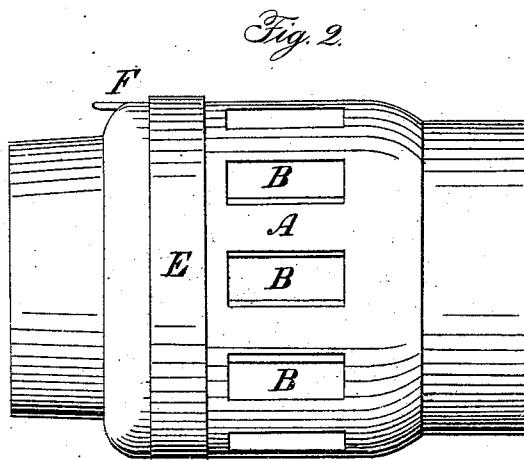
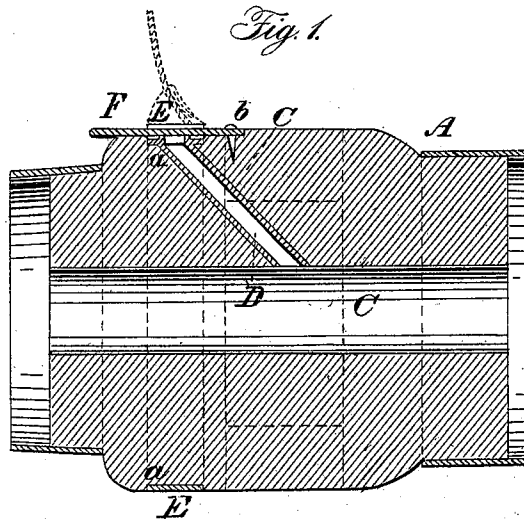


J. F. HINMAN.

Axle-Lubricator.

No. 40,692.

Patented Nov. 24, 1863.



Witnesses:

J. W. Coombs
G. W. Reed

Inventor:

J. F. Hinman
per M. H. C.
Attorneys

UNITED STATES PATENT OFFICE.

JOHN F. HINMAN, OF BATTLE CREEK, MICHIGAN.

IMPROVEMENT IN LUBRICATING AXLES.

Specification forming part of Letters Patent No. 40,692, dated November 24, 1863.

To all whom it may concern:

Be it known that I, JOHN F. HINMAN, of Battle Creek, in the county of Calhoun and State of Michigan, have invented a new and useful Improvement in Lubricating the Axles of Wheels for Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal central section of the hub of a wheel with my invention applied to it; Fig. 2, an external view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a simple means for lubricating the axles of wheel-vehicles without removing the wheels from the axle.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the hub of a wagon-wheel, B being the mortises which receive the spokes, and C the hole in which the metal box is fitted, if one be used. In the hub A there is bored a hole, D, which extends from the front part of the hub in front of the mortises B obliquely inward or downward to the hole C, and if a metal box be used, said hole is made to extend through the box. The axle is fitted in the hole C, or within a box fitted therein, and to lubricate the axle all that is required is to pour the oil into hole D, the hub and wheel being turned so as to bring the orifice of hole D at the upper side of the hub, as will be fully understood by referring to Fig. 1.

In the front part of the hub A there is made circumferentially a groove, *a*, in which a band, E, of india-rubber or other suitable elastic material, is placed. The orifice of the hole D is within this groove *a*, and directly

over the orifice there is fitted a cover, F, of leather or other suitable substance, and the inner end of this cover is tacked or otherwise secured to the hub, as shown at *b* in Fig. 1. This cover F is made to press snugly on the orifice of the hole D by means of the band E, which, by its elasticity, performs said function. The front end of the cover F projects in front of the band E, as shown in both figures, and when the axle requires to be lubricated the operator grasps the front end of the cover F, and by pulling it upward, as shown in red, Fig. 1, exposes the orifice of the hole D, into which the oil or other lubricating material is poured, the latter passing down through the hole D to the axle. When the cover F is released by the operator, the elastic band E throws down the cover F snugly over the orifice of the hole D, excluding all dust therefrom and also preventing the escape of the oil or other lubricating material. Thus by this simple arrangement the axle may be lubricated with the greatest facility without removing the wheel from the axle, and without the trouble and delay of removing and replacing plugs or stoppers.

I would remark that the hole D may, if desired, have a metal tube, *c*, inserted in it, as shown in Fig. 1, but that is not indispensably necessary.

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

The combination of the elastic band E and its groove *a* with the cover F and oil-orifice D, in the manner herein shown and described, for the purpose specified.

JOHN F. HINMAN.

Witnesses:

JOHN CALLAHAN,
MOSES B. RUSSELL.