

(No Model.)

E. L. ESSLEY.
WRENCH.

No. 491,415.

Patented Feb. 7, 1893.

Fig. 1.

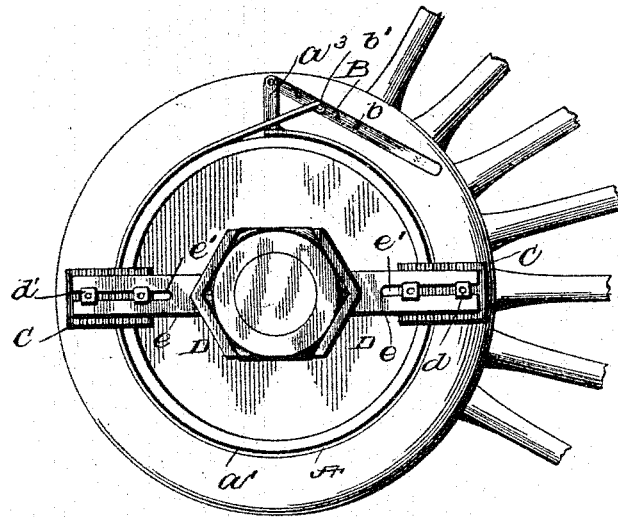


Fig. 2.

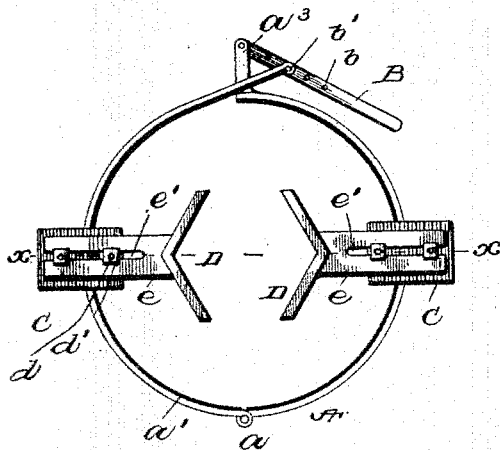


Fig. 3.

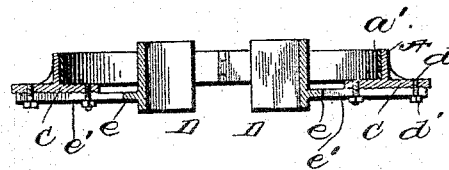
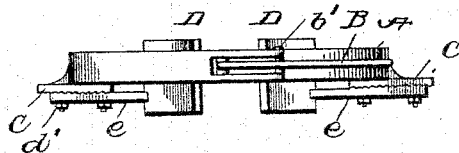


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

ELISHA L. ESSLEY, OF CHICAGO, ILLINOIS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 491,415, dated February 7, 1893.

Application filed November 21, 1892. Serial No. 452,718. (No model.)

To all whom it may concern:

Be it known that I, ELISHA L. ESSLEY, of Chicago, in the county of Cook and State of Illinois, 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 contemplates certain new and useful improvements in wrenches, and has for its object the production of a simple and inexpensive device of this nature whereby an axle nut can be removed from an axle together with the wheel and without separating the two, thus holding the nut in proper position for replacement on the axle.

The invention consists of a wrench composed of a band designed to be secured to the hub of a wheel and two jaws connected to said band and designed to embrace a nut, whereby as the wheel is revolved the nut will be made to move therewith and either be withdrawn from, or tightly screwed on, the threaded end of the axle-skein.

The invention also comprises the detail construction, combination and arrangement of parts, substantially as hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings:—Figure 1 is a view in side elevation of a wheel with my improved form of wrench applied thereto. Fig. 2 is a similar view of the wrench detached. Fig. 3 is a horizontal sectional view on the line $x-x$, Fig. 2. Fig. 4 is a top plan view.

Referring to the drawings, A designates a band preferably made of metal and formed in one piece, although I have shown it in Fig. 2 as being composed of two parts pivotally connected together at a . The inner surface of this band has a covering a' of rubber or other soft material so as to protect a wheel-hub from injury. From one end of band A projects a short post or stud a^2 , to the outer end of which is fulcrumed the inner end of a lever B in which is formed a series of holes or openings b . The other end of band A is forked and its extended portions are bent or curved back upon themselves to form loops through which

a bolt b' is passed, said bolt also being passed through any one of the series of holes b of lever B. The point to which the end of band is secured to lever B depends upon the size of the wheel hub.

C, C, are two plates diametrically opposed to each other and rigidly secured to, or they may be formed with, band A. The outer surfaces of these plates are serrated and from each plate projects two bolts or short threaded rods d upon which work nuts d' .

D, D, are two corresponding clamping jaws of V-shape. From each jaw projects an arm e having a longitudinal slot e' , and on their inner faces said arms are serrated similarly to plates C to which they are firmly held by the threaded bolts and nuts, the serrations aiding in holding the parts together. By loosening the nuts the clamping jaws can be readily and easily adjusted and firmly held at any desired point. It is only necessary to adjust the clamping jaws when nuts of different sizes are to be operated upon.

In practice, the band is placed around the end of the wheel hub and is thoroughly bound thereon by throwing lever B over into the position shown in Fig. 1, drawing the extended portions of the forked end of the band on each side of and beyond the post or stud a^2 . By thus tightening the band the clamping jaws are made to firmly hug or grasp the nut on the end of the axle skein. The axle being "jacked" so that the wheel is free from contact with the ground, the operator by turning the said wheel forward will effect the loosening or removal of the nut, which latter is held in fixed relation to the hub, whereby after the axle-skein has been greased, or the desired attention is given, the wheel is replaced and the nut being in proper relation to the threaded end of the axle-skein will be made to engage therewith. The wheel being revolved rearward the nut will be firmly screwed "home," after which the band is removed.

The advantages of my invention are apparent to those skilled in the art to which it appertains. It will be specially observed that a wrench thus constructed is extremely simple and inexpensive; that by means thereof the removal of a nut is readily and easily secured and by keeping the nut in fixed relation to

the wheel-hub after removal of the wheel, sand or the like is prevented from getting into the thread of the nut and the latter can be readily reapplied to the axle-skein.

- 5 Another advantage lies in the fact that a greater leverage is secured and hence a nut can be readily removed, and the device will not scratch or injure any part of the wheel.

I claim as my invention:—

- 10 1. The herein-described improved wrench, having an adjustable band designed to encircle and be secured on a wheel hub opposite adjustable clamping jaws carried by said band and means for holding said jaws stationary
15 at any point, substantially as set forth.

2. The herein-described improved wrench, comprising the band, means for binding the same, the plates secured to said band, and the clamping jaws adjustably secured to said
20 plates, substantially as set forth.

3. The herein-described improved wrench, comprising the band, means for binding the same, the plates secured to said band and having serrated faces, and the clamping jaws
25 having serrated arms adjustably held to said plates, substantially as set forth.

4. The herein-described improved wrench, comprising the band, the lever fulcrumed on one end of said band and having the other end
30 thereof adjustably secured thereto, and the opposite clamping jaws carried by and located within said band, substantially as set forth.

5. The herein-described improved wrench,

comprising the band, the lever fulcrumed on one end of said band and having the other end
35 thereof adjustably secured thereto, the plates carried by said band, and the clamping jaws having arms adjustably secured to said plates, substantially as set forth.

6. The herein-described improved wrench, 40 comprising the band having a post or stud projecting from one end thereof, its other end being forked, the lever fulcrumed on said post or stud and having a series of holes therein, the bolt holding the forked end of said band 45 to said lever, and the opposite adjustable clamping jaws carried by said band, substantially as set forth.

7. The herein-described improved wrench, consisting of the band designed to encircle 50 the hub of a wheel, the lever connected to the ends of said band for effecting the binding thereof, the opposite plates carried by said band and having serrated faces, the clamping
55 jaws of V-shape having arms projecting therefrom, said arms having serrated faces and longitudinal slots, and the nutted bolts for binding said arms to said plates, substantially as set forth.

In testimony whereof I have signed this 60 specification in the presence of two subscribing witnesses.

ELISHA L. ESSLEY.

Witnesses:

ARTHUR HUMPRHEY,
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