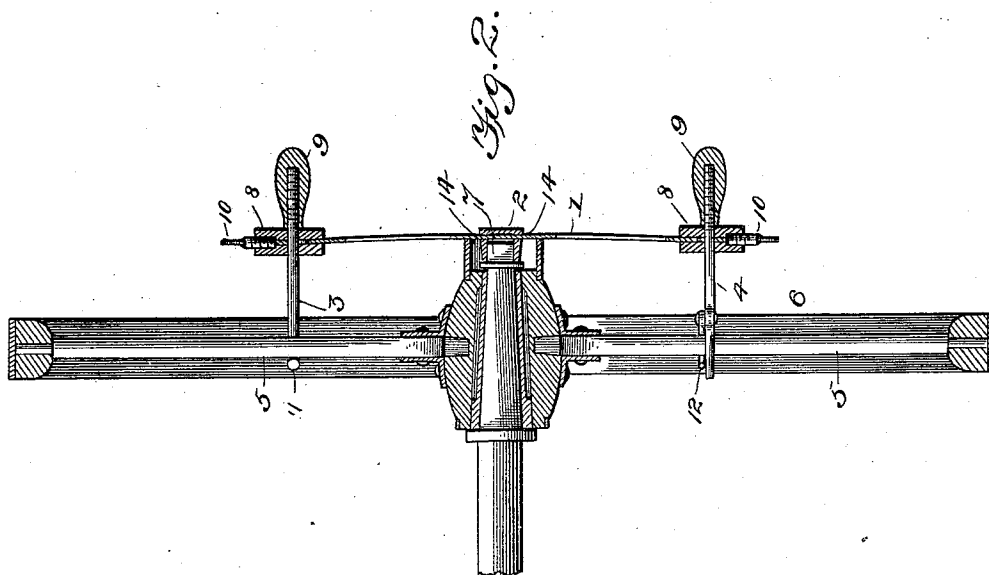


(No Model.)

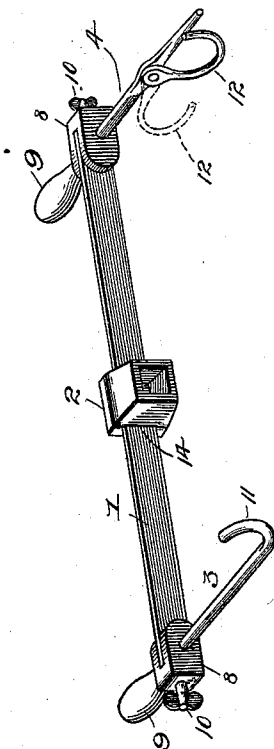
J. HASTINGS.  
VEHICLE AXLE NUT WRENCH.

No. 550,969.

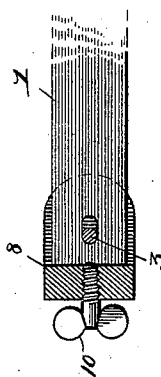
Patented Dec. 10, 1895.



*Fig. 1.*



*Fig. 3.*



Witnesses

*E. H. Monroe*

*J. H. Hastings*

By *his* Attorneys,

*C. A. Snow & Co.*

Inventor

*Joel Hastings*

# UNITED STATES PATENT OFFICE.

JOEL HASTINGS, OF BURKE, NEW YORK.

## VEHICLE-AXLE-NUT WRENCH.

SPECIFICATION forming part of Letters Patent No. 550,969, dated December 10, 1895.

Application filed August 20, 1895. Serial No. 559,917. (No model.)

*To all whom it may concern:*

Be it known that I, JOEL HASTINGS, a citizen of the United States, residing at Burke, in the county of Franklin and State of New York, have invented a new and useful Vehicle-Axle-Nut Wrench, of which the following is a specification.

The invention relates to improvements in vehicle-axle-nut wrenches.

10 The object of the present invention is to improve the construction of vehicle-axle-nut wrenches, and to provide a simple, inexpensive, and efficient one adapted to be readily applied to a vehicle-wheel and capable of  
15 ready adjustment to adapt itself to the position of the spokes and the axle-nut.

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

In the drawings, Figure 1 is a perspective view of an axle-nut wrench constructed in accordance with this invention. Fig. 2 is a  
25 vertical sectional view showing the same applied to a wheel and nut. Fig. 3 is an enlarged detail longitudinal vertical section through one end of the resilient bar and its metal clip.

30 Similar numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates a resilient bar carrying at its center an adjustable nut-receiving socket 2 and having at its ends adjustable spoke-engaging rods 3 and 4, adapted to connect the ends of the bar to two oppositely-disposed spokes 5 of a wheel 6, whereby the latter may be employed as a lever for unscrewing the  
40 axle-nut 7, which is received within the socket 2. Each spoke-engaging rod is adjustable to enable it to properly engage a spoke, and its shank portion passes through a perforation in the extremity of said bar and also through  
45 aligning perforations in a metal clip 8, embracing such extremity of the bar and capable of a slight sliding movement thereon. In rear of the bar 1 each rod is provided with a handle 9 and a set-screw 10, which passes  
50 through a threaded perforation in the end of

the clip 8, bears against the extremity of the bar 1, and serves when screwed inward to draw outward upon the clip 8 and bind the shank of the spoke-engaging rod against slipping or displacement. By this construction  
55 the spoke-engaging rods may be caused to project inward from the bar to a greater or less extent.

The rod 3 is provided with a hook 11, adapted to engage a spoke and formed integral with  
60 the rod and arranged at the inner end thereof. The other rod 4 has mounted on it adjacent to its inner end a pivoted approximately semi-circular catch 12, adapted, after the wrench has been placed in position, to be swung  
65 around the adjacent spoke to confine the rod 4 to the same. The wrench may be readily detached by swinging the pivoted catch out of engagement with the spoke. When the pivoted catch is in engagement with the spoke,  
70 its outer free end is arranged adjacent to the end of the rod.

The nut-receiving socket 2 is rectangular, its outer end is closed, and its inner end is open to receive the nut, and it is provided at  
75 opposite sides with slots 14, through which passes the bar 1.

It will be seen that the wrench is simple and inexpensive in construction, that it is capable of adjustment to fit a wheel, and that  
80 it will enable an axle-nut to be readily removed.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. A wrench comprising a bar provided at its ends with perforations, a nut-receiving socket mounted on the bar intermediate of the ends  
90 thereof, rods passing through the perforations of the bar and provided at their inner ends with spoke-engaging devices, clips mounted on the extremities of said bar and also embracing said rods, and set screws passing  
95 through said clips for holding said rods fixed, substantially as described.

2. A wrench comprising a bar, rods adjustably connected to the bar and extending inward therefrom, one of the rods being pro- 100

vided with a hook, a substantially semi-cir-  
cular catch pivotally secured to the other rod  
adjacent to the inner end thereof and adapted  
to receive and confine the spoke between it  
5 and the rod, and a nut-receiving socket mount-  
ed on the bar, substantially as described.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in  
the presence of two witnesses.

JOEL HASTINGS.

Witnesses:

JOHN C. MCHARDY,  
DAVID M. KELLY.