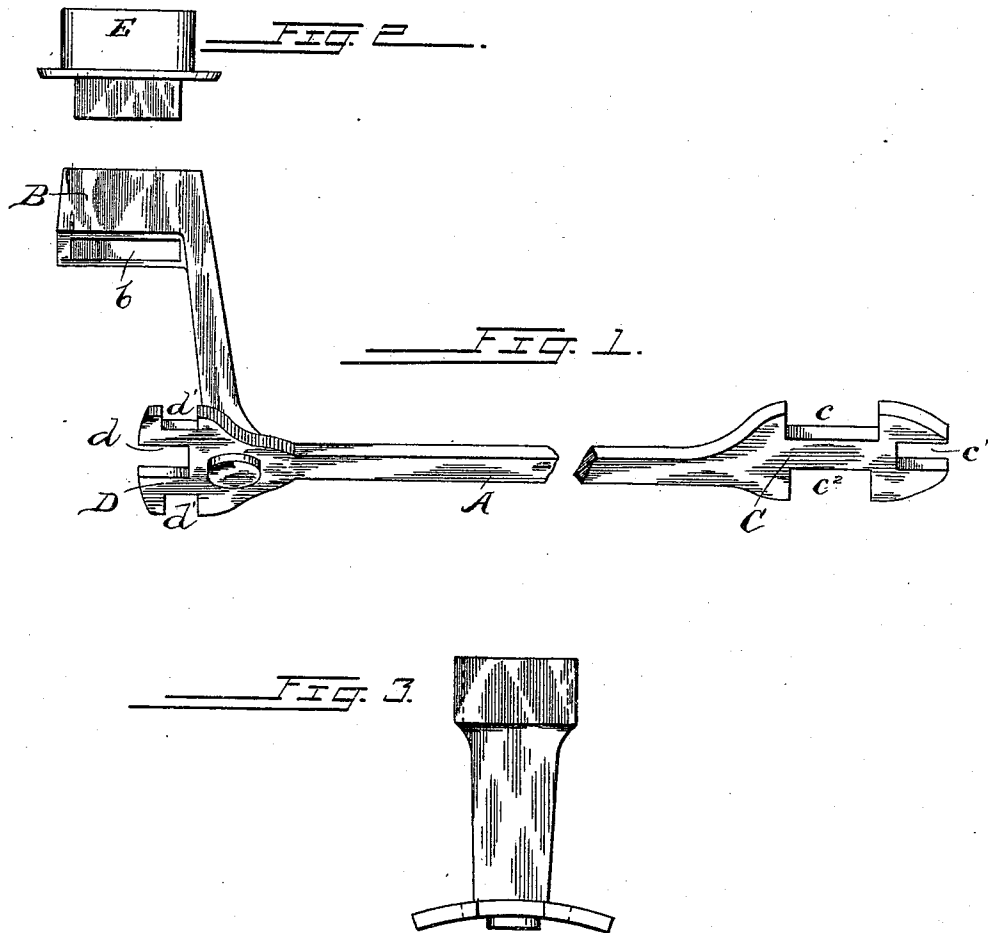


(No Model.)

J. K. BYLER & H. S. ZOOK.
CARRIAGE WRENCH.

No. 496,595.

Patented May 2, 1893.



Witnesses
Edw. Kelly
Calvin Jackson

JAMES K. BYLER
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UNITED STATES PATENT OFFICE.

JAMES K. BYLER AND HENRY S. ZOOK, OF MORGANTOWN, PENNSYLVANIA.

CARRIAGE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 496,595, dated May 2, 1893.

Application filed December 20, 1892. Serial No. 455,768. (No model.)

To all whom it may concern:

Be it known that we, JAMES K. BYLER and HENRY S. ZOOK, citizens of the United States, residing at Morgantown, in the county of Berks, State of Pennsylvania, have invented certain Improvements in Carriage-Wrenches, of which the following is a specification.

This invention relates to an improvement in carriage wrenches. Heretofore wrenches of this class have been devised but their use has been more or less unsatisfactory and our object has been to overcome the main objection as will be brought out in the following description of the present invention.

The main objection to wrenches of this character as manufactured at present is that when the nut or burr is removed from the axle, it is frequently left in the wrench socket for convenience until ready to be replaced; the wrench with the nut in it is ordinarily laid on the ground and as the main portion of the handle forms but a limited base and the weight of the socket and the nut held in it tends to overbalance it, the wrench will generally turn thus allowing sand and dirt to get into the nut.

In our present invention we overcome this great objection in a very simple and advantageous manner by forming an extension to the handle of the wrench which projects under the socket, thus forming in connection with the laterally extended rear end of the handle, a supporting base sufficient to maintain the socket, with the nut therein, in a vertical position, making it practically impossible for the wrench to turn so as to allow the nut to fall out of the socket. This extension of the handle like its rear end, is formed with various sizes of jaws adapted to fit a variety of nuts, the socket being sufficiently elevated to permit the use of these jaws as conveniently as those at the rear end.

The invention is fully described in connection with the accompanying drawings and is specifically pointed out in the claim.

Figure 1 is a perspective view of our improved wrench. Fig. 2 shows the nut or burr; and Fig. 3 is an end view.

The handle portion A is provided at the rear, as usual, with the laterally extended end C which is provided with different sized openings or jaws to engage various sizes of nuts. At the opposite end of the handle A is the nut socket B which is raised considerably above the plane of the handle portion A as usual so as to permit it to enter the recessed hub of a wheel sufficiently for the opening *b* to receive the nut or burr E shown in Fig. 2. Projecting under this elevated overhanging socket B, we provide an extension D to the handle, of considerable width, which serves, in connection with the laterally extended end C of said handle to form a sufficient base for the wrench to maintain the socket B, with the nut E, in the elevated position desired when the wrench is laid upon the ground or elsewhere. This extension D is provided, as shown, with openings *d d'* similar to those shown in the widened portion C but of different sizes; it is also provided with a projection *d²* which serves as a hammer and is of such a length that it does not prevent the outer ends of the extension D from bearing on the ground; thus serving to about double the range of the wrench, provide a hammer and at the same time support it in the desired position as already described.

What we claim is—

A carriage wrench having a nut socket B raised above the plane of the handle portion A and an extension D of said handle portion projecting under the socket and serving to form in connection with the laterally extended end C of said handle a supporting base adapted to maintain said socket B in elevated position substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES K. BYLER.
HENRY S. ZOOK.

Witnesses:

ED. A. KELLY,
W. G. STEWART.