

C. E. WOOD.
BOLT HOLDER AND WRENCH.
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978,100.

Patented Dec. 6, 1910.

Fig. 1.

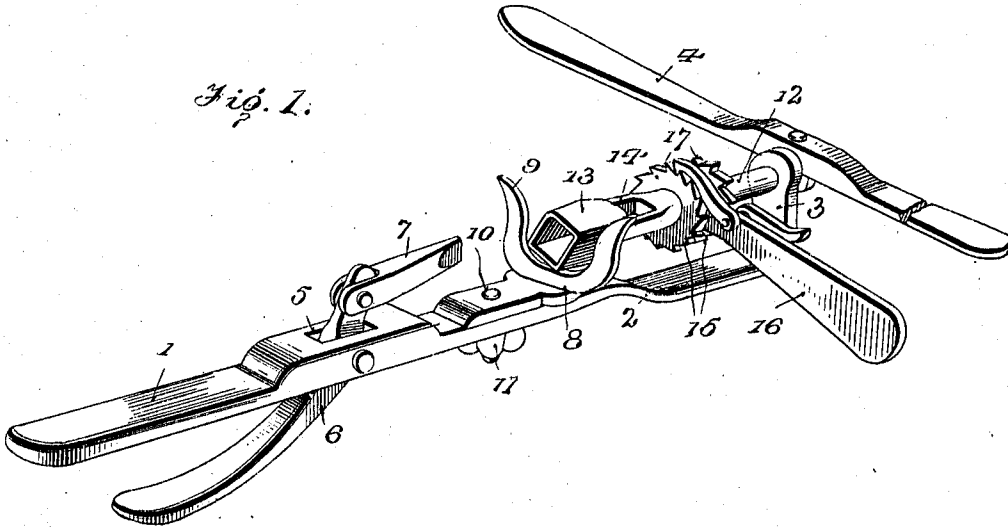
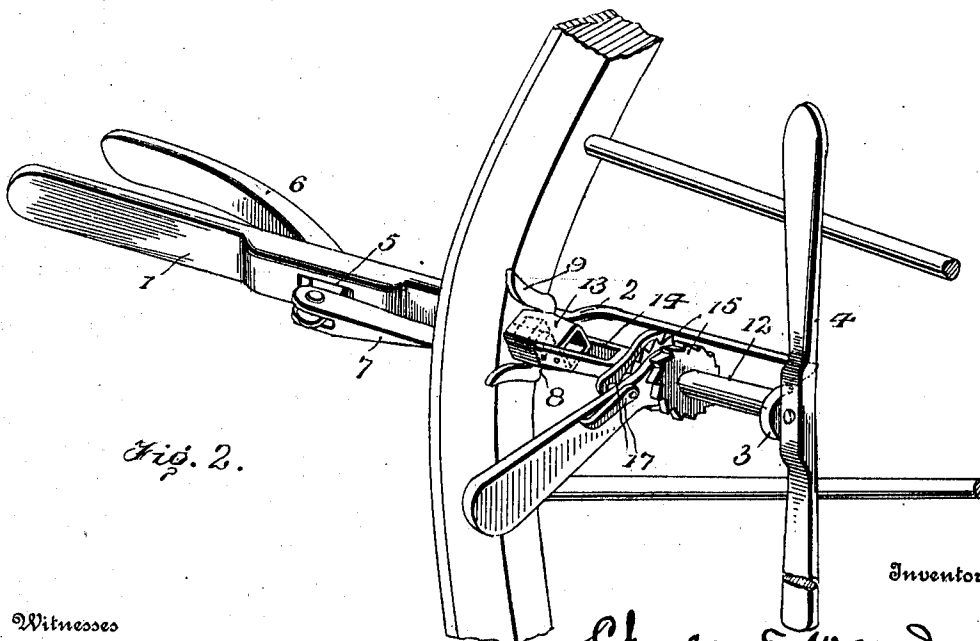


Fig. 2.



Inventor

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By Louis R. Bagge, Esq.
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Witnesses

Walter D. Munnay,
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UNITED STATES PATENT OFFICE.

CHARLES E. WOOD, OF DANVILLE, ILLINOIS, ASSIGNOR OF ONE-HALF TO ORVILLE J. GUNNELL, OF DANVILLE, ILLINOIS.

BOLT-HOLDER AND WRENCH.

978,100.

Specification of Letters Patent.

Patented Dec. 6, 1910.

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To all whom it may concern:

Be it known that I, CHARLES E. WOOD, a citizen of the United States, residing at Danville, in the county of Vermilion and State of Illinois, have invented certain new and useful Improvements in Bolt-Holders and Wrenches, of which the following is a specification.

My invention relates to a new and useful improvement in a tire bolt holder and wrench, and has for its object the provision of a device of this character, which will readily remove or replace nuts upon tire or other bolts.

It has for its further object novel means for holding the wrench while being operated.

With these and other objects in view, my invention relates to a novel arrangement and combination of parts as will be more readily understood from the following specification and drawings, in which:

Figure 1 is a perspective view; and Fig. 2 is a view showing the manner of operation.

The numeral 1 represents the handle, which is offset as shown at 2 and provided with the right-angled projection 3. Secured to the projection 3 is a bar 4, which is adapted to rest against the spokes of the wheel when operating the wrench as clearly shown in Fig. 2. The handle 1 is provided with an elongated slot 5 in which is pivoted a lever 6. Pivoted to the lever is an arm 7 having a sharp edge as shown. The object of the lever and sharp edged arm will be more clearly hereinafter pointed out. A plate 8, having two prongs 9, 9 extending therefrom is attached to the handle by means of a bolt 10, which passes through the plate and a slot (not shown) formed in the handle for that purpose. A thumb nut 11 may be used on the bolt 10 for more readily holding it in position. Rotatably mounted in the extension 3 of the handle is a shaft 12, which is provided with the hollow head 13 as shown. The end of the shaft 12 is preferably pronged as shown at 14 in order that when a nut is removed it can pass entirely through the head. It will be understood that the interior of the hollow head is square in order to fit the ordinary nut.

Secured upon the shaft are two ratchet wheels 15, the teeth of which extend in opposite directions. Loosely mounted on the

shaft is a lever 16, which is provided on either side with a pawl 17, which is adapted to engage one of the ratchet wheels.

It is believed that from the foregoing detailed description the operation of my wrench will be clearly understood. To operate, the wrench will be in the position shown in Fig. 2, the bar 4 bearing against the spokes. The arm 7 will be pressed tightly against the bolt head by means of the lever 6 and as the prongs 9 extend around the opposite side of the wheel felly, it will be seen that the bolt will be securely held against rotation. The head 13 on the shaft engages the nut and by taking hold of the lever 16 the shaft can be operated in either direction and the nut removed from the bolt or a nut put on the bolt. It will be understood that when operating in one direction one of the pawls operates upon one of the ratchet wheels and when it is desired to operate the shaft in the opposite direction the other pawl engages the other ratchet wheel.

I have found from experience that often the nuts and bolts have become so tightly secured together, as by rust, that it is impossible to separate them, but with my improved wrench such a strong hold is secured on the bolt that by continual turning of the shaft the bolt may be twisted and finally broken. It is very seldom that old nuts are used a second time when damaged by rust and therefore there will be practically no loss by breaking the bolts.

It is evident that more or less slight changes may be resorted to in the form and arrangement of the several parts described without departure from the spirit and scope of my invention, and hence I do not wish to be limited to the exact construction herein set forth, but:—

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

A bolt holder and wrench comprising a handle, a lever pivotally connected to the handle, an arm connected to the lever adapted to engage a bolt, a plate upon the handle adapted to engage the felly of the wheel, a bar connected to the handle adapted to engage the spokes of the wheel, a shaft journaled upon the handle, a head on the shaft adapted to engage the nut, ratchet wheels

mounted upon the shaft, the teeth of which project in opposite directions, a lever mounted upon the shaft between the wheels having pawls thereon adapted to engage the ratchet
5 wheels for causing the shaft to be rotated in either direction for screwing or unscrewing the nut.

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

CHARLES E. WOOD.

Witnesses:

WALTER V. DYSENT,
CLARIBEL BULLOCK.