

M. A. JOHNSON.
BUGGY WRENCH.

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986,716.

Patented Mar. 14, 1911.

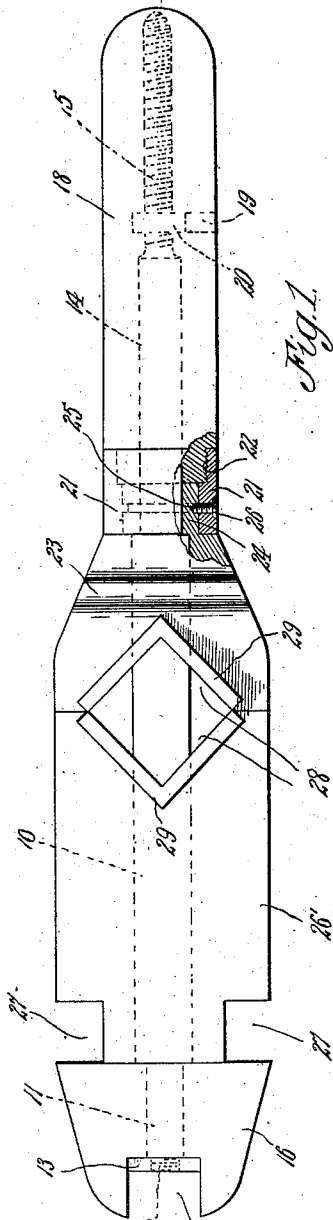


Fig. 1.

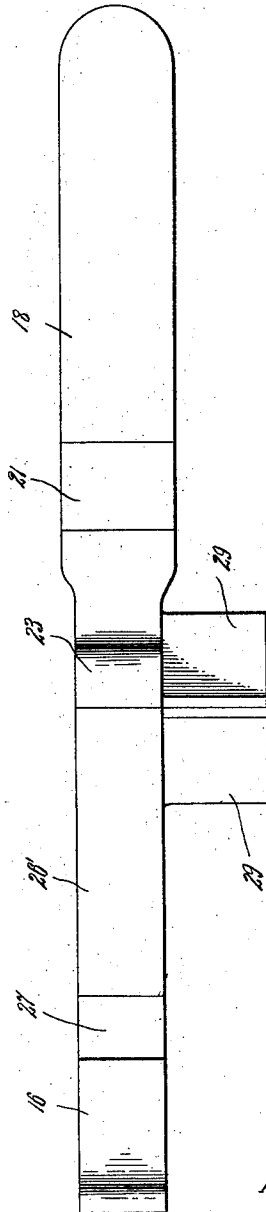


Fig. 3.

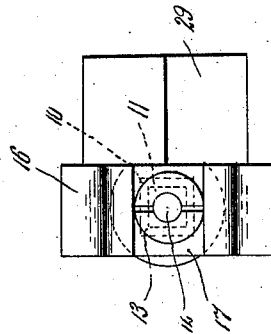


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

MILTON A. JOHNSON, OF DENISON, IOWA.

BUGGY-WRENCH.

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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 Buggy-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 wrenches and has special reference to a form of wrench adapted to be used around wagons and buggies and the like.

One object of the invention is to improve the general construction of wrenches of this character.

Another object of the invention is to provide an improved form of wrench which will combine in itself a socket wrench adaptable for removing the nut from wheel hubs and a jaw wrench for removing or replacing the ordinary type of nut.

With the above and other objects in view the invention consists in general of a wrench having a relatively fixed jaw, a relatively movable jaw, and a second movable jaw slidable on a stem attached to the first fixed jaw.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically set forth in the claim.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a plan view of a wrench constructed in accordance with this invention. Fig. 2 is a side view thereof. Fig. 3 is an end view thereof.

The stem of this wrench comprises a body portion square in cross section 10 provided at its forward end with a reduced portion 11 terminating in a reduced portion 12 which is threaded to fit in a nut 13. The opposite end of this stem is provided with a reduced portion 14 circular in cross section and this portion is again reduced at the extremity as indicated at 15 and provided with suitable threads for purposes hereinafter to be described. Held upon the reduced portion 11 of the stem is a fixed head 16 the base portion of which forms a plane surface as can readily be seen from an inspection of Fig.

1. The forward portion of this fixed jaw 55 is provided with a rectangular recess 17 adapted to receive the nut 13 which is of the screw nut type as can be clearly seen from reference to Fig. 3. This recess is further made deep enough to receive a nut in the ordinary manner in which open wrenches are used.

At 18 is a handle and this handle is provided with a rectangular recess 19 adapted to receive a nut 20, the opening of the recess being afterward closed by a suitable plug in the ordinary manner. This nut 20 fits on the reduced portion 15 of the stem so that as the handle is turned the stem is caused to move in and out of said handle. The forward end of this handle is provided with a ferrule 21 wherein the handle is secured by means of suitable threads 22 formed on the inside of the ferrule and the outside of the handle end.

Mounted adjacent the handle 18 is a movable jaw 23 provided with a reduced circular portion 24 which fits within the ferrule and which has a groove 25 extending therearound. A set screw 26 is screwed through the ferrule and the end thereof projects into the groove 25 so that as the handle is rotated the movable jaw 23 is held attached thereto and moves along the stem with said handle. This movable jaw 23 is spaced at a considerable distance from the fixed jaw 16 and between the jaws 23 and 16 is a second movable jaw 26' which is held on the body of the stem 10 and is freely slidable thereon. The forward end of the jaw 26' is notched on each side as indicated at 27 and these notched portions in connection with the base of the fixed jaw 16 form nut receiving notches. Both the jaw 23 and the jaw 26' are cut away on their opposed faces as indicated at 28 and surrounding these cut away portions are flanges 29 which project laterally from the jaw as can be seen by reference to Fig. 2. These flanges form the socket portion of the wrench and by reason of their projection can be introduced within the hub of a wheel for the purpose of detaching or attaching the axle nut to the axle.

In the operation of this invention the wrench is adjusted by grasping the fixed head 16 with one hand and rotating the handle 18 with the other. This causes the handle 18 to move on or off of the stem 14

and consequently increases or decreases the distance between the jaw 23 and the jaw 16. If the device is to be used as a socket wrench the jaw 26' is slid forward against the jaw 16 and the handle rotated sufficiently to permit the entrance of the nut to be applied or removed between the flanges 29. The socket is then fitted over the nut and the wrench operated in the usual manner, it being observed that both hands may be used to rotate the wrench, one on each side of the socket. If the wrench is to be used for rotating nuts of the ordinary type the jaw 26 is positioned against the jaw 23 and the handle rotated sufficiently so that one of the openings 27 will fit the nut to be removed or applied. The wrench is then used by placing this notched portion over the nut and the same rotated in the ordinary way.

20 There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

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

In a wrench, a stem, a fixed jaw secured thereto, a handle upon the stem, means to adjust said handle along said stem, a movable jaw carried by the handle and provided with laterally extending flanges arranged to form one side of a socket wrench, a third jaw freely slidable on the stem between the first mentioned jaws, said third jaw being equal in width to the fixed jaw and arranged to form a jaw wrench in connection therewith, and flanges formed on said third jaw adjacent the movable jaw to form the other side of said socket wrench.

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

MILTON A. JOHNSON.

Witnesses:

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