

(No Model.)

W. F. CUSTER.
BOLT HOLDER AND WRENCH.

No. 466,329.

Patented Jan. 5, 1892.

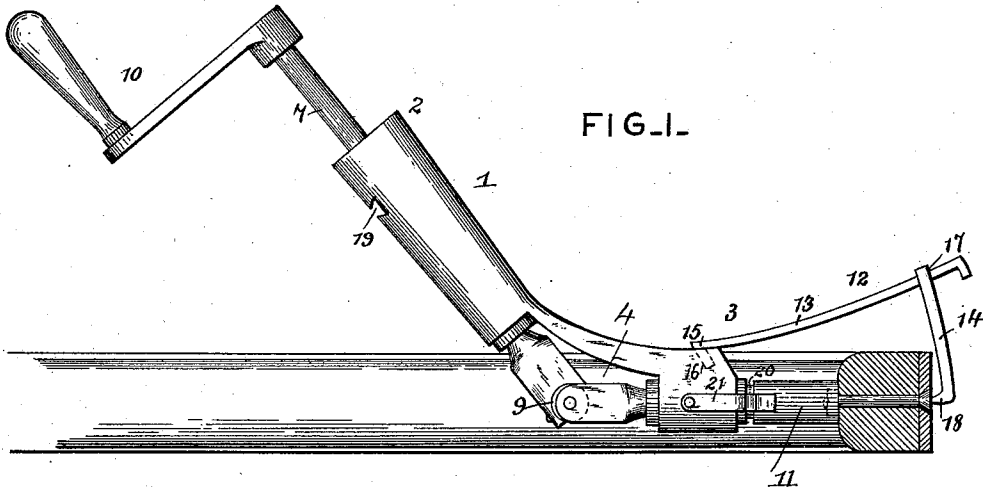


FIG. 1.

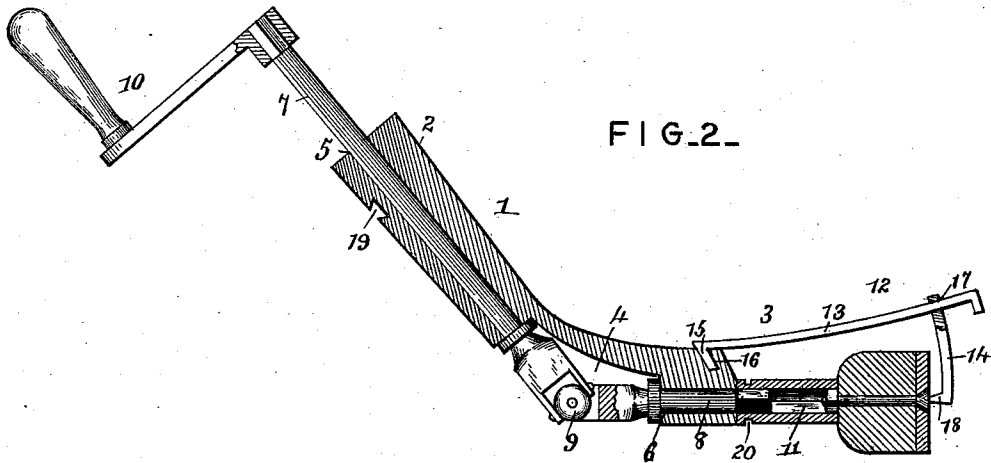


FIG. 2.

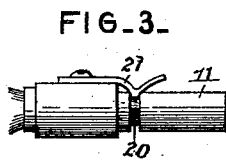


FIG. 3.

Witnesses

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By his Attorneys,

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UNITED STATES PATENT OFFICE.

WILLIAM F. CUSTER, OF SUMMITVILLE, INDIANA.

BOLT-HOLDER AND WRENCH.

SPECIFICATION forming part of Letters Patent No. 466,329, dated January 5, 1892.

Application filed March 31, 1891. Serial No. 387,122. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. CUSTER, a citizen of the United States, residing at Summitville, in the county of Madison and State of Indiana, have invented a new and useful Combined Bolt-Holder and Wrench, of which the following is a specification.

The invention relates to improvements in combined bolt-holders and wrenches.

The object of the present invention is to provide a combined bolt-holder and wrench which will be simple and inexpensive in construction, adapted to be readily applied to a wheel, and capable of securely holding the tire-bolts while the nuts are being screwed home or off.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a sectional view of a wheel having a combined bolt-holder and wrench constructed in accordance with this invention and applied in operative position. Fig. 2 is a longitudinal sectional view of the combined wrench and bolt-holder. Fig. 3 is a detail showing the spring in engagement with the socket.

Referring to the accompanying drawings, 1 designates a wrench stock or frame, which is bent at its center and has the portions 2 and 3 arranged at an angle, and it is provided with a recess 4. The portions 2 and 3, which are arranged at an angle to each other, are provided with longitudinal bearing-openings 5 and 6, in which are journaled shafts 7 and 8, arranged at an angle and having their inner ends bifurcated and connected by a ball-coupling 9, which enables the shaft 7 to transmit its motion to the shaft 8. The outer end of the shaft 7 is squared and is received in the socket of a crank-handle 10, by which the shaft 7 is rotated and the device operated, and the outer end of the shaft 8 is provided with a nut-socket 11, which is rectangular in cross-section and adapted to receive tire-bolt nuts.

In use the portion 3 of the wrench extends

parallel with a spoke and the portion 2 is arranged at an angle to the spoke, whereby the crank-handle is enabled to be freely turned to operate the wrench. The bolt is held against turning by a bolt-holder 12, which consists of a curved bar 13 and an adjustable arm 14, and the curved bar has its end 15 bent at an angle and arranged to engage a recess 16 in the wrench-stock 1. The arm 14 extends at an angle to the curved bar and is provided at one end with an opening 17 to receive the curved bar and at its other or outer end with a projection 18, having a chisel-point, and when the bolt-holder is in operative position, as illustrated in the accompanying drawings of Fig. 1, the arm 14 is arranged at the outer face of the tire and the projection 18 is in position to engage the head of the bolt. The arm is adapted to be adjusted along the curved bar to suit the thickness of the tire and the felly, and the device is adapted to be readily adjusted to any wheel.

The socket which is arranged on the squared end of the shaft 8 is provided with an annular groove 20, which is engaged by a spring 21, secured to the stock and adapted to retain the socket on the squared end of the shaft 8.

The stock is provided with a dovetailed notch 19, adapted for the reception of a head of a bolt to enable the latter to be readily drawn from the wheel.

It will readily be seen that the combined wrench and bolt-holder is simple and inexpensive in construction, and is adapted to be readily applied to a wheel and is capable of screwing or unscrewing the nuts of the tire-bolts.

What I claim is—

1. The combination of a nut-wrench having the portions 2 and 3 arranged at an angle to each other, the portion 3 adapted to extend along a spoke and the portion 2 arranged to extend at an angle to the same, and the bolt-holder comprising the bar 13, adapted to engage the wrench, and the arm 14, adjustably secured to the bar and adapted to engage the head of a bolt, substantially as described.

2. The combination of the nut-wrench provided with the recess 16 and the bolt-holder

comprising the curved bar having its end 15
bent at an angle and adapted to engage the
recess of the wrench, and the arm 14, pro-
vided at one end with an opening to receive
5 the curved bar and provided at its other end
with a projection to engage the head of a bolt,
substantially as described.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
presence of two witnesses.

WILLIAM F. CUSTER.

Witnesses:

JOHN R. ALLEN,

GEO. W. WEBSTER.