

WRENCH.

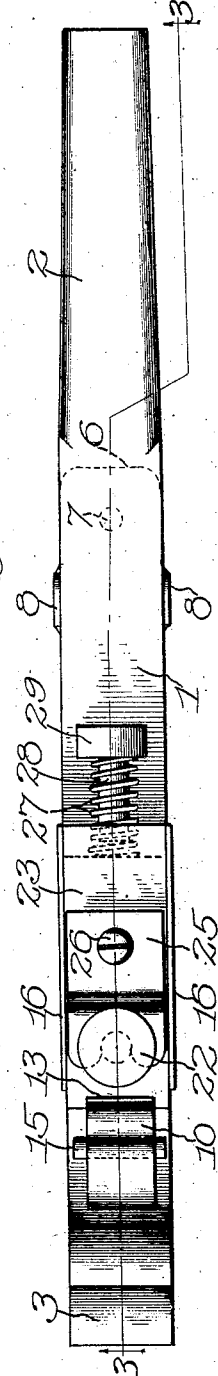
Patented Apr. 9, 1912.

2 SHEETS--SHEET 1.

Witnesses:
H. Domarus Jr.
A. F. Pindler

By:

Fig. 2.



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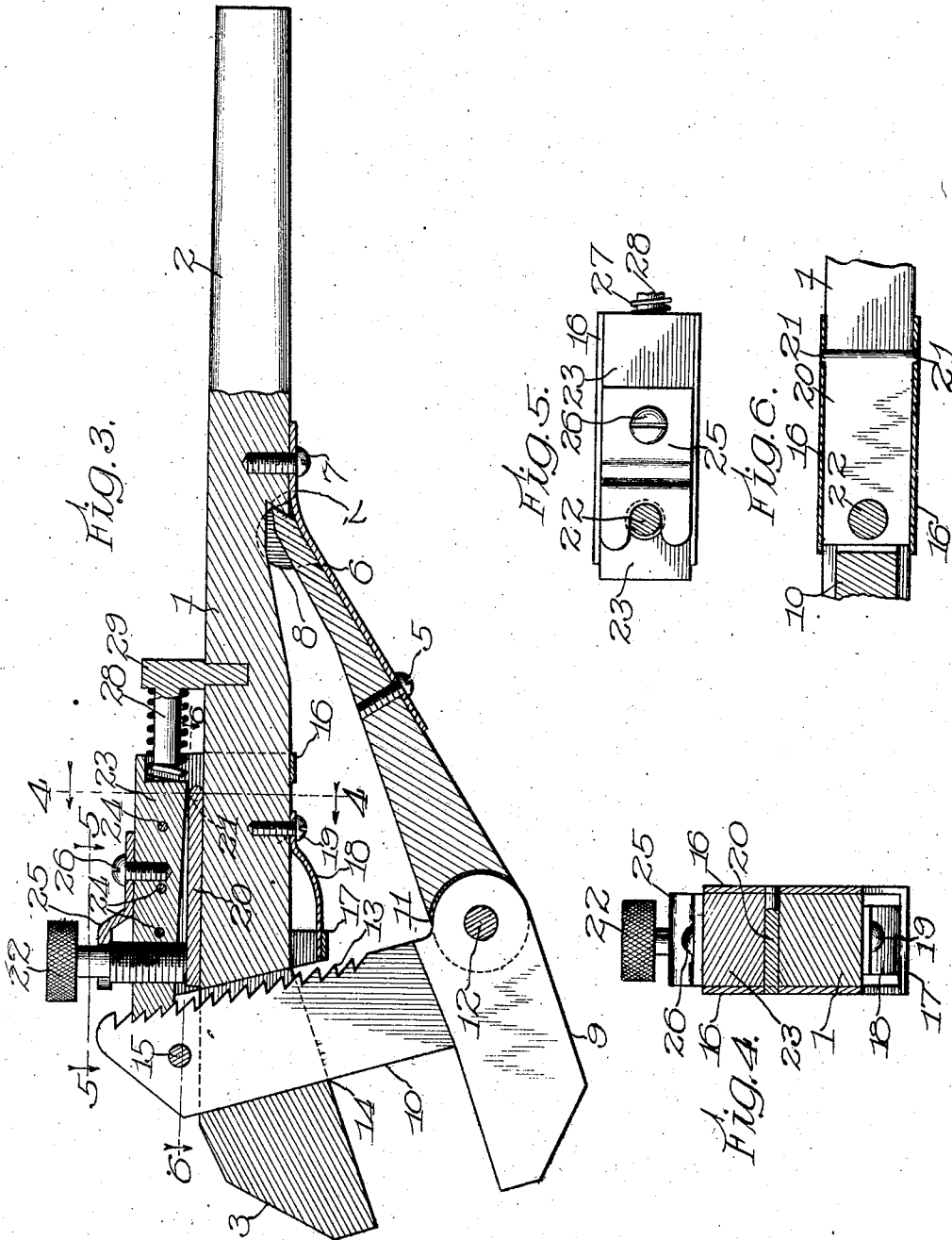
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WRENCH.

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1,022,892.

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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

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WRENCH.

1,022,892.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARL A. SODERHOLM, a citizen of Sweden, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to improvements in wrenches and its object is to produce a wrench that is capable of being locked in any adjusted position; the particular construction of the wrench is such as to permit its use in positions ordinarily difficult of access by a wrench.

Other objects are general durability and efficiency.

With the foregoing and other objects in view the invention consists in the combination and arrangement of parts to be hereinafter fully described in the following specification, pointed out in the claims and illustrated in the accompanying drawings which form a part of said specification and in which—

Figure 1 is a side elevation of the wrench. Fig. 2 is an elevation of the wrench turned to a position at right angles to that shown in Fig. 1. Fig. 3 is a section taken on line 3—3 of Fig. 2. Fig. 4, is a transverse section through one of the jaws of the wrench and through one locking member, taken on line 4—4 of Fig. 3. Fig. 5 is a detail taken on line 5—5 of Fig. 3. Fig. 6 is a section taken on line 6—6 of Fig. 3.

Like reference characters indicate corresponding parts throughout the several views.

My wrench comprises a stationary jaw 1 which terminates at one extremity in a handle 2 by which the wrench is manipulated and at the opposite end in an enlarged portion or head 3. A movable jaw 4 tapered toward one extremity is secured by a pin 5 extending through this tapered portion to a metallic piece 6 whose opposite extremity is secured by a screw 7 to the stationary jaw. The tapered extremity of the movable jaw is beveled and rests upon an inclined shoulder 7' formed in the stationary jaw to afford a bearing for the aforesaid movable jaw. Ears 8 which are lateral prolongations of the metallic piece 6 extend alongside the jaw 1 and serve as guides for the movable jaw in action. An enlarged portion or head 9 is made integral with a transverse jaw 10 which is provided with a

shoulder that extends below the said head and is pivotally secured between a pair of pivot ears 11 one on either side of the movable jaw 4 at its upper termination between which the body of this member is recessed to provide a clearance for the shoulder, by a pivot pin 12. The inner longitudinal surface of the transverse jaw is serrated as at 13 through the greater portion of its length and the said jaw projects through an aperture 14 in the stationary jaw and is provided near its free extremity with a pin 15 running transversely therethrough to prevent the said jaw being entirely withdrawn from engagement with the said stationary jaw. A hollow jacket 16 is slidably arranged on the stationary jaw below the recess 14 in said jaw and provided with an extension 17 for the retention, normally, of one end of a spring 18 the opposite end of which is secured by a screw 19 to the inner face of the jaw.

A suitable block 20 is pivotally arranged within the jacket 16, upon a pivot 21 the extremities of which are mounted in the walls of the aforesaid jacket, and adapted to rest normally against the adjacent surface of the stationary jaw of the wrench to serve as a seat for a thumb-screw 22 that is threaded and secured in a threaded aperture in a block 23 secured within the jacket 16 by pins 24; the thumb-screw 22 being further supported by an apertured support 25 secured to the aforesaid block 23 by a suitable screw 26. The upper surface of the block 23 projects beyond the jacket and is serrated for normal engagement with the serrations of the transverse jaw 10 while the lower termination of the said block serves as an abutment for one extremity of a coil spring 27 arranged upon a peg 28 made integral with a transverse piece 29 that is mortised in the stationary jaw 1. The purpose of the spring 27 is to keep the serrations of the block 23 normally enmeshed with those of the transverse jaw 10 thus holding the jaws of the wrench in locked position and exerting a strain on the jacket 16, through the medium of the block 23, that will tend to move it toward the jaw 10.

It will be seen that the block 23 with spring 27 constitute a jaw locking member so that when engaged with the serrations 13 of the jaw 1 they hold the two jaws 1 and 4 relatively stationary, and thus afford a means for locking the wrench in the adjust-

ed position desired. The distance between the successive serrations of the jaw 10 marks the intervals at which the jaws may be locked. When it is desired to lock the jaws at intermediate intervals or at points falling within the space from one serration to the next serration of the jaw 10, for which intervals the locking device just described would be inoperative, another method is employed as follows: The jaws are adjusted as desired and if they cannot be locked in this position by the serrated block 23 and jaw 10, the thumb-screw 22 is rotated against the block 20 which will draw the jacket 16 in a direction away from the movable jaw 4 against the tension of the spring 18 until the serrations of the block 23 and jaw 10 will mesh when the two jaws 1 and 4 will be locked in their relative positions.

20 What I claim is:—

1. A wrench comprising a stationary jaw provided with a handle and terminating at one extremity in an apertured head, a movable jaw secured to the stationary jaw, a transverse serrated jaw connected to said movable jaw and adapted for engagement with the apertured head of the aforesaid stationary jaw, a head made integral with the said transverse jaw and means for locking the transverse jaw in adjusted position.

2. A wrench comprising a stationary jaw provided with a handle and terminating at one extremity in an apertured head, a movable jaw secured to the stationary jaw, a transverse serrated jaw connected to said movable jaw for engagement with the apertured head of the aforesaid stationary jaw, a head made integral with the said transverse jaw, a spring actuated jacket arranged on the aforesaid stationary jaw and a serrated block seated in and projecting beyond said jacket for engagement with the transverse jaw.

3. A wrench comprising a stationary jaw provided with a handle and terminating at one extremity in an apertured head, a movable jaw secured to the said stationary jaw, a transverse serrated jaw connected to said movable jaw and adapted for engagement with the apertured head of the aforesaid stationary jaw, a head made integral with the said transverse jaw, a jacket having a forward prolongation slidably arranged on the said stationary jaw, a spring secured to the said jaw for engagement with the said jacket prolongation, a serrated block

secured in said jacket and projecting therebeyond, a spring arranged below the jacket for engagement with the said serrated block and means for moving the said jacket against the tension of the spring engaging its forward projection.

4. A wrench comprising a stationary jaw provided with a handle and terminating at one extremity in an apertured head, a movable jaw secured to said stationary jaw, a transverse serrated jaw connected to said movable jaw and adapted for engagement with the apertured head of the aforesaid stationary jaw, a head made integral with the said transverse jaw, a jacket having a forward prolongation slidably arranged on the said stationary jaw, a spring secured to the said jaw for engagement with the said jacket prolongation, a block pivotally arranged in the said jacket, a serrated block secured in the said jacket and projecting therebeyond, a spring arranged below the said jacket and projecting thereinto for engagement with the said serrated block and a thumb-screw piercing the said serrated block for engagement with the said pivoted block.

5. A wrench comprising a stationary jaw formed with an inclined shoulder, provided with a handle and terminating at one extremity in an apertured head, a movable jaw secured to the said stationary jaw and having a bearing upon the inclined shoulder of the said jaw, a transverse serrated jaw connected to the said movable jaw and adapted for engagement with the apertured head of the aforesaid stationary jaw, a head made integral with the said transverse jaw, a jacket having a forward prolongation slidably arranged on the said stationary jaw, a spring secured to the said jaw for engagement with the said jacket prolongation, a serrated block secured in said jacket and projecting therebeyond, a spring arranged below the jacket for engagement with the said serrated block and means for moving the said jacket against the tension of the spring engaging its forward projection.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two subscribing witnesses.

CARL A. SODERHOLM.

Witnesses:

P. G. BALDWIN,
GEO. W. GALKINS.