T. H. BURRIDGE.

Car-Axle Boxes.

No. 158,358. Patented Jan. 5, 1875.

FIG. 1.

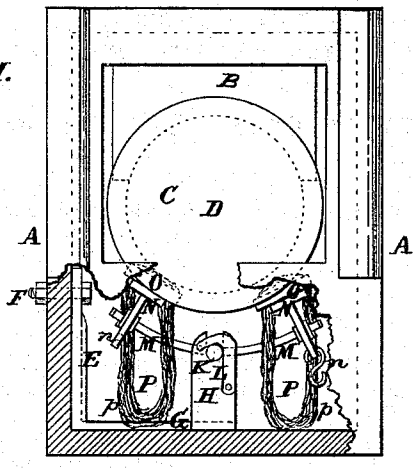


FIG. 2.

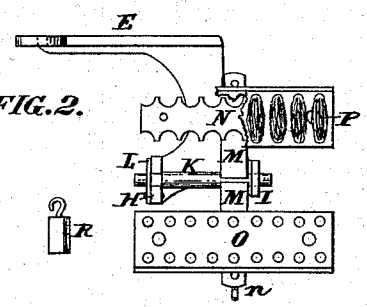
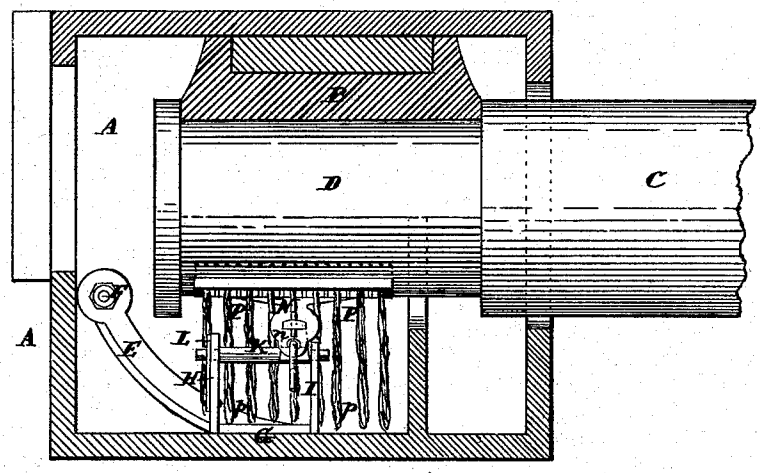


FIG. 3.



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UNITED STATES PATENT OFFICE.

THOMAS H. BURRIDGE, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF HIS RIGHT TO JAMES W. BUTCHER, OF SAME PLACE.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **158,358**, dated January 5, 1875; application filed August 17, 1874.

To all whom it may concern:

Be it known that I, THOMAS H. BURRIDGE, of St. Louis, St. Louis county, Missouri, have invented a certain new and useful Improvement in Oilers for Car-Axles, of which the following is a specification:

This is an improvement and simplification of my device for oiling railway-car axles, for which Letters Patent of the United States were granted to me on the 2d day of June, 1874, and numbered 151,562.

My patented device consists of a single pad and counter-balance, mounted on a shaft below the axle-journal, and oscillated by means of suitable gearing connecting it with the axle, so as to periodically immerse said pad in the lubricant in the bottom of the oil-box.

In the present device I dispense with the gearing mechanism, and add features which are new in construction and operation.

This improvement consists in a rocking frame, supported in the oil-box beneath the axle, and carrying at the ends pads, which, as the box is shaken, (by the movement of the car,) are thrown up alternately against the under side of the axle-journal. Depending from these pads are beards of cotton wicking or other fibrous material, to supply oil to the pads by capillary attraction. When the oil is low in the box these beards still carry up a sufficient quantity of oil to lubricate the journal. To each pad is attached an ear, having an eye, into which may be hooked a weight, to counterbalance any redundancy of weight in the other pad, and which would otherwise interfere with the regular rocking of the frame.

In the drawings, Figure 1 is an end view of the axle and oiling device within the oil-box. Fig. 2 is a top view of the oiler, showing parts broken away to exhibit construction. Fig. 3 is a side elevation of the axle-journal and oiler in position in the oil-box, which latter and the journal-box are in section.

A is the oil-box. B is the journal-box. C is the axle, and D the axle-journal. The oiler-frame has an arm, E, secured by a bolt, screw, or rivet, F, to the side of the oil-box. To the arm E is attached a plate, G, lying on the bottom of the oil-box, and supporting two uprights, H I. K is a rock-shaft, with bearings in the tops of the uprights H I. The shaft K is preferably made removable by the following means—one end is first inserted endwise into the upright I, and the other end is then dropped into the open-topped bearing in the top of the upright H, and is held down by a hook, L. M M are arms, extending from opposite sides of the rock-shaft, and carrying at their ends cross-arms N N, upon which are secured the perforated pad-plates O O.

The arms M M pass through the cross-arms N N, but the joint is preferably made so loosely that the cross-arms have freedom to turn upon the arms M M a limited distance to either side, to accommodate the surface of the pad to the journal in cases where the oil-box is not straight with the journal, or the oiler is not in proper relative position with the journal, from any cause.

Through the perforations in the plates O O pass cotton wicking or strings of other fibrous material, P, whose ends or loops *p* hang down to the bottom of the oil-box, so as to take up oil by capillary attraction, and cause the saturation of the part of the material above the plate, and which forms the lubricating surface of the pad. The upward flow of oil in the hanging ends *p* is aided by the flexure of the ends caused by the rocking of the shaft K.

The lower ends of the cross-arms N N extend downward, and form ears *n n*, which are perforated to receive the suspension-hooks of a weight, R, whose office is to counterbalance any inequality in weight between the two pads, and to thus overcome the tendency of either pad to remain in constant contact with the journal. The weight is of course suspended from the lighter pad, so as to give it an equal weight with the other.

The arrangement is such that the shaking of the oil-box, when the cars are in motion, will oscillate the pad-frame, so as to bring the pads alternately in contact with the journal.

I claim—

1. The lubricating-cradle K M N O P, having bearings H I, in combination with an axle-journal and oil-box, substantially as described.

2. The counter-balance R, in combination with the rocking lubricator, as and for the purpose set forth.

Witness my hand this 10th day of August, A. D. 1874.

THOMAS H. BURRIDGE.

Witnesses:
SAML. KNIGHT,
ROBERT BURNS.