

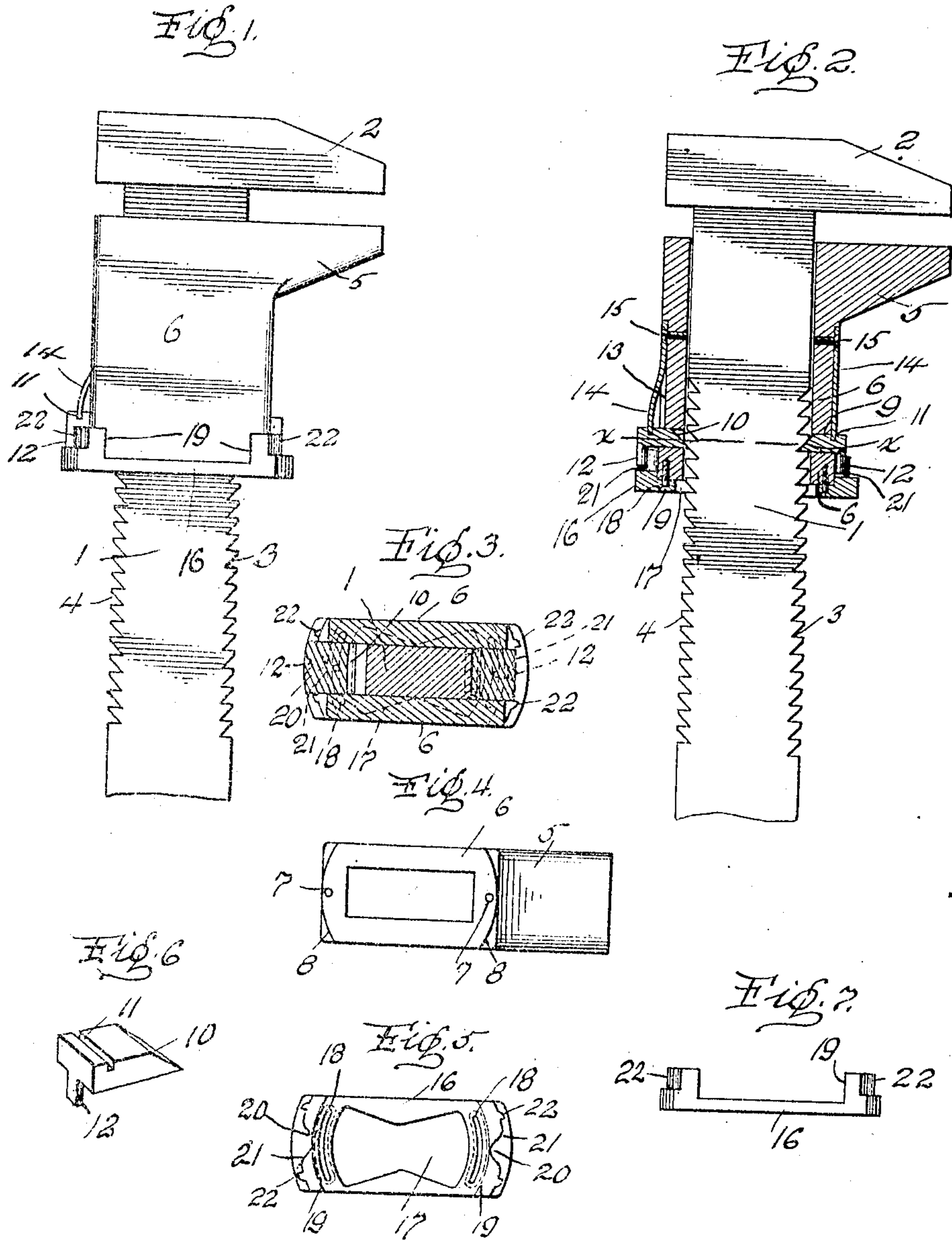
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F. D. NOBLE.

WRENCH.

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Inventor

F. D. Noble.

Witnesses

Samuel Payne.
Dea. Butler.

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H. C. Everts & Co.

Attorneys

UNITED STATES PATENT OFFICE.

FRANKLIN D. NOBLE, OF PITTSBURG, PENNSYLVANIA.

WRENCH.

No. 885,512.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANKLIN D. NOBLE, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to wrenches, and more particularly to that type commonly styled a "quick acting monkey wrench."

15 The primary object of my invention is, to provide a simple and inexpensive wrench, wherein positive and reliable means are employed for holding the movable jaw of a wrench in the position to which it is adjusted.

20 Another object of this invention is to provide a strong and durable wrench that can be readily manipulated to obtain a large or a minute adjustment. To this end, I have devised a wrench having a toothed shank with a movable jaw provided with oppositely disposed, spring pressed, alternately engaging 25 gripping blocks. The blocks are moved through the medium of a movable lock-out member carried by the movable jaw of the wrench.

30 The detail construction entering into my invention will be presently described and reference will now be had to the drawings forming a part of this specification, wherein:

35 Figure 1 is an elevation of a portion of the wrench constructed in accordance with my invention, Fig. 2 is a similar view illustrating the movable jaw thereof in section, Fig. 3 is a horizontal sectional view taken on the line $x-x$ of Fig. 2, Fig. 4 is a bottom plan of the movable jaw of the wrench, Fig. 5 is a 40 plan of a lock-out member as detached from the jaw of the wrench, Fig. 6 is a perspective view of one of the gripping blocks, and Fig. 7 is a side elevation of the lock-out member.

45 In the accompanying drawings, 1 designates a shank having a fixed jaw 2. This shank is rectangular in cross section, and has its front and rear edges provided with teeth 3 and 4, the teeth 3 being staggeredly arranged with respect to the teeth 4, whereby 50 an adjustment can be obtained with one of the teeth 3 that will be approximately half way between two of the teeth 4. According to the drawing one-sixteenth inch of an adjustment can be obtained.

55 Slidably mounted upon the shank 1 is a movable jaw 5 having a sleeve 6 embracing

said shank. The lower end of the sleeve 6 is provided with two screw openings 7, and is cut away to provide two oppositely disposed surfaces 8. Adjacent to the end of the sleeve 60 6, said sleeve is slotted, as at 9 for two oppositely disposed gripping blocks adapted to alternately engage the teeth 3 and 4 of the shank. These gripping blocks are provided with beveled gripping edges 10, transverse 65 grooves 11 and depending semi-cylindrical lugs 12, the object of which will presently appear. The sleeve 6 has its front and rear edges above the gripping blocks recessed, as at 13, for flat springs 14, these springs being 70 secured to the sleeve by screws 15 and are adapted to engage in the grooves 11 of the gripping blocks. The springs have a tendency to force the gripping blocks into engagement with the teeth 3 and 4 of the shank. 75

Movably mounted upon the lower end of the sleeve 6 is a lock-out member 16 provided with a double fan-tail shaped opening 17 for the shank 1. The member 16 is formed with diametrically opposed curved slots 18, and 80 extending through said slots are screws 19 engaging in the screw holes 7 of the sleeve 6 for holding the member 16 in engagement therewith. This member is formed with curved bearing shoulders 19 adapted to en- 85 gage the oppositely disposed bearing surfaces 8, and the outer faces of said shoulders are formed with oppositely disposed concavities 20, beveled surfaces 21, and lugs 22. The concavities 20 are adapted to receive 90 the depending semi-cylindrical lugs 12 of the gripping blocks.

The manner of operating my wrench is as follows: To close the jaw 5 it is only necessary to push upwardly upon said jaw, the 95 gripping blocks receding over the teeth 3 and 4 of the shank 1. When it is desired to open the jaw 5 or move the same away from the jaw 2, the lock-out member 16 is turned either to the right or to the left, the shape of 100 the opening 17 of said member permitting of a rocking movement of the member 16 upon the shank 1. As the member is moved in either direction, the beveled surfaces 21 of said member engaging the depending semi- 105 cylindrical lugs 12 force said lugs outwardly until they impinge two of the lugs 22, these lugs limiting the outward movement of the lugs 12. In consequence of this movement, both gripping blocks are moved outwardly 110 and maintained out of engagement with the teeth 3 and 4, permitting of the jaw 5 being

rapidly adjusted upon the shank 1. Since the springs 14 are under tension, a very slight movement of the member 16 will be sufficient impetus for the member to return to its normal position, also the gripping blocks of the wrench.

It will be observed from the foregoing description taken in connection with the drawings, that I have devised a wrench that can be easily adjusted, and due to all parts being compactly arranged and housed, the wrench will be free from danger of damage by ordinary use. I have not only provided a wrench or gripping mechanism wherein screw threads are dispensed with, but have devised a wrench that insures as minute adjustment as threads and can be manufactured at a comparatively small cost.

My invention is susceptible to such changes in the size, proportion and minor details as are permissible by the appended claims.

Having now described my invention what I claim as new, is:—

1. In a wrench, the combination with a shank having oppositely disposed staggeredly arranged teeth, and a fixed jaw, of a movable jaw slidably mounted upon said shank, a sleeve carried by said jaw and embracing said shank, oppositely disposed spring pressed gripping blocks mounted in said sleeve and adapted to alternately engage the teeth of said shank, depending semi-cylindrical lugs carried by said blocks, a lock-out member embracing the shank and mounted for rocking movement on the shank independently of the movable jaw, and shoulders at each end of said member for engagement with the

lugs on said blocks to move the blocks out of engagement with said shank.

2. The combination with a toothed shank having a fixed jaw, of a movable jaw slidably mounted upon said shank, a sleeve carried by said jaw and embracing said shank, oppositely disposed spring pressed gripping blocks mounted in said sleeve and engaging said shank, depending lugs carried by said blocks, a lockout member connected to the lower end of said sleeve to rock on said shank, the movement of said member being independent of the sleeve, and beveled shoulders carried at opposite ends of the member for engagement with said lugs to move said blocks out of engagement with said shank.

3. In a wrench, a gripping mechanism comprising a sleeve, oppositely disposed spring pressed gripping blocks mounted in said sleeves, depending lugs carried by said blocks, and a lock-out member movably mounted at the lower end of said sleeve and having beveled shoulders for engaging said lugs.

4. In a wrench, a gripping mechanism comprising a sleeve, oppositely disposed spring pressed gripping blocks mounted in said sleeve, depending lugs carried by said blocks, and means movably mounted upon the lower end of said sleeve for engaging said lugs and moving said blocks outwardly.

In testimony whereof I affix my signature in the presence of two witnesses.

FRANKLIN D. NOBLE.

Witnesses:

MAX H. SROLOVITZ,
K. H. BUTLER.