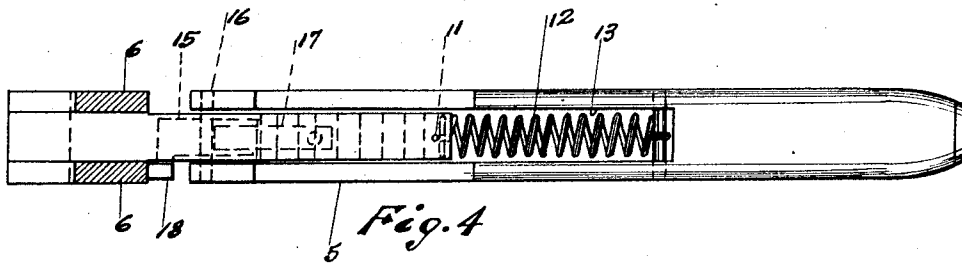
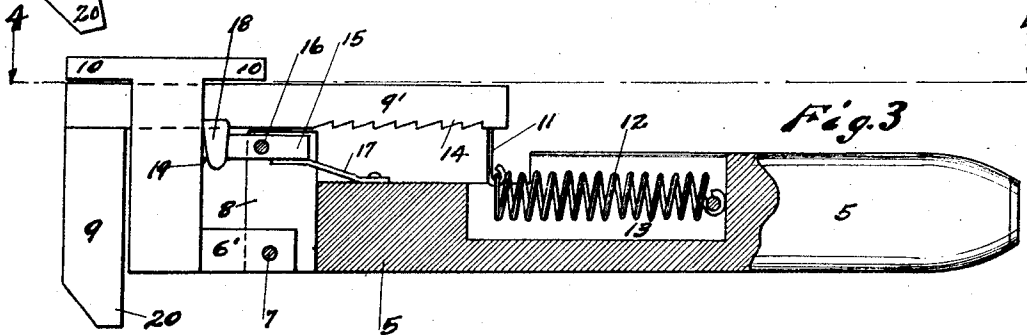
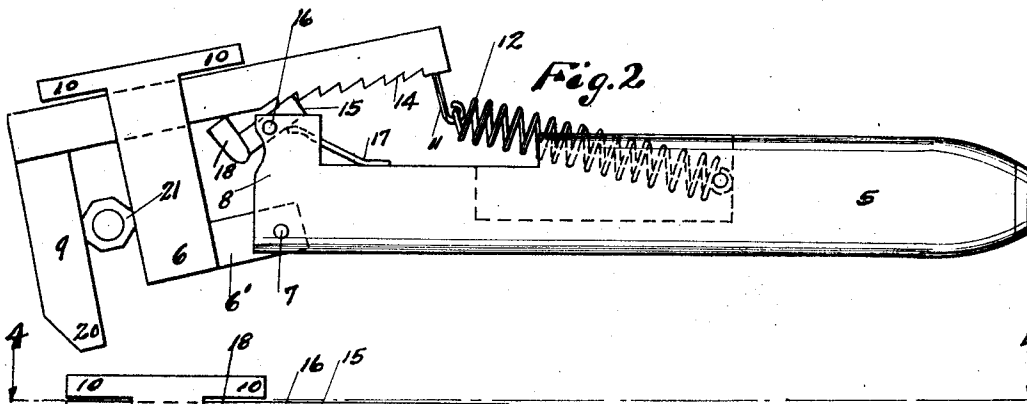
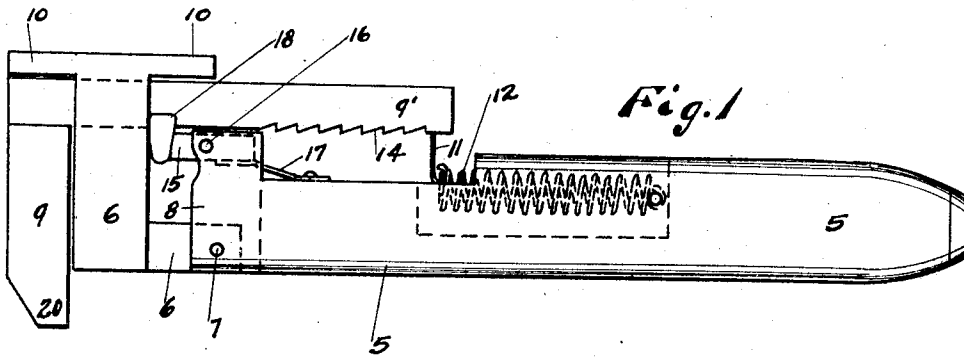


K. O. W. LINDQUIST.
 WRENCH.
 APPLICATION FILED JULY 23, 1920.

1,411,285.

Patented Apr. 4, 1922.



Witnesses:
C. E. Thrush
B. S. Richards

Inventor
Knut O. W. Lindquist
 By *Joseph R. H. Foss*
 His Attorney.

UNITED STATES PATENT OFFICE.

KNUT O. W. LINDQUIST, OF CHICAGO, ILLINOIS.

WRENCH.

1,411,285.

Specification of Letters Patent.

Patented Apr. 4, 1922.

Application filed July 23, 1920. Serial No. 398,363.

To all whom it may concern:

Be it known that I, KNUT O. W. LINDQUIST, a former subject of the King of Sweden, having declared my intention of becoming a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to improvements in wrenches, and has for its object the provision of an improved wrench which is capable of automatic engagement with a nut by mere application thereto.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 is a side view of a wrench embodying the invention, shown in normal position;

Fig. 2, a similar view of the wrench shown in position of engagement with a nut;

Fig. 3, a longitudinal section corresponding with Fig. 1, and

Fig. 4, a horizontal section taken on line 4-4 of Fig. 3.

The preferred form of construction, as illustrated in the drawings, comprises a suitable handle 5 having a wrench jaw 6 pivotally mounted at one end thereof, said wrench jaw being provided with a rearwardly extending arm 6' pivoted at 7 in a bifurcation or slot 8 provided at the corresponding end of handle 5. An adjustable wrench jaw 9 is arranged to co-operate with the jaw 6 and provided with a rearwardly extending shank 9' sliding freely through the jaw 6 as indicated. Guide flanges 10 are provided on the jaw 6 to guide the shank 9' in its movements. At its inner end, the shank 9' is provided with an arm 11 connected with handle 5 by a coiled wire spring 12 arranged in a recess 13 provided in said handle as shown. The shank 9' is also provided on its inner side with ratchet teeth 14 co-operating with the detent 15 pivoted at 16 in the slot 8 and normally pressed towards engagement with the ratchet teeth 14 by means of a leaf spring 17. The detent 15 is provided with a head 18 normally resting against the rear edge 19 of one side of the

jaw 6, and whereby said detent is normally held from engagement with the teeth 14 as indicated. The jaw 9 is provided with an extension 20 for engagement with a nut 21 for use in engaging the wrench with the nut.

In use the wrench is engaged with the nut by grasping the handle 5 in one hand and engaging the projecting edge 20 on jaw 9 with a side of the nut. Then by pulling longitudinally on the handle 5, the jaw 9 will yield sufficiently against the resistance of spring 12 to permit of the engagement of jaws 9 and 6 with opposite sides of the nut as indicated in Fig. 2. Then upon turning movement of the wrench, the jaws 9 and 6 will rock relatively to handle 5, thus freeing the head 18 from jaw 6 and causing the detent 15 to engage one of the ratchet teeth 14 as indicated in Fig. 2. This locks the jaw 9 against further separation from jaw 6 and also locks said jaws against further rocking, thus effecting a rigid connection between the wrench and the nut for turning the nut. In this way, the wrench may be readily engaged with a nut of any size within the capacity of the wrench and the nut turned without preliminary adjustment of the jaw 9.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A wrench comprising a handle; a jaw on said handle; a co-operating jaw adapted to be freely moved longitudinally with respect to said handle; means for locking said jaw against longitudinal movement upon a turning movement of said handle; and an extended portion formed on said jaw adapted to engage a nut for adjusting said jaws in operative engagement with said nut, substantially as described.

2. A wrench comprising a handle; a jaw on said handle; a co-operating spring held jaw having an extended portion adapted upon engagement with a nut to be freely

5 moved longitudinally with respect to said handle for adjusting said jaws on said nut; and means pivotally mounted on said handle for locking said co-operating spring held jaw upon a turning movement of said handle, substantially as described.

10 3. A wrench comprising a handle; a jaw pivoted on said handle; a co-operating jaw slidably carried by said pivoted jaw; means for automatically locking said co-operating jaw upon turning movement of said handle; and an extended portion on said co-operating jaw adapted upon engagement with a nut to freely move said co-operating jaw
15 longitudinally with respect to said handle, substantially as described.

20 4. A wrench comprising a handle; a jaw pivoted on said handle; a co-operating spring-held jaw sliding freely to be adjusted by engagement with a nut; and means normally engaging said pivotally mounted jaw for automatically locking said sliding jaw upon turning movement with said handle, substantially as described.

25 5. A wrench comprising a handle; a jaw pivotally mounted at one end of said handle; a co-operating jaw having a shank sliding freely through said pivoted jaw; a tension spring connecting the inner end of said

shank with said handle; and a detent on said handle engaging said pivotally mounted jaw normally holding said detent from engagement with said shank but freeing said detent for engagement with said shank upon turning movement of said handle, substantially as described.

30 6. A wrench comprising a handle; a jaw pivotally mounted at one end of said handle; a co-operating jaw having a shank sliding freely through said pivoted jaw; a tension spring connecting the inner end of said shank with said handle; ratchet teeth on the inner edge of said shank; a spring-held detent pivotally mounted in said handle and co-operating with said teeth; and a head on said detent resting against said pivoted jaw and normally holding said detent from engagement with said ratchet teeth, but freeing said detent for engagement with said ratchet teeth upon turning movement of said handle, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

KNUT O. W. LINDQUIST.

Witnesses:

JOSHUA R. H. POTTS,
ROSE K. TRIB.