T. H. BURRIDGE.

Axle-Boxes.

No. 151,562. Patented June 2, 1874.

Fig. 1.

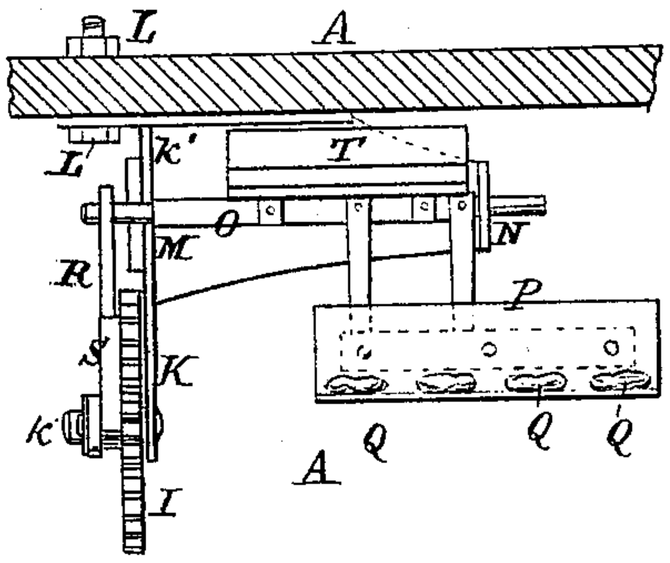


Fig. 2.

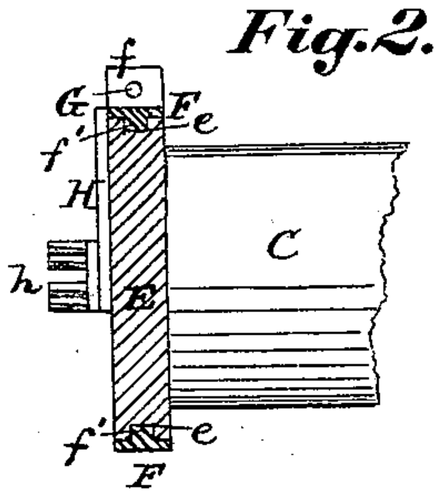


Fig. 3.

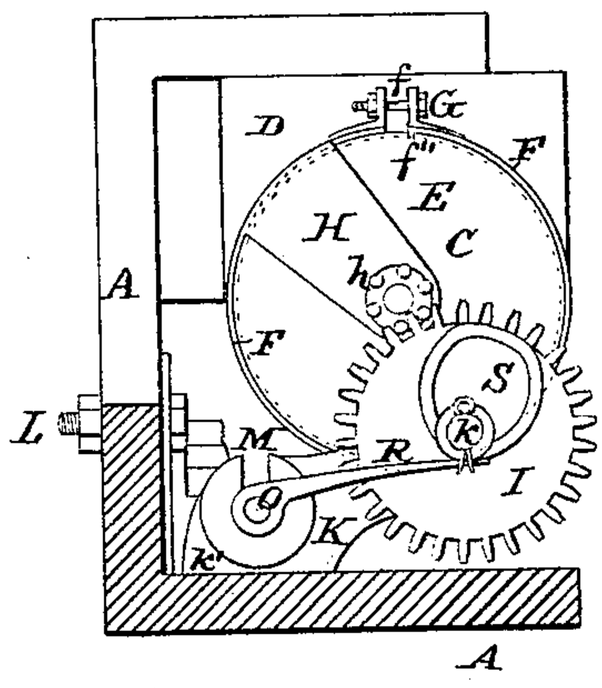
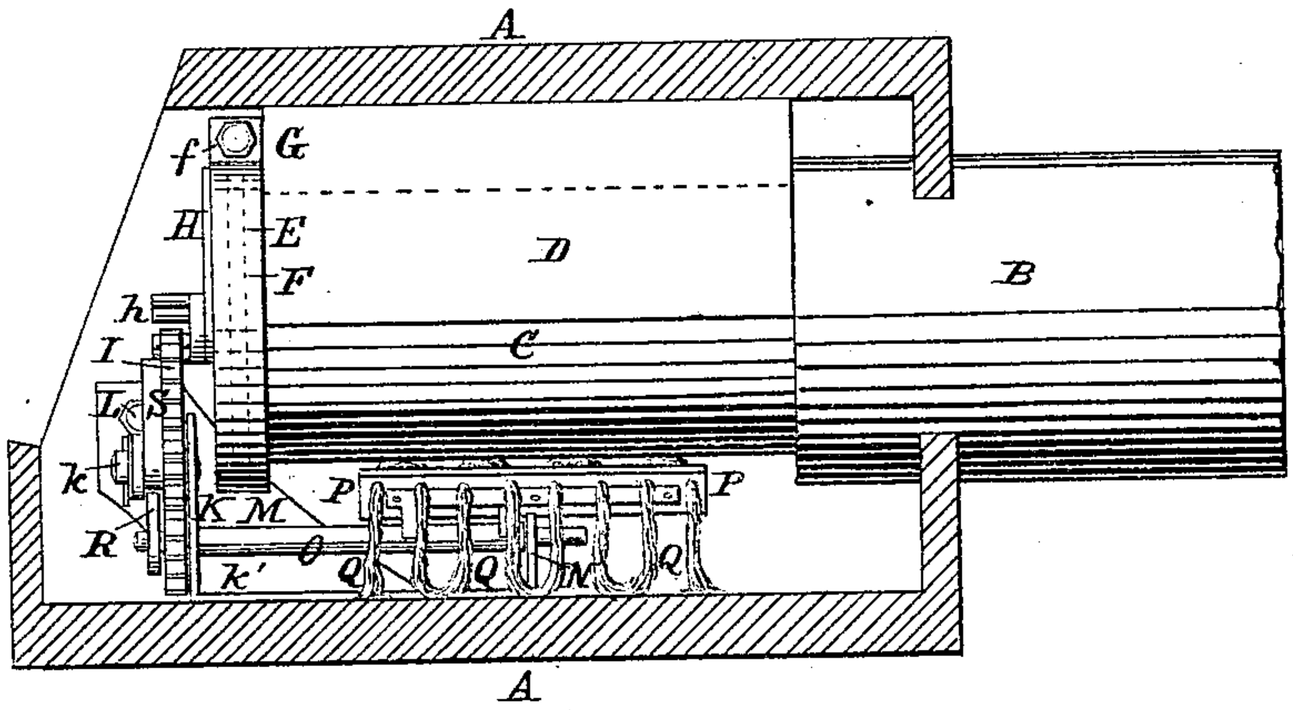


Fig. 4.



ATTEST.

Robert Burns.
H. F. Tanner.

INVENTOR.

Thomas H. Burridge
By Knight Bros.
Attys.

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 AXLE-BOXES.

Specification forming part of Letters Patent No. **151,562**, dated June 2, 1874; application filed March 31, 1874.

To all whom it may concern:

Be it known that I, THOMAS H. BURRIDGE, of St. Louis, in the county of St. Louis and State of Missouri, have invented a certain Improved Automatic Oiler for Railway-Car Axles, of which the following is a specification:

The first part of my invention relates to an oscillating greaser, which is periodically immersed in the lubricant at the bottom of the grease-box, preferably by the rotation of a cam connected to the axle by gearing, the grease-pad being raised by a counter-balance to bring it in contact with the axle as the depressing-cam is raised. The second part of my invention relates to the manner of attaching the axial cog-pinion to the axle. In this the pinion is attached to an arm extending inward from a circular strap or collar, which is fitted to surround the end collar of the axle, and secured thereto by a screw, as shown.

In the drawings, Figure 1 is a top view of the greasing apparatus. Fig. 2 is a side view of the end of an axle, with the collar and strap in axial section. Fig. 3 is an end view of the apparatus. Fig. 4 is a side view of the same with the grease-box in section.

A is the grease-box, which contains the axle-box, and slides in the pedestal of the car-truck. B is the axle, having a bearing, C, in the journal-box D. The end of the axle has the usual annular flange or collar E, around which is secured the clip-collar F, having lugs *f*, through which passes a bolt, G, to tighten the clip-collar on the axle. The collar E has a circumferential groove, *e*, to receive a rib, *f'*, running around the interior of the clip-strap F. *f''* is a transverse lug in the strap, resting in a recess or key-seat in the collar to prevent the slip of the strap on the collar.

The above mode of attachment may be varied; for instance, lugs or studs on the strap F or collar E may enter recesses in the other, or screws may pass through the strap into the collar E.

H is an arm extending inward from the collar F to the center of the axle, and to whose end is attached an axial pinion, *h*, or pinion in line with the center of the axle. This pinion engages with a spur-wheel, I, having bearings on a pin, *k*, in a frame, K, secured to the inner side of the grease-box A by a foot, *k'*, resting on the bottom of the box, and a bolt, L, passing into or through the side of the box. M and N are bearings of the rock-shaft O, to which is attached the oscillating carrier P of the grease-pad Q. The shaft O also carries an arm, R, which is pressed down at each rotation of the wheel I by a cam, S, attached to said wheel. On the opposite side of the rock-shaft to the grease-pad and lever is an arm carrying a counter-balance, T, of sufficient weight to raise the pad-carrier P and arm R after depression by the cam.

When the grease-pad is raised, it is in contact with the lower side of the axle, as shown in Fig. 1, and when it is depressed it is immersed more or less in the grease at the bottom of the box A.

The pad may be made, as shown, of loops of fibrous material hanging down so as to draw up and hold a portion of the lubricant by capillary attraction; or a piece of fibrous cloth or felt may be attached to the top of the carrier, and an edge of this may hang down for saturation; or merely the top of the carrier may be covered with fibrous material, and its depression alone trusted to for saturation.

I claim as my invention—

1. In combination with the oil-box A and axle B, the oscillating carrier P and pad Q, as and for the purpose set forth.

2. The oscillating carrier P, grease-pad Q, bearings M N, counter-balance T, spur-wheel I, pinion *h*, arm R, and cam S, in combination with the grease-box A and axle B, substantially as and for the purpose set forth.

3. In combination with the axle-collar E, the clip-collar F, having arm H, carrying an axial pinion, *h*, substantially as set forth.

THOMAS H. BURRIDGE.

Witnesses:

SAML. KNIGHT,

ROBERT BURNS.