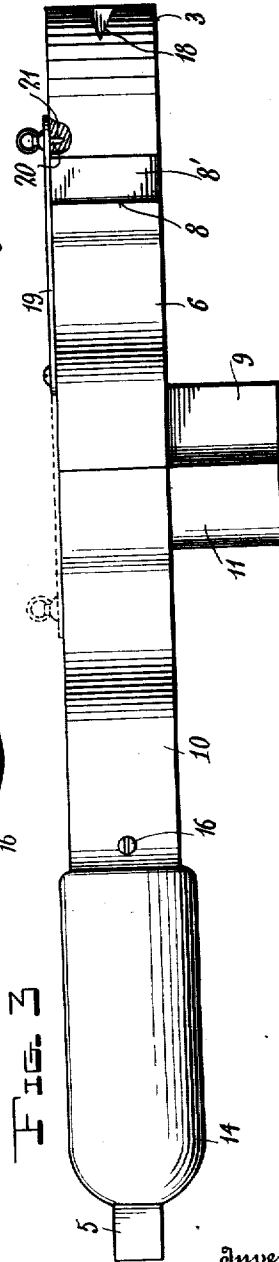
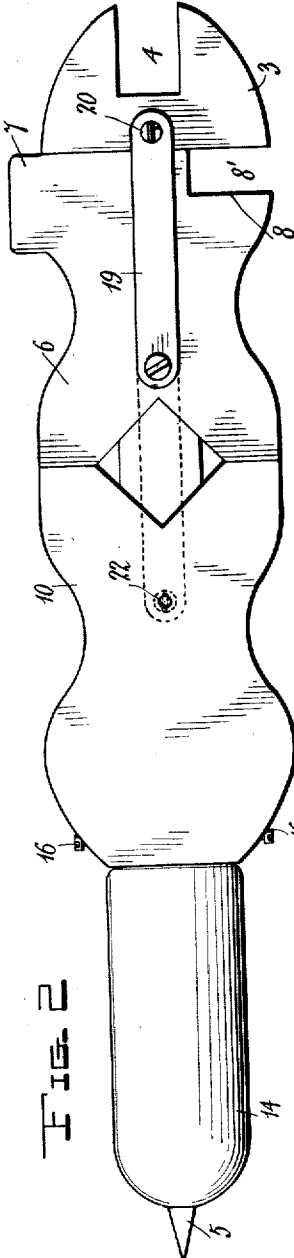
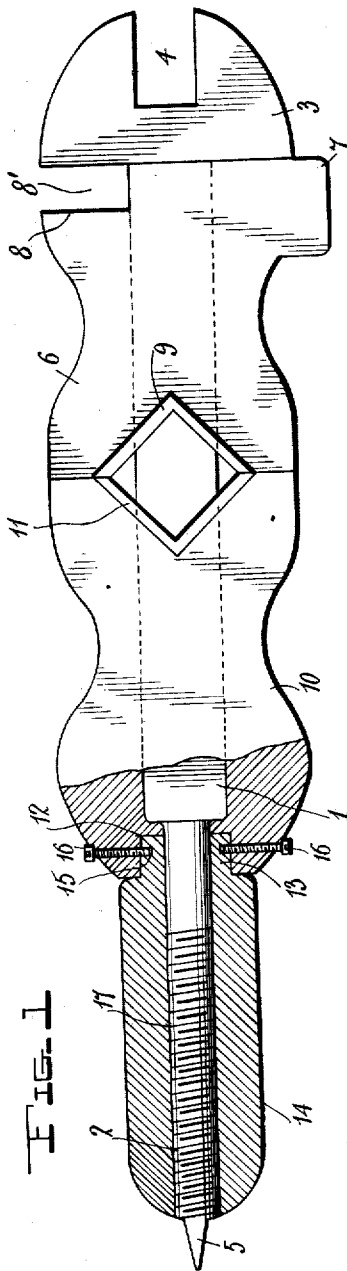


M. A. JOHNSON.
WRENCH.

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Patented Feb. 13, 1912.

1,017,550.



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UNITED STATES PATENT OFFICE.

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WRENCH.

1,017,550.

Specification of Letters Patent.

Patented Feb. 13, 1912.

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To all whom it may concern:

Be it known that I, MILTON A. JOHNSON, a citizen of the United States, residing at Denison, in the county of Crawford, State of Iowa, 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.

This invention relates to that type of wrenches particularly adapted for use in connection with vehicles of all kinds, and has for its object to provide a device of this character having combined therewith a socket wrench for removing nuts from the hubs and a jaw wrench for use upon nuts employed upon other parts of vehicles.

A further object of the invention is to combine with a wrench of this type a hammer and screw driver, the same forming a part of the device, whereby all tools are at all times, by simple manipulation ready for use.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended; it being understood that various changes in the form, proportion size and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a top plan view of the wrench. Fig. 2 is a bottom plan view. Fig. 3 is a side elevation.

Referring to the drawing, the numeral 1 designates the stem, the same being rectangular in cross section, and has one of its ends provided with a reduced portion 2, the same being circular in cross section and is threaded. The other end of the stem 1 is provided with a head 3, and is formed with a socket 4 for operating a nut in the usual manner. The lower end of the reduced portion 2 is formed with a blade 5, said blade constituting a screw driver.

Slidably mounted on the stem 1 is an outer jaw 6, said jaw being provided with a hammer head 7 and a shoulder 8, said shoulder operating in conjunction with the under side of the head 3 to form a socket

8', and when said jaw is adjusted is adapted to fit nuts of different sizes. Upon the inner end of the jaw 6 is formed an angular flange 9 which projects laterally from the jaw 6. Adapted to coact with the jaw 6 is a jaw 10, said jaw being slidably mounted on the stem 1 and is provided at its outer end with an angular flange 11, said flange being formed in a manner similar to the flange 9 and coacts therewith to form a socket, and by reason of their projection can be introduced in the hub of a wheel for the purpose of detaching or attaching a nut to the axle. The inner end of the jaw 10 is provided with a circular recess 12 and in which the reduced portion 13 of the handle 14 is seated. The reduced portion 13 is provided with an annular groove 15, said groove being adapted to receive the ends of set screws 16 which are threaded through suitable openings in the jaw 10. The handle 14 is further provided with a central bore 17, said bore being threaded to coact with the threaded reduced portion 2.

The head 3 has one of its sides formed with a claw 18, whereby the same may be readily used for removing nails or the like.

Pivotally connected to the jaw 6 is a leaf spring 19, said spring having its outer end adapted to rest upon one side of the head 3, and is provided with a pin 20. The head 3 is provided with an orifice 21, in which the pin 20 may be inserted and be held therein by the spring 19. The jaw 10 is likewise provided with an orifice 22, so that the spring 19 may be swung upon its pivot until the pin 20 is seated therein, whereby the jaws 6 and 10 may be held against independent adjustment.

The operation of the device is as follows: By rotating the handle 14 and when the pin 20 is seated within the orifice formed in the head 3, the jaw 10 is capable of adjustment, due to the threaded connection between the bore of the handle and reduced portion 2, during which operation the jaw 6 remains stationary. This permits the proper adjustment of the flanges 9 and 11 for engagement with the axle nut of the vehicle. Now when it is desired to adjust the head 4 in a manner to allow engagement of a nut by the socket 8' the spring 19 is swung upon its pivot until the pin engages the orifice 22 formed in the jaw 10, thereby holding said jaws against independent adjustment but allowing the stem 1 to

move outwardly or inwardly to adjust the socket 8' for engagement with nuts of different sizes. This is readily accomplished as when the handle 14 is rotated the jaws 6 and 10 remain stationary, but the stem 1 is caused to move back and forth through the threaded connection between the handle and the reduced portion 2.

What is claimed, is:—

- 10 A wrench of the class described, comprising a stem having a head formed at its outer end and its inner end provided with a threaded reduced portion, inner and outer jaws slidably mounted on said stem, the
15 outer jaw being provided with a shoulder which coacts with the under side of the head to form a nut socket, a handle mount-

ed on said reduced portion and being connected to the inner jaw, an orifice formed in the inner jaw, a leaf spring pivotally connected to the outer jaw, a pin carried upon the outer end of the spring, said spring being adapted to be swung upon its pivot to allow the pin to engage in the orifice formed in the inner jaw, whereby when the handle 25 is rotated both the inner and outer jaws are simultaneously adjusted upon the stem.

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

MILTON A. JOHNSON.

Witnesses:

A. DANNELS,

J. W. MONAGHAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."