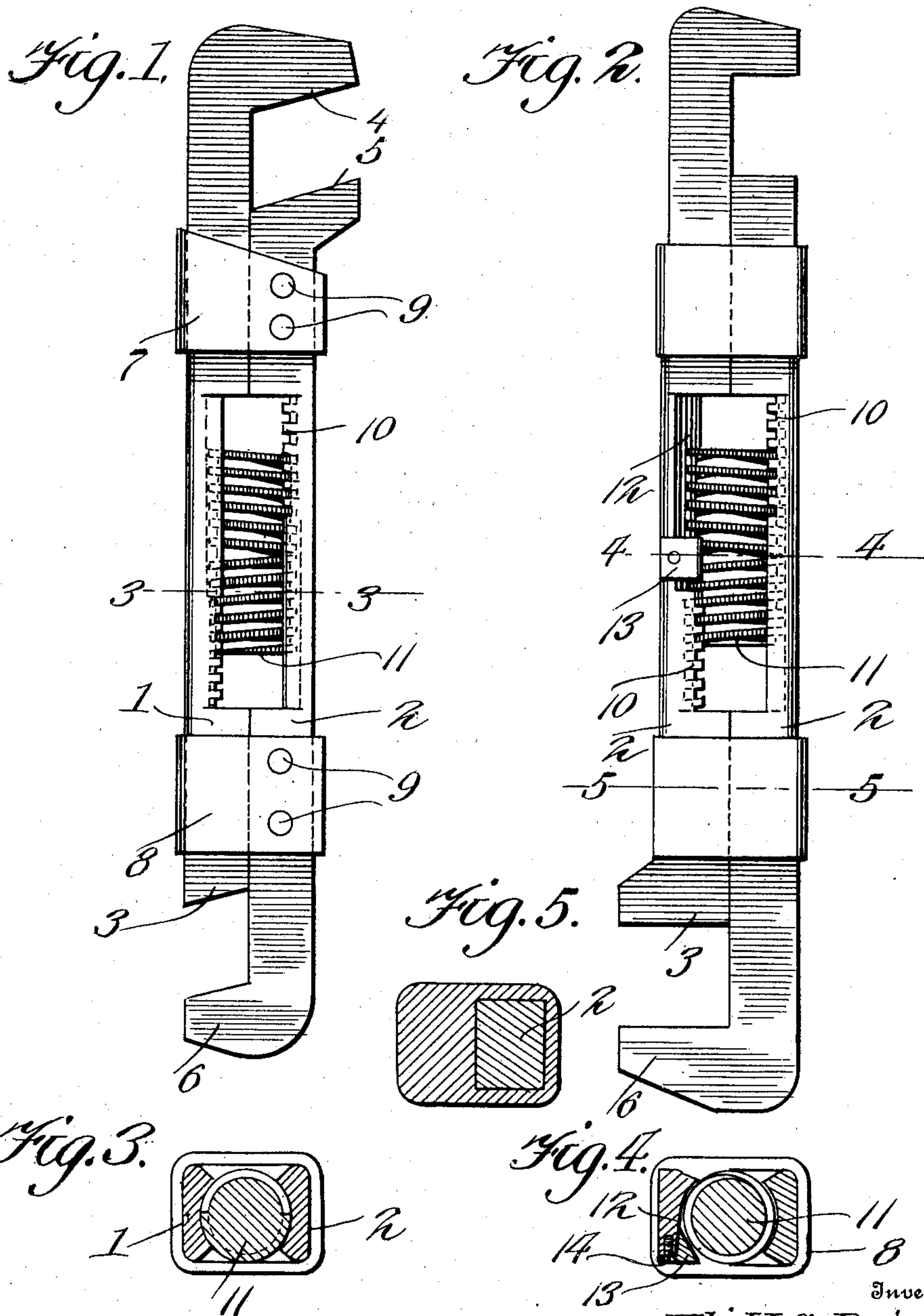


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WRENCH.  
APPLICATION FILED FEB. 18, 1908.

907,001.

Patented Dec. 15, 1908.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## WRENCH.

No. 907,001.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed February 18, 1908. Serial No. 416,493.

*To all whom it may concern:*

Be it known that I, ELI H. G. BRINSER, a citizen of the United States, residing at Elizabethtown, in the county of Lancaster and State of Pennsylvania, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to wrenches, the object of the invention being to provide a simple and effective quick action wrench of duplex or double form, embodying means whereby the relatively movable jaws of the wrench may be quickly adjusted with relation to each other, a further object of the invention being to provide a construction which will add materially to the life and durability of the wrench as a whole.

With the above general object in view, the invention consists of the novel construction, combination and arrangement of parts herein fully described, illustrated and claimed.

In the accompanying drawings, Figure 1 is a plan view of the wrench embodying the present invention. Fig. 2 is a similar view showing a slight modification in the construction of the wrench. Fig. 3 is a cross-section on the line 3—3 of Fig. 1. Fig. 4 is a cross-section on line 4—4 of Fig. 2. Fig. 5 is a cross-section on line 5—5 of Fig. 2.

The wrench contemplated in this invention comprises two parallel and relatively slidable shanks 1 and 2, each of which is provided at its opposite ends with jaws, the shank 1 having jaws 3 and 4 and the shank 2 having the jaws 5 and 6. These jaws may have their working faces disposed either at right angles to the shanks, as shown in Fig. 2, or at an oblique angle relatively thereto, as shown in Fig. 1. The parallel overlapping and relatively sliding shanks are connected together by means of yokes 7 and 8 which, under the arrangement shown in Fig. 1, are in the form of endless loops or straps which closely embrace both of the shanks and are secured to one of the shanks by fasteners 9. In the arrangement shown in Fig. 2, the yokes are formed as integral parts of one of the shanks, as shown in cross-section, Fig. 5, or the said yokes may be formed separately from and united to said shanks by welding.

Between the points at which the yokes 7 and 8 are located, the inner faces of the shanks 1 and 2 are cut away and screw threaded as shown at 10, and a double pitched screw 11, or in other words, a screw embodying right and left hand threads is inserted

between the threaded inner faces of the shanks so as to simultaneously engage with both of the shanks for the purpose of advancing or sliding the shanks longitudinally of each other to obtain the desired adjustment between the jaws of the wrench. Furthermore, by such arrangement, the shanks and jaws are moved relatively to each other at double the speed of an ordinary single screw which makes the wrench quick acting.

Under the arrangement shown in Fig. 1, the screw 11 may be placed in engagement with the threaded portions of the shanks before the yokes 7 and 8 are applied and secured to one of the shanks. In the construction shown in Fig. 2, however, where the yokes are permanently connected to one of the shanks, it is necessary to provide other means for introducing the adjusting screw 11. This is accomplished by cutting away a portion of the threads 10 to leave a threadless recess 12 embodying an inclined wall, as shown in Fig. 4, the said recess 12 being of the same length as the screw 11 so that by closing the jaws upon each other, the screw 11 may be passed into the recess 12 and the threads thereof brought into engagement with the threads of the opposite shank 2, after which by a slide movement, the threads of the screw are brought into engagement with the threads of the opposite shank 1. In order to prevent the screw 11 from becoming displaced accidentally, I provide a retainer or key 13 which is substantially wedge-shaped in cross-section as shown in Fig. 4, forming a shoulder which overhangs and partially embraces the screw 11, as clearly shown in Fig. 4, the said key or retainer being held in place by a fastener such as a screw 14.

Having thus fully described the invention, what is claimed as new is:—

1. A wrench embodying overlapping and relatively slidable shanks provided with jaws and connected by yokes placed at a suitable distance apart, the inner faces of said shanks being cut away and facially threaded, and a double pitched screw having knurled threads interposed between and engaging the threaded portions of said shanks, substantially as described.

2. A wrench comprising overlapping and relatively slidable shanks provided with jaws, yokes connecting said shanks and spaced apart a suitable distance, the inner portions of said shanks being cut away and facially threaded between the yokes, and a rotary ad-



justing screw having knurled threads interposed between the threaded portions of the shanks, one of the shanks being provided with a threadless recess providing for the introduction and removal of said screw.

3. A wrench comprising overlapping and relatively slidable shanks provided with jaws, yokes connected to one jaw and embracing the other jaw and arranged at a suitable distance apart, the inner jaws of the shanks being cut away between the yokes and threaded, an adjusting screw interposed between the threaded portions of the shanks, one of

the shanks being provided with a threadless recess for the insertion and removal of said screw, and a retainer detachably connected to the shank having the threaded recess, said retainer acting to prevent displacement of the screw, substantially as described. 15

In testimony whereof I affix my signature in presence of two witnesses. 20

ELI H. G. BRINSER.

Witnesses:

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