No. 757,613. PATENTED APR. 19, 1904.

W. E. GILLILAND.

NUT WRENCH.

APPLICATION FILED SEPT. 21, 1903.

NO MODEL.

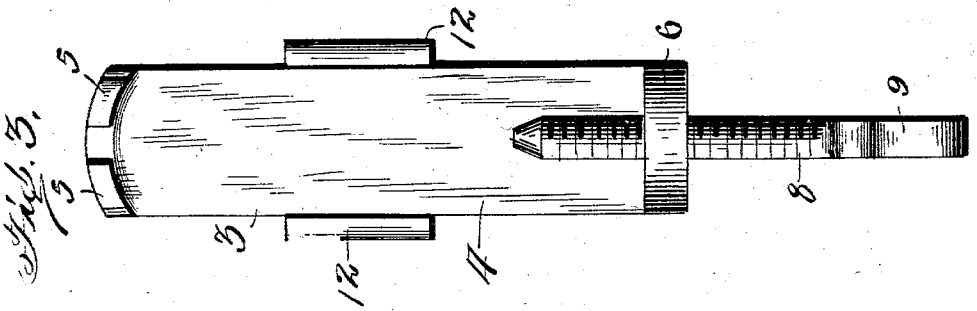

Fig. 3.

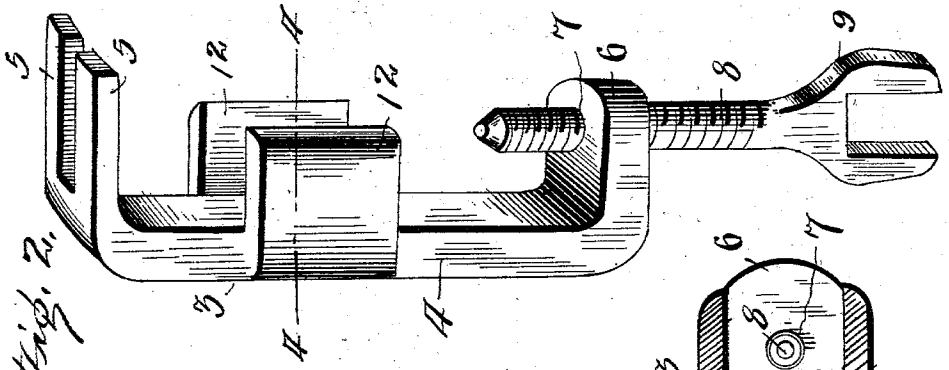

Fig. 2.

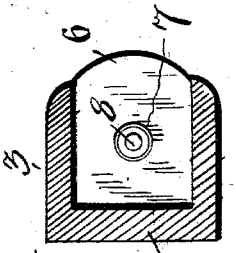

Fig. 4.

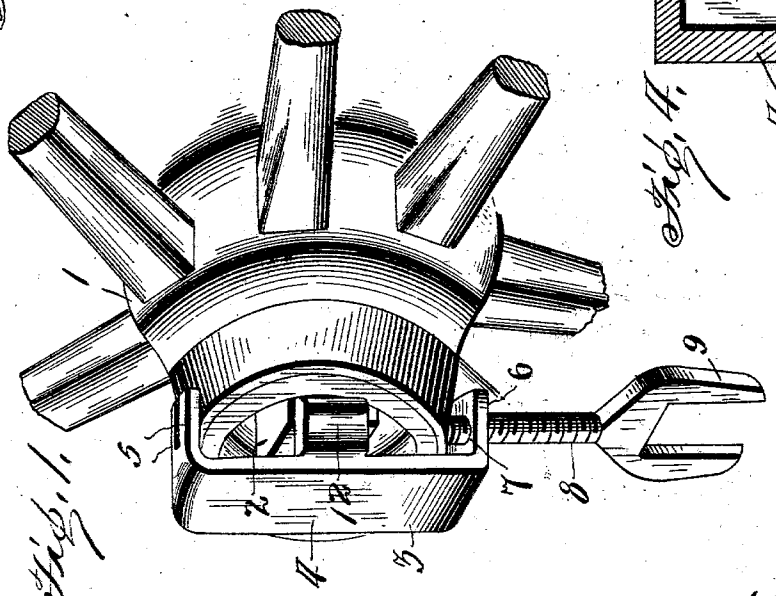

Fig. 1.

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No. 757,613. Patented April 19, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM EDWARD GILLILAND, OF COATSBURG, ILLINOIS.

NUT-WRENCH.

SPECIFICATION forming part of Letters Patent No. 757,613, dated April 19, 1904.

Application filed September 21, 1903. Serial No. 174,076. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EDWARD GILLILAND, a citizen of the United States, residing at Coatsburg, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Nut-Wrenches; and I do 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 improvements in nut-wrenches.

The object of the invention is to provide a wrench for use particularly in connection with the axle-nuts of vehicles to remove and replace them without the necessity of handling the same.

A further object is to provide a wrench for this purpose which will be simple in construction, quickly adjusted for use, and well adapted to the purpose for which it is designed.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a portion of a wheel-hub, showing the application of the device to the same. Fig. 2 is a perspective view of the wrench removed from the hub. Fig. 3 is an inner face view of the wrench. Fig. 4 is a sectional view on the line 4 4 of Fig. 2.

Referring to the drawings more particularly, 1 denotes the hub of a vehicle. 2 denotes the nut which screws onto the ends of the vehicle-axle to hold the hub and wheel in place.

The wrench 3 consists of a flat bar or plate 4, having formed on one end right-angularly-disposed lugs or ears 5, said ears being arranged on a slight arc, whereby they will engage or conform to the curvature of the hub. On its opposite end the bar 4 has formed a right-angularly-disposed lug 6, which lies below and in line with the ears 5. In the lug 6 is formed a threaded hole or opening 7, in which is adapted to be screwed a set-screw or bolt 8, the inner end of which is adapted to bear upon the under side of the hub when applied thereto and screwed up, thus holding the bar 4 in place. On the lower end of the bolt 8 is formed a head 9 in the shape of a nut-wrench, as shown. On each edge and just above the center of the bar 4 are formed inwardly-projecting plates or jaws 12, arranged parallel with each other and in position to engage the nut when the device is applied to the hub of the vehicle.

When it is desired to remove the wheel of a vehicle, the wrench is applied to the hub of the same in the manner shown in Fig. 1 of the drawings, with the jaws 12 engaging the axle-nut. The set-screw or bolt 8 is then tightened up. The wheel is now turned backward, rotating the wrench in a direction to unscrew the nut from the axle without the operator having had to handle the same. The wheel may now be removed from the axle, carrying with it the wrench and nut. When the wheel is replaced, the nut may be screwed onto the axle by rotating the wheel in a forward direction, as will be understood.

By the use of a device of this character handling of the nut and the consequent soiling of the hands and other objections will be obviated. Nuts which have become tightened on the axle, so as to be difficult to loosen, may be easily removed by this device, owing to the increased leverage given by the wheel.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A nut-wrench, consisting of a bar having right-angularly-disposed ears formed on one end and a right-angularly-disposed lug formed on its opposite end, plates projecting from

said bar to form nut-engaging jaws, and means for removably attaching said bar, to the hub of a vehicle, substantially as described.

2. A nut-wrench, consisting of a bar having right-angularly-disposed ears formed on one end, said ears being arranged on an arc, a right-angularly-disposed lug formed on the opposite end of said bar, a threaded hole formed in said lug, a set-screw or bolt adapted to be screwed into said hole, and parallel plates formed on said bar and projecting therefrom to form nut-engaging jaws, substantially as described.

3. A nut-wrench, consisting of a bar having right-angularly-disposed ears formed on one end, said ears being arranged on an arc, a right-angularly-disposed lug formed on the opposite end of said bar, a threaded hole formed in said lug, a set-screw or bolt having a head in the form of a nut-wrench, said set-screw or bolt being adapted to be screwed into said threaded hole, and plates formed on the edges of said bar slightly above the center of and projecting from the same in parallel relation to form nut-engaging jaws, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM EDWARD GILLILAND.

Witnesses:
C. T. GIBBS,
J. C. MURROH.