(No Model.)

L. S. CRITTENDEN.

WHEEL.

No. 457,813. Patented Aug. 18, 1891.

Fig. 1.

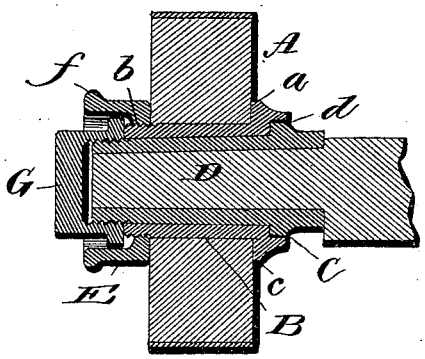


Fig. 2.

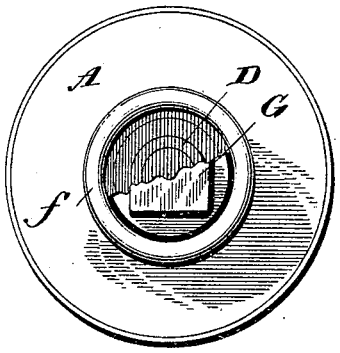


Fig. 3.

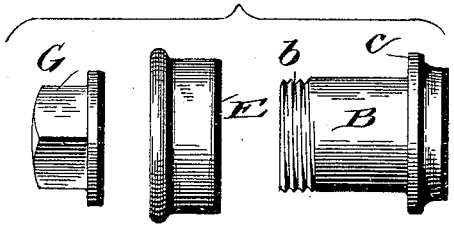
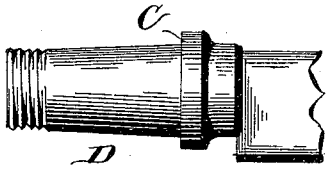


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

LOUIS S. CRITTENDEN, OF CANASERAGA, ASSIGNOR OF ONE-HALF TO CHARLES W. STEVENS, OF HORNELLSVILLE, NEW YORK.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 457,813, dated August 18, 1891.

Application filed May 7, 1891. Serial No. 391,942. (No model.)

To all whom it may concern:

Be it known that I, LOUIS S. CRITTENDEN, a citizen of the United States, residing at Canaseraga, in the county of Allegany, State of New York, have invented certain new and useful Improvements in Wheels, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in vehicles, more particularly to the wheels and axles thereof, and it has for its objects, among others, to provide novel and simple means for preventing sand and grit from getting onto the bearing. I provide a sleeve, which is formed at one end with a flange to bear against the face of the wheel and at the other end provided with a screw-thread adapted to receive a screw-threaded ring, which serves the double function of holding the sleeve to the wheel and as a cap or protection for the axle-nut. The sleeve forms the hub of the wheel, and while it is designed to be permanently held therein it may be detached, when desired, by the removal of the ring. The axle-skein is entirely protected, and the means whereby this is accomplished gives to the vehicle a neat and finished appearance.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a central longitudinal section through a wheel and axle with my improvements applied thereto. Fig. 2 is an end view with a portion broken away. Fig. 3 shows in side elevation the parts separated, but in their relative positions. Fig. 4 is a side view of the outer end of the axle.

Like letters of reference indicate like parts throughout the several views in which they occur.

Referring now to the details of the drawings by letter, A designates a wheel, which is a solid wheel with a broad periphery to adapt it for use upon wet and marshy ground without sinking in, and this wheel is provided centrally with an opening *a*, which may or may not be slightly tapered from the inside outward, and into this hole is fitted the sleeve B, which is also preferably slightly tapered and is formed at its outer end with a screw-thread *b*, the sleeve being of sufficient length so that its outer end will extend for a short distance beyond the outer face of the wheel, for a purpose hereinafter described. The inner end of this sleeve is formed with an outwardly-extending flange *c*, which bears against the inner face of the wheel, as seen in Fig. 1, and which is also formed with a chamber and flange or shoulder *d*, within which chamber the collar C on the axle D fits, as seen in said Fig. 1. The axle is slightly tapered and fits within the sleeve with its outer end screw-threaded and projecting through the sleeve for the reception of the axle-nut.

E is a ring, which at the inner end is formed with screw-threads *e* to engage the screw-threads on the extended end of the sleeve, as shown in Fig. 1, and with an outwardly-extending annular flange *f*, which forms a socket or chamber within which the axle-nut G fits, as seen in said Fig. 1.

In assembling the parts the sleeve is inserted in the opening in the wheel and serves as the hub of the wheel. The ring is then screwed onto the extended end of the sleeve, and this draws the sleeve tightly up against the wheel. The wheel is then sleeved upon the axle, the collar of which fits within the chamber of the flange at the inner end of the sleeve, and the axle-nut is then screwed upon the extended screw-threaded end of the axle, as seen in Fig. 1, which holds the parts in position. It will thus be seen that I provide a perfect sand band or guard which completely protects the axle-bearing, the parts constituting the hub serving the additional function of sand-band.

The various parts may be nickel-plated or otherwise made as ornamental as may be desired. The detachable hub permits of ready removal of the wheel for the purpose of repairs or replacing it by a new one.

What I claim as new is—

1. A wheel having a central opening, combined with a sleeve fitted to said opening and having at its inner end a chambered flange and

at the outer end a screw-thread, and a detachable ring engaging the screw-threads of the sleeve and having an annular flange, substantially as and for the purposes specified.

2. A wheel having a central opening, combined with a sleeve fitted to said opening and formed at its inner end with a flange bearing against the inner face of the wheel and having a chamber and shoulder within the chamber, the axle having a collar fitted in the said chamber and bearing upon the said shoulder, the outer end of the sleeve being screw-threaded and extended beyond the outer face of the wheel, a screw-threaded ring engaging the threads on the extended end of the sleeve and formed with an outwardly-extending annular flange, and the axle-nut engaging the threads on the outer end of the axle and within the space inclosed by the said flange of the ring, substantially as shown and described.

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

LOUIS S. CRITTENDEN.

Witnesses:
BETSY CRITTENDEN,
MARY F. CURRY.