as a stop formed on the wrench jaws might, reduces shock and strain on the links and, should the stops become worn, makes replacement of the part carrying the stop a simple and inexpensive matter, while efficiently holding the wrench jaws in proper position.

It will be understood that the invention is not to be confined to the form or location on either link of the stop shown, or to the number of such stops employed, but that changes in these respects may be made while still retaining the invention defined by the claims.

What is claimed is:

1. A wrench comprising a fixed jaw, a movable jaw, links pivotally connecting said jaws, a spring co-operating with said links and normally tending to force the jaws together, and a stop carried by one of said links arranged to contact with another of said links to stop and hold said wrench jaws apart in inoperative position.

2. A wrench comprising a fixed jaw, a movable jaw, links arranged in pairs and pivotally connected with the side faces of the wrench jaws, a spring co-operating with said links and normally tending to force the

wrench jaws together, and stops carried by each link of one pair arranged to contact with each link of the other pair to stop and hold said wrench jaws apart in inoperative  
5 position.

3. A wrench having jaws 10, 13, links 15, 16 connecting said jaws, a spring tending to close the jaws, and said links being formed to abut on their edges in the closing of the  
10 jaws to prevent the full closing of the jaws.

4. A wrench having jaws 10, 13, links 15, 16 connecting said jaws, a spring tending to close the jaws, one of said links having its edge formed to engage the other link opposite its pivot on the fixed jaw in the closing  
15 of the jaws to prevent full closing of the jaws.

In testimony whereof, I have hereunto set my hand.

FREDERICK RUESCH.