H. McDONALD.

WRENCH.

APPLICATION FILED MAR. 25, 1910.

966,943.

Patented Aug. 9, 1910.

Fig. 1

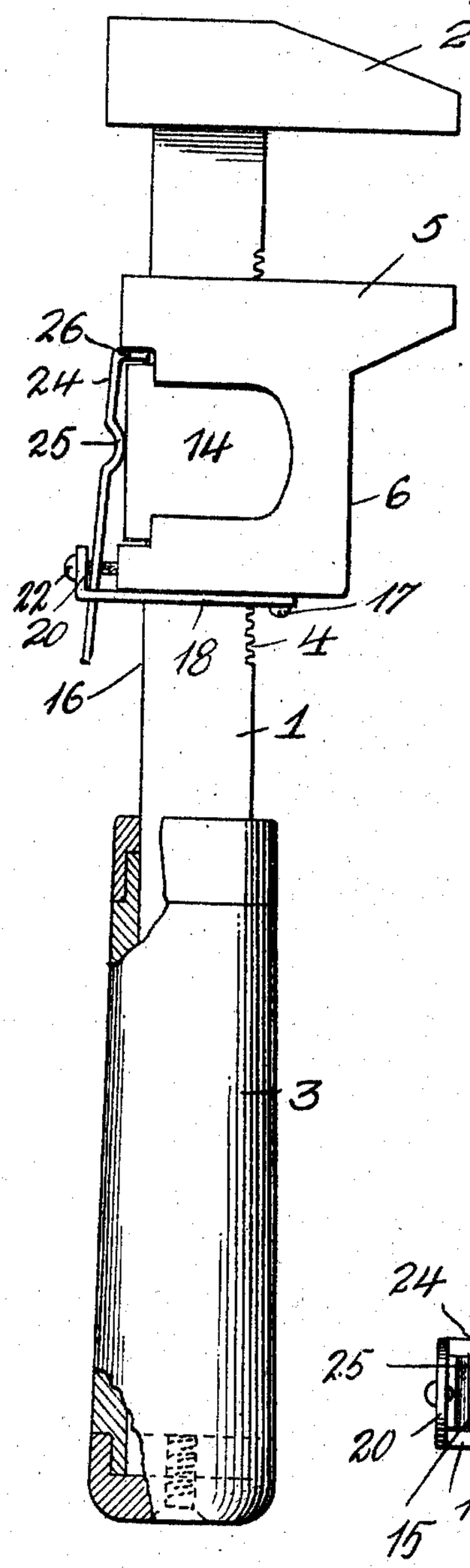


Fig. 2.

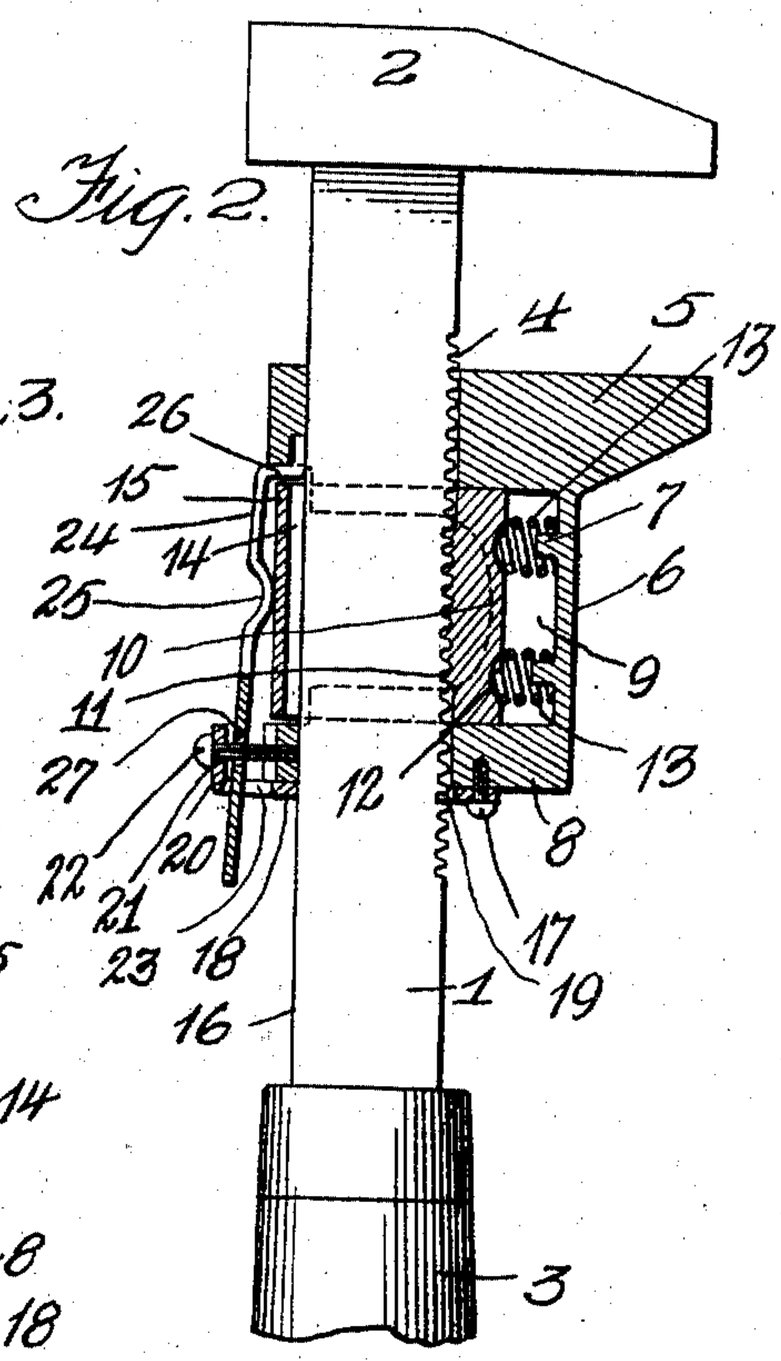


Fig. 3.

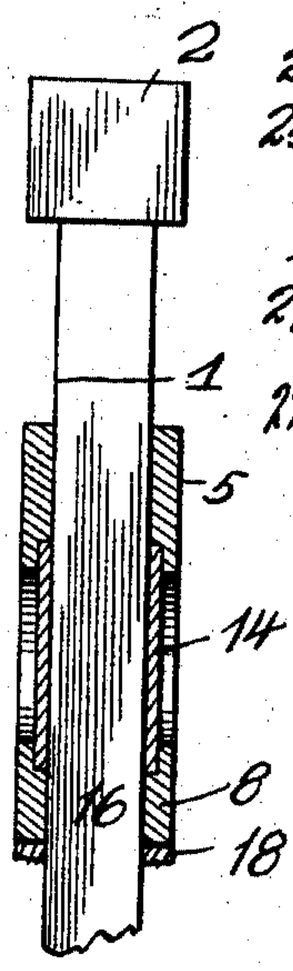


Fig. 4.

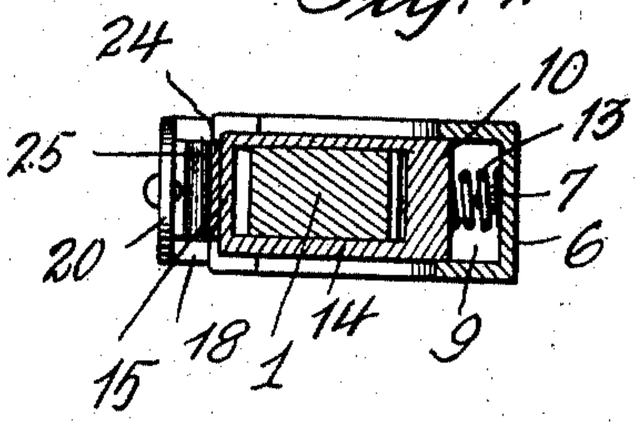
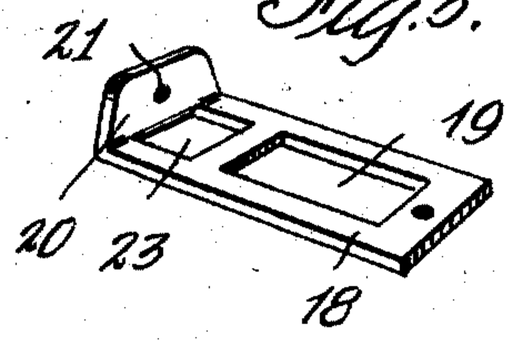


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

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WRENCH.

966,943. Specification of Letters Patent. **Patented Aug. 9, 1910.**

Application filed March 25, 1910. Serial No. 551,451.

To all whom it may concern:

Be it known that I, HUGH McDONALD, a citizen of the United States of America, residing at New Castle, in the county of Lawrence 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.

This invention relates to wrenches and the object thereof is to provide a tool of such class in a manner as hereinafter set forth with means for conveniently adjusting and maintaining in its adjusted position the slidable or movable jaw of the wrench.

Further objects of the invention are to provide a wrench which shall be comparatively simple in its construction and arrangement, strong, durable, efficient in its use, readily set up, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as hereinafter more specifically described and illustrated in the accompanying drawings wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claim hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views: Figure 1 is a side elevation partly broken away of a wrench in accordance with this invention. Fig. 2 is a side elevation partly in section of the wrench with the handle broken away. Fig. 3 is a front elevation partly in section with the shank broken away. Fig. 4 is a cross sectional view of the wrench through the movable jaw, and, Fig. 5 is a detail illustrating the lever retaining plate.

Referring to the drawings in detail, 1 denotes a shank having at one end a fixed jaw 2 and at its other end a handle 3. One edge of the shank 1 is formed with a series of teeth as at 4. The foregoing elements are of common construction.

Slidably mounted upon the shank 1 is an adjustable jaw 5 formed with an extension 6 which is arranged in parallelism with respect to the toothed edge 4 of the shank 1 and is formed on its inner face with a pair of lugs 7. The extension 6 terminates in a right-angularly-disposed bar 8 through which extends the shank 1 and which is arranged in parallelism with respect to the jaw 5. The bar 8 in connection with the jaw 5 forms a chamber 9 for the reception of a gripping block 10 having a toothed face 11 which is adapted to engage with the toothed edge 4 of the shank, whereby the movable jaw is maintained in its adjusted position.

The gripping block 10 is provided in its smooth face with recesses 12 in which extend coil springs 13 for maintaining the gripping block 10 in engagement with the toothed edge 4 of the shank 1. The springs 13 abut against the extension 6 and surround the lugs 7. Connected to the gripping block 10 are side extensions 14 which project beyond the shank 1 and are coupled together by a plate 15 formed integral with the extensions 14. The plate 15 extends in parallelism with the edge 16 of the shank and is adapted to be shifted in a manner to be presently referred to whereby the gripping block 10 is moved out of engagement with the toothed edge 4 of the shank 1 and against the action of the springs 13.

Connected to the lower face of the bar 8 by the hold-fast device 17 is a plate 18 formed with an opening 19 through which extends the shank 1. The plate 18 projects beyond the edge 16 of the shank 1 and is formed with an angularly-disposed end 20 having an opening 21 through which extends a hold-fast device 22, the latter engaging with the bar 8. The plate 18 is furthermore provided with an opening 23 in proximity to its angular end.

The reference character 24 denotes a shifting lever formed intermediate its ends with an off-set portion 25 bearing against the plate 15. One end of the lever 24 is bent in an angular manner as at 26 and extends between one edge of the plate 15 and the movable jaw 5. The other end of the lever 24 extends through the opening 23 of the plate 18, and is provided with an opening 27 through which passes the hold-fast device 22.

From the foregoing construction and arrangement of parts, it is evident that if the apertured end of the lever 24 is swung inwardly the off-set portion 25 will engage the plate 15 shifting the latter toward the edge 16 of the shank 1, whereby the gripping block 10 will be moved out of engage-

ment with the toothed edge 4 of the shank 1 so that the jaw 5 can be adjusted to the position desired upon the shank 1. After the jaw 5 has been adjusted to the desired position, the lever 24 is released and the springs 13 force the gripping block to engage with the toothed edge 4 of the shank 1, whereby the jaw 5 is maintained in its adjusted position.

What I claim is:

A wrench comprising an adjustable jaw, an extension projecting therefrom, a bar formed integral with said extension, a shank extending through the bar and jaw and provided with a fixed jaw and further provided with a toothed edge, a spring-controlled toothed gripping block interposed between the adjustable jaw and said bar and adapted to engage the toothed edge of the shank for maintaining the adjustable jaw in position, a plate connected with said gripping block and interposed between the jaw and said bar, a shiftable lever having an angularly-disposed end projecting between said plate and movable jaw and further provided with an off-set portion intermediate its ends for moving said plate when the lever is shifted whereby the block is moved from engagement with the shank, and supporting means for the lever carried by and projecting from said bar.

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

HUGH McDONALD.

Witnesses:

U. Z. Sweesy,

Leverett L. Schefenocker.