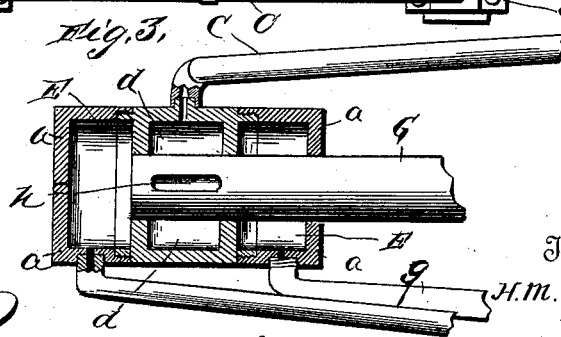
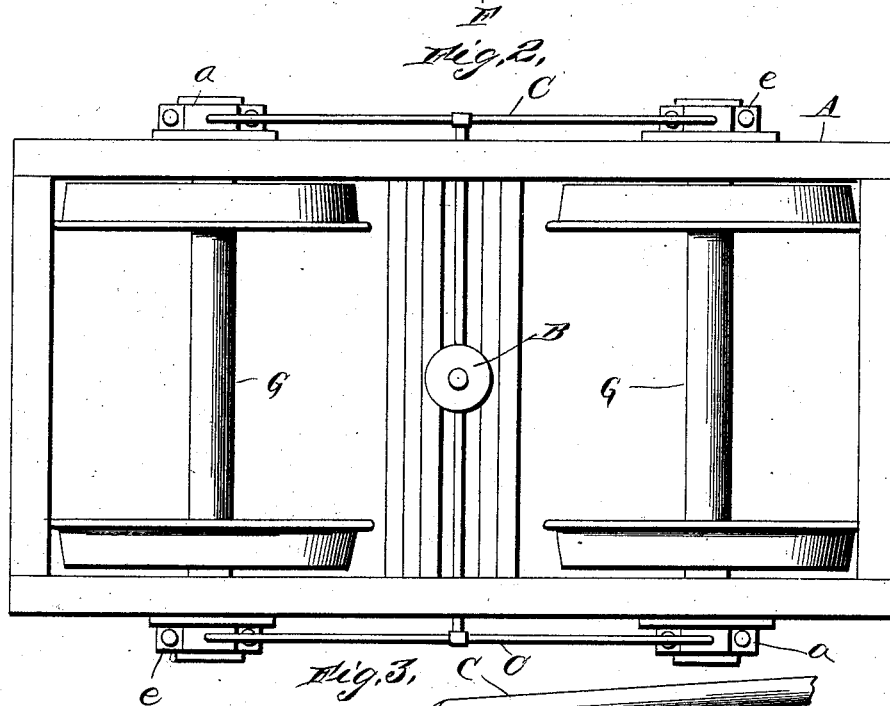
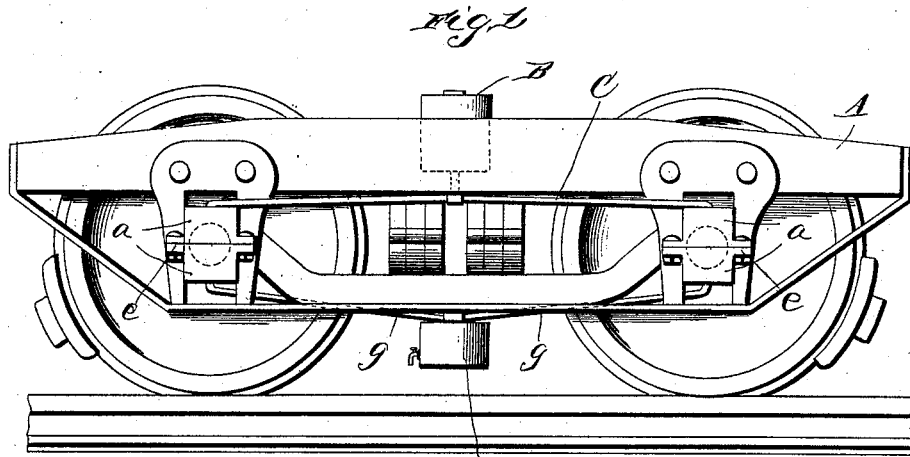


(No Model.)

H. M. GOODMAN.
CAR AXLE LUBRICATOR.

No. 419,604.

Patented Jan. 14, 1890.



Witnesses
Chas. H. Mason
Phill. H. Mason

Inventor
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By *his* Attorney

E. W. Anderson,

UNITED STATES PATENT OFFICE.

HENRY M. GOODMAN, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF,
TO CHARLES WARREN, OF SAME PLACE.

CAR-AXLE LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 419,604, dated January 14, 1890.

Application filed October 12, 1889. Serial No. 326,770. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. GOODMAN, a citizen of the United States, and a resident of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Car-Axle Lubricators; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a side view of this invention. Fig. 2 is a top view of the same, and Fig. 3 is a sectional view.

This invention has relation to car-axle lubricators; and it consists in the novel construction and combination of parts, as hereinafter set forth.

In the accompanying drawings, the letter A designates a car-truck, upon the upper framework of which is seated a supply-reservoir B, containing oil. Leading from the reservoir B are similar supply-pipes, one on each side, connecting, respectively, with branch feed-pipes C, communicating above with the axle-boxes D.

The axle-boxes are constructed with two horizontal sections *a*, which are coincidentally grooved or recessed, as at *d*, on their interior circumferential walls to form an oil-receptacle, and are provided with lateral external flanges *e*, pierced vertically for the reception of bolts to secure the sections.

E E indicate drip-cups, which are formed on the front or rear of the axle-box or on both sides thereof. These cups are to receive the oil which may work over the bearings, and are connected by waste-pipes *g* with a receiver or waste-box F, seated on the truck below the level of the oil in the axle-boxes.

G indicates the car-axle, which has a superficial longitudinal groove or recess *h* at its journal ends. These grooves do not extend to the end of the axle, but are confined within the box and communicate with the oil-recess of the latter, and being constantly filled

with oil feeds the same to the journals and bearings while the car is in motion. It will be observed that by this construction the use of packing is obviated, thus precluding all possibility of a hot box; also, the waste-reservoir receives the oil which may find its way over the bearings to be drawn off for future use.

The location of the supply-reservoir need not necessarily be on each truck; but it may be located within the car, and the oil supplied to the several boxes essentially in the same manner above described. The oil may also be distributed by a force-feed as well as by gravity; but the latter disposition, being more simple, is preferred.

What I claim as my invention is—

1. The combination, with a sectional car-axle box having an interior oil-groove, of the car-axle having a longitudinal oil-groove in its journal end, the drip-cups on the face and back of the axle-box, the supply-pipes leading from an oil-reservoir located above the level of the boxes, and the waste-pipes leading from the drip-cups to a collecting-reservoir below the level of the boxes, substantially as specified.

2. In a truck, the combination, with car-axle boxes having central internal circumferential oil-chambers in their bearings, of the superficially-grooved journal ends of the axles seated in said bearings, a central reservoir, and pipes to supply oil to said axle-boxes, substantially as specified.

3. In a car-truck, the combination, with car-axle boxes having each an internal oil-chamber formed in the bearing, of the grooved journal ends of the axles seated in said boxes, the circular drip-cups on each side of the axle-boxes surrounding the axles, a supply-reservoir and its supply-pipes, and a collecting-reservoir located below the supply-reservoir and its collecting-pipes on the car-truck, substantially as specified.

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

HENRY M. GOODMAN.

Witnesses:

JOSEPH SHORT,
S. P. WALKER.