T. HAYNES.

Car-Axle Boxes.

No. 157,000. Patented Nov. 17, 1874.

Fig. 1.

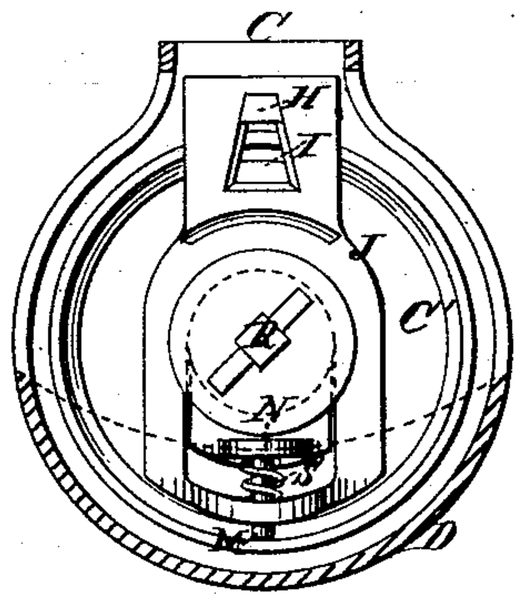


Fig. 2.

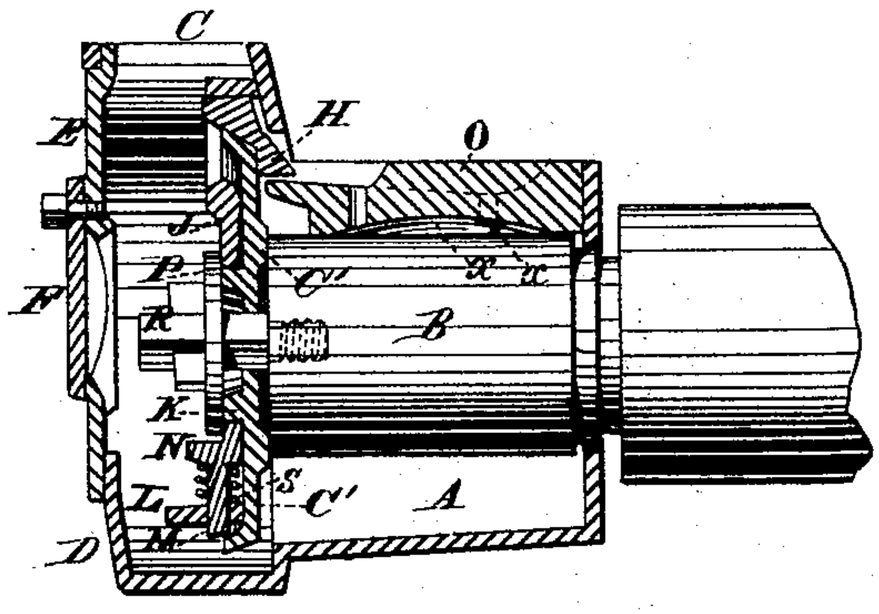


Fig. 3.

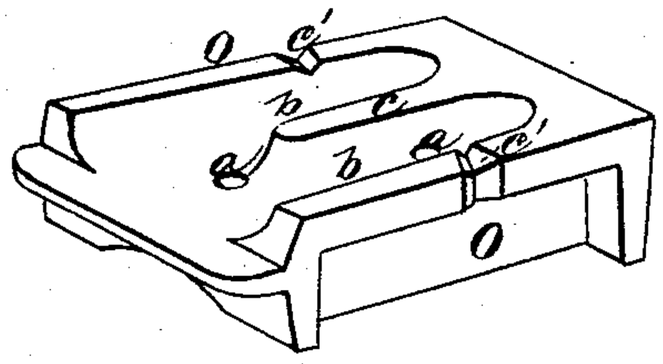
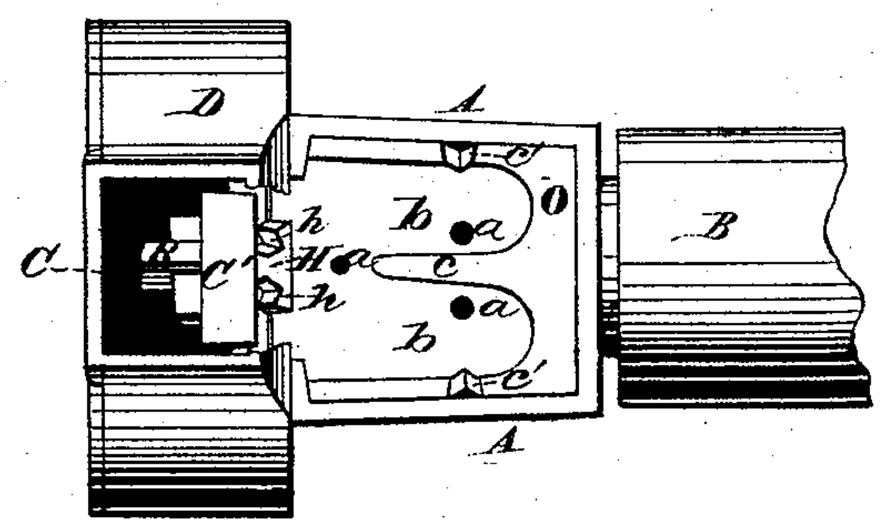


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

THOMAS HAYNES, OF KANSAS CITY, MISSOURI.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **157,000**, dated November 17, 1874; application filed July 3, 1874.

To all whom it may concern:

Be it known that I, THOMAS HAYNES, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Car-Axle Lubricators; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, in which—

Figure 1 is an end view with the cover and front portion of the oil-reservoir removed. Fig. 2 is a longitudinal section. Fig. 3 is a detached perspective view of the brass. Fig. 4 is a plan view with the casing partly broken away to show the channels in the scraper and the cover of the axle-box removed.

Like letters of reference refer to corresponding parts in the several figures.

My invention relates to car-axle lubricators; and consists of a disk attached to the axle and revolving in an oil-reservoir, the oil being raised by the disk, the perimeter of which is beveled inwardly to conform to a scraper in the upper end of a yielding frame, the scraper removing the oil from the revolving disk and conveying it to a chambered brass immediately over the axle, from which it is conducted, by gravity, through suitable orifices and grooves, to the upper surface of the axle, along which it is distributed, as hereinafter more fully described and claimed.

In the accompanying drawing, A is the axle-box, suitably attached to the car, in which the axle B revolves, and into which oil or other lubricant is introduced, preferably through the opening C in its top. The outer end of the axle-box terminates in a cylinder, D, the outer end of which is covered by a removable plate, E, having a swinging door, F, pivoted at its upper end, by a bolt, to the plate E, by means of which the operative parts may be inspected and the amount of oil in the reservoir readily determined. To the outer end of the car-axle the disk C is securely attached, the axle and disk revolving together, and the latter also revolving in the oil-reservoir in direct contact with the oil. The perimeter of the revolving disk C is beveled inwardly to cause the oil to flow in the direction of the axle and be brought in contact with a scraper, H, provided with channels *h h* for the passage of oil to the brass, and situated in the upper end of a dovetailed opening, I, in a frame, J, the upper end of which is provided with a lip, which assists in retaining the scraper in place. The frame J has also a central opening, P, fitting over a boss, K, in the oil-disk, and it is also provided with a projection, L, on its lower end, having an orifice, through which passes the rounded end of a projection, M, on the lower face of a bridge-piece, N, which bears upon the boss K. A coiled spring, S, surrounds the projection M, the tension of which is constantly exerted to keep the scraper on the disk to perform its work in removing the oil therefrom, and to allow for wear of the scraper. O is the brass for the reception and distribution along the axle of the oil conveyed to it by the scraper. The under surface of the brass is rounded, so as as to be concentric with the axle, and is provided with a longitudinal and a transverse groove, *x x*, intersecting each other at right angles, and having perforations or oil-passages *a a*, which pass through the brass to the chambers *b b* in the upper surface of the brass. Between the chambers *b b* is situated a frog-strengthening piece, *c*. In practice it is found, from the strain upon the brass, that it is extremely liable to break; and to obviate this defect I employ the frog *c*, which performs the double function of strengthening the brass and forming the sides of the chambers for conducting the oil into the orifices *a a*, and thence into the grooves in the lower face of the brass, when it is distributed upon the axle. *c' c'* are recesses in the upper edges of the brass, leading from the chambers *b b* to the oil-reservoir. R is a pin, holding the operative mechanism of the lubricator, and which may be screwed into, or formed in one piece with, the axle.

I am aware that the combination of a revolving disk, scraper, and perforated brass, broadly, is not new.

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

1. The brass O, provided with grooves *x x* on its under surface, chambers *b b* and frog *c* upon its upper surface, and oil-passages *a a*, substantially as and for the purpose set forth.

2. The brass O, in combination with scraper H *h h* and beveled disk C, substantially as and for the purpose specified.

3. The frame J, provided with the openings I and P and scraper H, in combination with the disk C, having the central boss K, bridge-piece N, and spring S, substantially as shown and described.

4. The combination of the boss K, yielding frame J, bridge-piece N, beveled disk C, and oil-reservoir A, substantially as shown and described.

In testimony whereof I have hereunto signed my name in presence of two subscribing witnesses.

THOMAS HAYNES.

Witnesses:
JOS. R. EDSON,
J. P. WOOD.