

No. 621,223.

Patented Mar. 14, 1899.

J. B. CALEF.
CARRIAGE WRENCH.

(Application filed Apr. 14, 1898.)

(No Model.)

Inventor,
Josiah B. Caley.
Foxfield, Saratoga^{and} Zimmerman
Hills.

UNITED STATES PATENT OFFICE.

JOSIAH B. CALEF, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-FOURTH TO
HARRY D. WHYTE, OF SAME PLACE.

CARRIAGE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 621,223, dated March 14, 1899.

Application filed April 14, 1898. Serial No. 677,589. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH B. CALEF, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carriage-Wrenches, of which the following is a specification.

This invention relates to carriage-wrenches, and has for its object to provide a construction which shall be strong, durable, and efficient and at the same time simple and adapted to be produced at a relatively small expense.

To these ends the invention consists in certain novel features which I will now proceed to describe and will then particularly point out in the claim.

In the accompanying drawings, Figure 1 is a plan view of a wrench embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is an end elevation of the wrench viewed from the handle end thereof, and Fig. 4 is a bottom plan view of a portion of the wrench.

In the said drawings, 10 indicates the handle or shank of the wrench, which consists of a flat bar having its body disposed in the plane of rotation of the wrench or, in other words, in the plane of strain. This shank has located at one end thereof the fixed jaws of the wrench, the same being preferably made integral with said shank or handle and being disposed at right angles to the plane of the body thereof.

11 indicates the fixed jaw of the axle-nut portion of the wrench, which, as hereinbefore stated, is arranged in a position at a right angle to the plane of the body of the wrench, and which is provided with a notch or recess 12, V-shaped in section, as is usual in the jaws of axle-nut wrenches.

13 indicates the fixed jaw of the monkey-wrench portion of the device, which lies on the opposite side of the shank from that on which the axle-nut portion 11 is located, and which has a plane or ungrooved inner face 14.

15 indicates a traveler or keeper which is mounted to slide longitudinally on the shank of the wrench, being provided with a rectangular aperture 16, extending longitudinally therethrough, which aperture is adapted to receive and fit upon said shank. This trav-

eler or keeper carries the movable jaws of the wrench, which are preferably formed in one piece therewith.

17 indicates the movable axle-nut jaw, which is arranged like its companion jaw 11 at right angles to the plane of the body of the wrench, and which is provided with a similar groove or recess 18, V-shaped in cross-section.

19 indicates the movable monkey-wrench jaw, which is located on the side of the traveler or keeper 15 opposite to that on which the jaw 17 is located, and which has a plane or ungrooved face 20, corresponding to and parallel with the face 14 of the fixed jaw 13.

The traveler or keeper 15 is recessed laterally, as shown at 21, said recess extending from the side of the keeper inward to and communicating with the aperture 16, and there are provided on opposite sides of said recess 21 lugs or projections 22, through which passes a pivot-screw 23, (shown in dotted lines in Fig. 1,) upon which is mounted, so as to rotate thereon, a worm 24, having a milled or roughened edge by means of which it may be rotated. This worm meshes with a rack 25, cut or formed upon the edge of the shank 10 along a portion thereof, extending from a point near the fixed jaws of the wrench some distance toward the opposite or handle end thereof. At the point where this rack terminates, toward the handle end of the wrench, there is formed in the edge of the shank 10 a recess 26, whereby there is formed on said edge of the shank a shoulder 27, which lies opposite a similar shoulder 28, formed by the terminal wall of the traveler or keeper adjacent thereto, the two shoulders thus forming wrench-jaws for the purposes hereinafter set forth.

The wrench thus constructed is employed in the following manner: The axle-nut jaws 11 and 17 are adapted to grasp between them the axle-nuts of a carriage in the manner usual in wrenches constructed for this purpose, the movable jaw being adjusted into proper position relatively to the fixed jaw by means of the worm 24, which engages the rack 25. The handle or shank having the plane of its body arranged at a right angle to these jaws has consequently such a location as to

offer the maximum strength of its resistance to any force applied thereto in rotating the axle-nuts of a carriage or other vehicle. The plane-faced jaws 13 and 19 may obviously be
5 used upon ordinary nuts after the manner of an ordinary monkey-wrench, thus dispensing with the necessity of employing a separate wrench for use in connection with such nuts or bolts. It is also frequently the case that
10 carriage-bolts are of such a construction or are so located that the nut or bolt head to be grasped is not accessible by means of an ordinary wrench on account of the thickness of this latter. Such nuts or bolts may be op-
15 erated upon by presenting the shank of the wrench edgewise to them and grasping them between the shoulder 27 of the recess 26 of the shank and the corresponding shoulder 28, formed by the end of the traveler or keeper,
20 and owing to the thinness of these portions of the wrench it may be used in many locations about a carriage or buggy which would be inaccessible to a wrench as ordinarily constructed.
25 The entire wrench is very simple in construction, being composed of few parts, and

while durable and not likely to get out of order may be produced at a relatively slight cost.

I claim—

A carriage-wrench comprising a flat shank having a rack formed in its edge and a recess adjacent thereto forming a gripping-shoulder on said edge, said shank being provided at one end with fixed jaws on opposite sides thereof at right angles to the plane of the body of the shank and having respectively a grooved and a plane face, in combination, with a traveler or keeper apertured to fit and slide on said shank, provided with a rotatable worm to en-
30 gage the rack on the edge thereof and having at one end movable jaws on opposite sides of said shank and provided respectively with a grooved and a plane face, and at the other end a shoulder adapted to coöperate with the
45 shoulder on the edge of the shank to form gripping-jaws, substantially as described.

JOSIAH B. CALEF.

Witnesses:

FREDERICK C. GOODWIN,
IRVINE MILLER.