

No. 867,450.

PATENTED OCT. 1, 1907.

R. TOWARD.
WRENCH.

APPLICATION FILED JUNE 10, 1905.

2 SHEETS—SHEET 1.

Fig. I

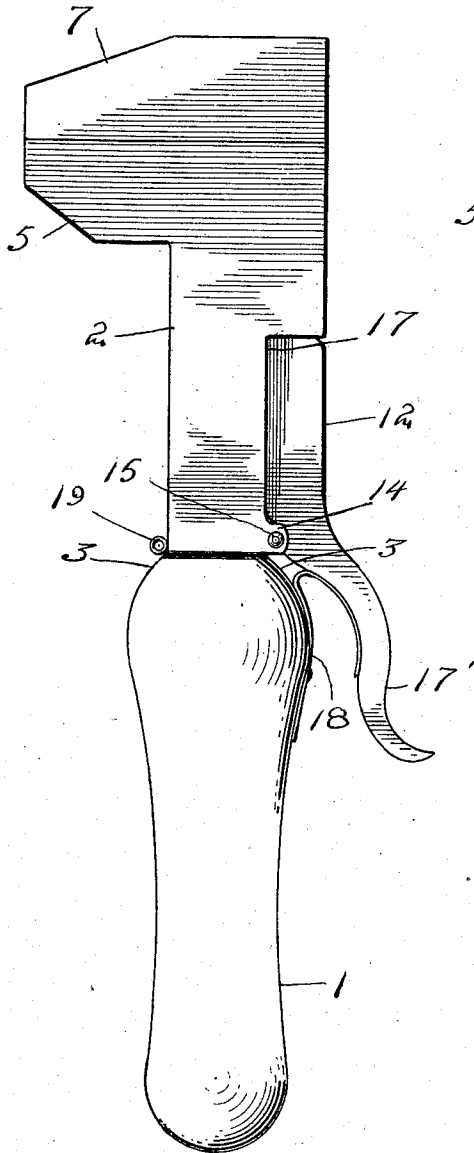
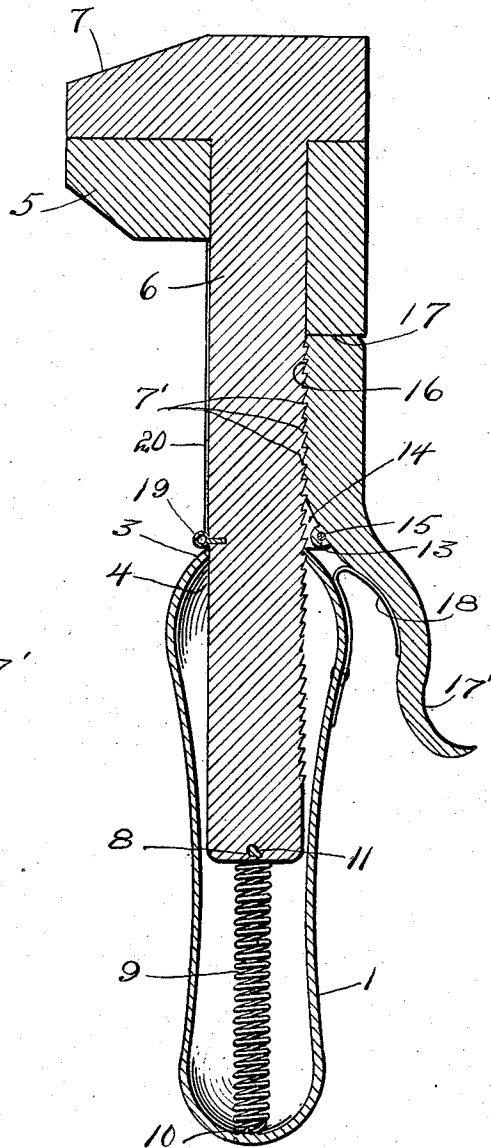


Fig. 2.



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2 SHEETS—SHEET 2.

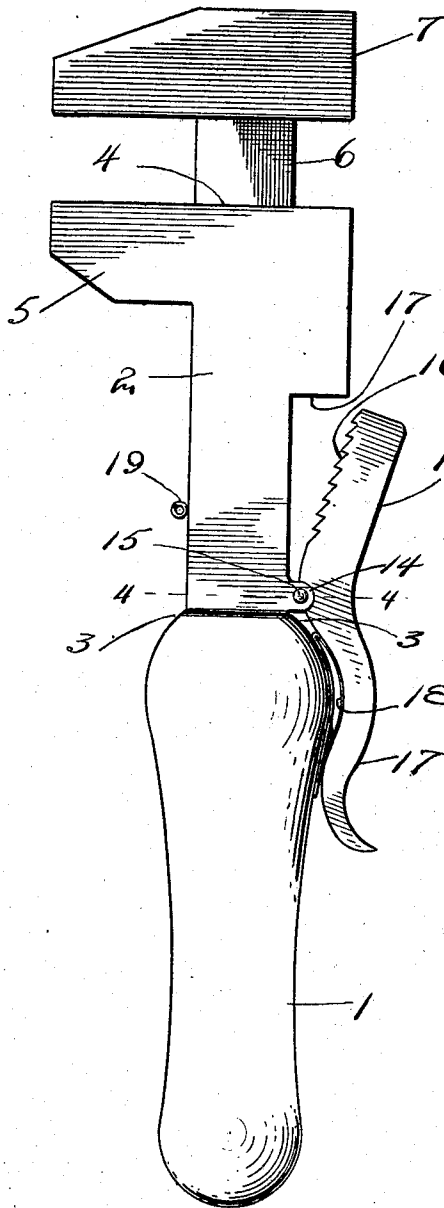


FIG. 3

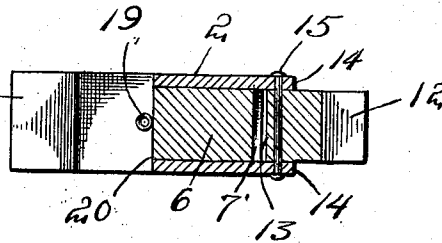


FIG. 4

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RALPH TOWARD, OF CARNEGIE, PENNSYLVANIA.

WRENCH.

No. 867,450.

Specification of Letters Patent.

Patented Oct. 1, 1907

Application filed June 10, 1905. Serial No. 264,640.

To all whom it may concern:

Be it known that I, RALPH TOWARD, a citizen of the United States, residing at Carnegie, in the county of Allegheny, State of Pennsylvania, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to nut wrenches.

One object of the invention is to provide an exceedingly simple, inexpensive, durable and efficient monkey wrench.

Another object of the invention resides in the provision of a tool of the character stated whereby it may be easily and quickly adjusted to fit a nut for the loosening or tightening of the latter with respect to a bolt.

With these and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size and minor details may be made, within the scope of the appended claims, without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings: Figure 1 is an elevation of my invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an elevation with the jaws separated and the locking dog disengaged. Fig. 4 is a transverse sectional view with the jaws separated and the locking dog disengaged.

Referring now more particularly to the accompanying drawings, the reference character 1 designates a hollow handle having its inner end reduced to form a shank 2, shoulders 3 being formed as the result of the reduced shank portion 2 of the handle 1, the said shank having a passage 4 arranged centrally thereof for communication with the hollow portion of the handle 1, there being a jaw 5 formed integrally with the outer end of the shank 2 which shall be hereinafter referred to as the inner jaw.

The shank 6 of the outer jaw 7 is provided upon one face with teeth 7' and a perforation 8 in its end opposite to the end at which the integral jaw 7 is formed, the shank being of such formation as to have sliding movement in the aforesaid hollow shank 2, there being a helical or other spring 9 connected at one of its ends to a lug 10 formed within the hollow handle 1, the said spring having its hook 11 at its opposite end engaged in the perforation 8 of the shank 6 of the outer jaw 7 to hold the latter normally in engagement with the inner jaw 5.

When it is desired to apply the wrench to a nut for

manipulation, the outer jaw 7 is pulled away from the inner jaw against the action of the aforesaid spring 9, and in order to hold the outer jaw 7 away from the inner jaw 5, I provide a suitable dog 12 having a perforated ear 13, designed to fit between the spaced ears 14 formed at the upper shoulder 3 of the handle 1, there being a suitable pivot pin 15 piercing the ears of the handle and the said bolt to permit of pivotal movement of the dog. It will be seen that the dog 12 is provided with teeth 16 upon its under-face for engagement with the teeth 7' of the shank 6, there being an opening 17 in the upper face of the hollow shank 2 to permit of the passage of the dog 12 therethrough for engagement with the said teeth 7' of the shank 6. It will therefore be understood that this dog 12 is normally in engagement with the teeth 7' of the shank 6 and when it is desired to disengage the former from the latter to permit of the outward withdrawal of the outer jaw 7, it is simply necessary to press upon the thumb piece 17 of the dog 12 and press downwardly against the action of the spring 18 which is secured upon the handle and bent upon itself to bear against the thumb piece 17' of the dog 12.

From the foregoing, it will be seen that my improved wrench is very light and inexpensive and when it is desired to apply the wrench for operation, it is simply necessary to disengage the dog 12 from engagement with the shank 6 of the outer jaw and pull the latter outwardly against the action of the spring 9, the latter serving to pull the outer jaw inwardly in the event that the same be pulled out too far for engagement with the nut. In other words, the spring 9 will pull the outer jaw inwardly when the pawl is not engaged with the shank thereof, thereby insuring a positive tight connection of the wrench with the nut or other object to be worked. In order to permit of a ready outward movement of the jaw 7 with respect to the hollow shank 2 of the handle 1, I secure in any suitable manner to the under-face of the shank 6, a knob or other suitable element 19 designed to work in the slot 20 in the forward-face of the hollow shank 2, it being understood that it is simply necessary to exert an outward pressure upon the said knob or the like 20 to force said jaw outwardly.

What is claimed is:

A wrench comprising a hollow handle, a hollow shank connected with the handle, a jaw carried by the shank at its outer end, said shank having a longitudinal passage in its forward face, a movable outer jaw having a shank engaged within the hollow shank and extending into the handle, a spring secured to the inner end of the second named shank and within the handle, and arranged to hold the shank yieldably against outward movement, said movable shank having teeth upon its rearward face, said hollow shank having an opening at its rearward side to expose the teeth, and having ears at the lower end of the opening, a dog having an ear pivoted between the ears of

the hollow shank and provided with teeth for engagement of those in the movable shank, to hold the latter against movement, a finger piece carried by the movable shank and extending outwardly through the longitudinal slot
5 of the hollow shank for engagement to move the movable shank against the action of the spring, a finger piece carried by the dog and extending downwardly over the handle and in spaced relation thereto, and a spring secured to the handle and engaged with the inner surface of the finger

piece, to hold the latter yieldably with the dog in engagement with the teeth of the movable shank. 10

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

RALPH TOWARD.

Witnesses:

JOSEPH JOHNSTON,
JAMES PLATTS.