(No Model.)

I. VAN WINKLE.

HUB ATTACHING DEVICE.

No. 481,603. Patented Aug. 30, 1892.

Fig. 1.

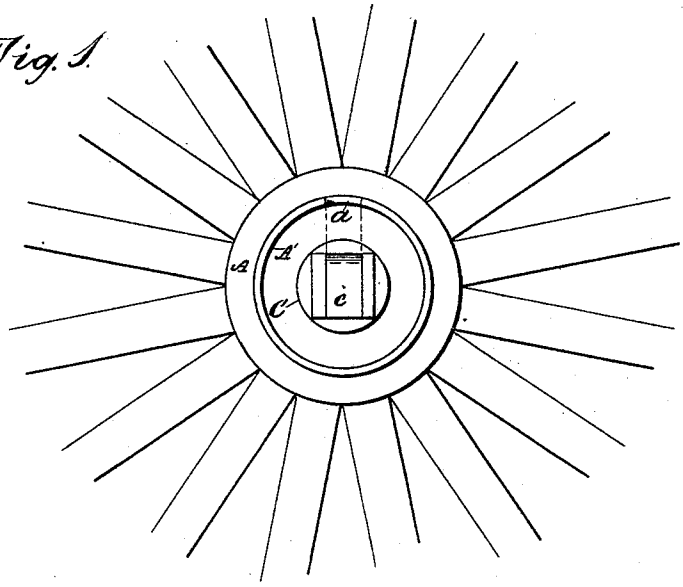


Fig. 2.

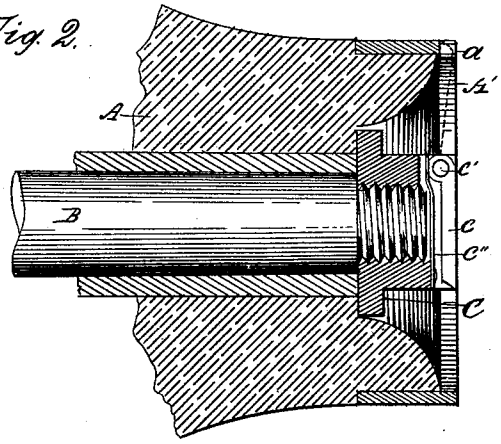


Fig. 3.

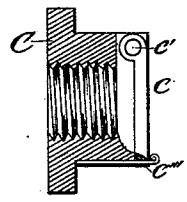
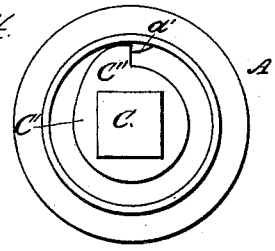


Fig. 4.



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UNITED STATES PATENT OFFICE.

ISAAC VAN WINKLE, OF DYSART, IOWA.

HUB-ATTACHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 481,603, dated August 30, 1892.

Application filed February 13, 1892. Serial No. 421,385. (No model.)

To all whom it may concern:

Be it known that I, ISAAC VAN WINKLE, a citizen of the United States, residing at Dysart, in the county of Tama and State of Iowa, have invented certain new and useful Improvements in Hub-Attaching Devices; 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.

The object of my invention is to improve the construction of the hub and axle burr of a vehicle so as to admit of the removal of the burr without the use of the wrench, as commonly applied for that purpose.

The invention consists, essentially, in providing the burr with a lateral projection which is removable with relation to the hub, and the hub with a suitable shoulder to engage therewith, whereby the burr is unscrewed by turning the wheel.

In the accompanying drawings, forming a part of this specification, Figure 1 is an end elevation of the burr and a portion of the wheel embodying my invention. Fig. 2 is a fragmentary central longitudinal section of the same. Fig. 3 is a similar view of a modified form of burr detached, and Fig. 4 is an end elevation showing a further modification in the construction of the device.

Similar letters of reference indicate corresponding parts.

The device is intended to do away with the annoyance and inconvenience incident to the use of a wrench in removing the burr from vehicle-axles for oiling and the like. To this end means are provided whereby the wheel itself serves as the wrench, in connection with a lateral lug or arm extending from the burr.

Referring to the drawings, A is the hub of the wheel. At the outer end of the hub is the usual metal band A′. In this is formed a notch *a*, or the same may be provided with a projecting lug *a′*, the same being adapted to perform the same function as the notch, which is to hold the projection connecting with the burr.

On the axle B is the burr C, which does not differ in appearance much from those in common use. This is provided with an extension *c* or C″, which is removable as regards the hub-band A′.

A simple construction is shown in Fig. 4, the part C′ being simply a socket for the square portion of the burr with a short projection C″ to engage with the lug *a′* on the inner face of the band A′. When the vehicle is in use, this socket must of course be removed from the burr, and so, though the device embodies the principle, which is the removal of the nut by turning the wheel backwardly, the device illustrated in Figs. 2 and 3 is preferred. In this the burr itself is provided with a hinged plate *c*, fitting in a suitable recess formed in the outer face of the burr. The plate is pivoted near one corner of the burr by a pin *c′*. When the plate is in normal position, the burr differs very slightly in appearance from the ones in common use. By turning the plate upwardly (the drawing considered) it engages with the notch *a*. Now by turning the wheel backwardly the burr is loosened or wholly removed. In case the vehicle is a heavy one or no jack is at hand the parts are put in engagement and the vehicle backed along the ground with the same effect.

To prevent any rattle of the plate when in normal position, it should be provided with a holding-spring *c″*. The preferred form is shown in Fig. 2, and is in the nature of a pocket-knife spring, being secured to one side of the burr with its free end bearing on a flattened portion of the plate-hinge. In Fig. 3 the spring is attached on one of the sides of the burr and has a slight roll at the outer end to hold the end of the plate engaging therewith.

Having thus described my invention, I claim—

1. The herein-described hub-attaching device, consisting, essentially, of a burr provided with a lever hinged thereto, the said lever when in normal position not extending beyond the square of the burr laterally and being wholly external to the axle, an axle to which the said burr is attached, and a hub

having a notch or shoulder to engage the lever when folded outwardly.

2. In a hub-attaching device, the combination of a notched hub, an axle adapted to receive a burr, a burr provided with a hinged lever adapted when folded outwardly to engage with the notch in the hub and when in normal position lying within the square of said burr, but external to the axle, and a spring to hold the lever in position and prevent rattle.

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

ISAAC VAN WINKLE.

Witnesses:
C. DUNCAN,
E. B. WILLIX.