(No Model.)

J. DONOVAN.

CAR AXLE LUBRICATOR.

No. 587,188. Patented July 27, 1897.

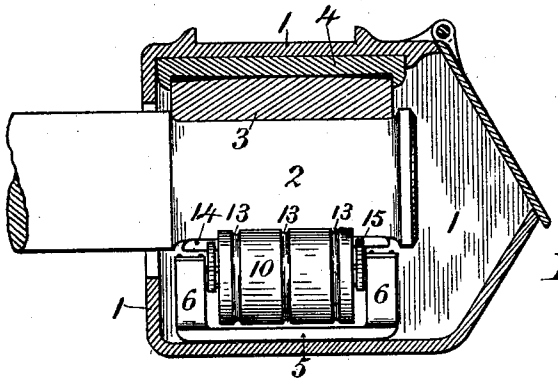

Fig. 1

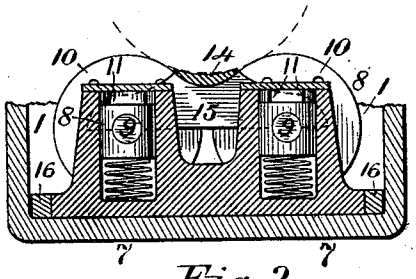

Fig. 2

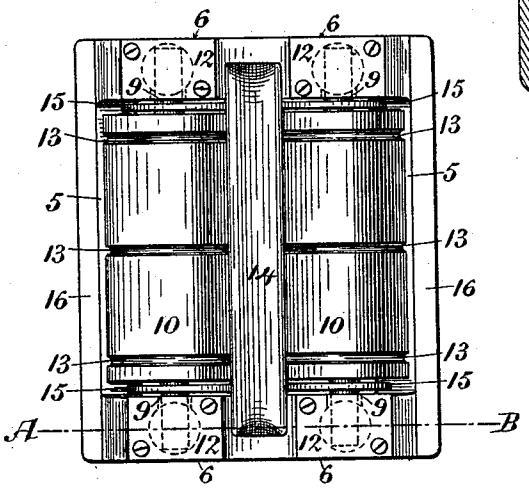

Fig. 3

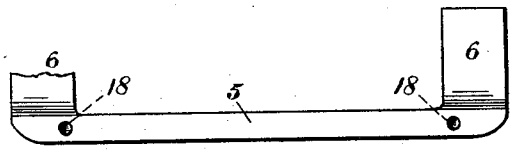

Fig. 4

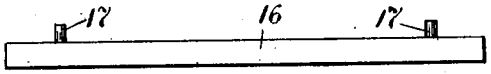

Fig. 5

Witnesses

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JAMES DONOVAN, OF BROCKVILLE, CANADA.

CAR-AXLE LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 587,188, dated July 27, 1897.

Application filed July 17, 1896. Serial No. 599,490. (No model.)

To all whom it may concern.

Be it known that I, JAMES DONOVAN, of the town of Brockville, in the county of Leeds and Province of Ontario, Canada, have invented a certain new and useful Car-Axle Lubricator, of which the following is a specification.

My invention relates particularly to that class of car-axle lubricators in which rollers are employed to roll in contact with the axle or journal portion thereof and constantly supply and distribute oil or other kindred liquid lubricant on the same when in motion; and the objects of the invention are, first, to provide a means by which oil or other liquid lubricant is constantly distributed on the journal or axle when in motion, and, second, to provide a simple means for extending the width of the lubricator, so as to adapt it to fit into and retain its position beneath the journal in journal-boxes of different widths.

In the accompanying drawings, illustrating my invention, similar numbers of reference refer to similar parts throughout.

Figure 1 represents a section at center and longitudinal of a railway journal-box and showing my improved lubricator in position. Fig. 2 represents a transverse section of my improved lubricator, taken on the line A B shown in the next succeeding figure. Fig. 3 represents a plan of the lubricator alone and having the means by which its width is increased to fit the wider journal-boxes. Fig. 4 represents a side view of a portion of the lubricator-frame only to show where the means for extension of width is applied, and Fig. 5 represents a detail plan view of the extension-bar employed.

The journal-box 1, axle or journal 2, bearing-block 3, and rocker 4 are the ordinary and well-known kinds and require no further description. The lubricator-frame 5 is rectangular in plan and preferably open at the bottom. At each end of the frame 5 bearing-chambers 6 project vertically and have within each a spiral spring 7, on which is supported a cylindrical bearing 8. The bearings 8 fit on the journals 9 of the rollers 10 and are free to move vertically in said chambers 6, which have slots 11 in their inner sides toward the rollers 10 to permit of insertion of the journals 9 and vertical play or motion of the same, these slots 11 being shown only in full lines in Fig. 2. To secure the bearings 8 within the chambers 6 when the lubricator is removed from the journal-box 1, a cap-plate 12, suitably secured on each chamber 6, is used. The pair of rollers 10 have transverse grooves 13 to assist in carrying and distributing oil or lubricant. Surmounted above the rollers 10 and supported thereby is a distributing-frame, which consists of a concaved strip 14, having two transverse arms 15 extending transversely thereof. These arms 15 have their width vertically, so that they occupy but a very narrow space between the ends of the rollers 10 and the chambers 6. At their lower edges these arms 15 are adapted to rest on the journals 9 of the rollers 10. The strip 14 is concaved in its upper surface to contain oil at its center and at its margins contact with the journal 2, and it extends beyond the ends of the rollers 10, so as to distribute oil the entire length of the journal 2. The rollers 10 are in contact with the strip 14 at its under surface, so as to deliver oil to it and on the journal 2, with which said rollers 10 are in contact also. The lower portion of the journal-box 1 is supplied with oil and the lubricator placed therein and beneath the journal. As the width of different kinds of journal-boxes varies somewhat, and it is necessary that the lubricator retain its position and fit the box 1, I provide an extension-strip 16, preferably of metal and having a couple of pins 17 projecting which fit into adapted holes 18 in the lubricator-frame 5 along its sides. These strips 16 are detachable or removable, and in the narrowest journal-boxes are not required. Instead of making the lubricator-frame 5 of the various widths, necessitating a variety of patterns and a large stock to supply the demand, I simply provide extension-strips 16 of different sizes to suit the widths of journal-boxes.

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

1. In a railway journal-box the lubricator device consisting of an open rectangular frame having bearing-chambers thereon, a spiral spring in each of said chambers, bearings supported on said springs, plates to secure said bearings, rollers journaled at their ends in said bearings, and a distributing-

frame carried by and in contact with said rollers, substantially as shown and described.

2. In a railway journal-box, the combination of an open rectangular frame, having bearing-chambers thereon, a spiral spring in each of said chambers, bearings supported on said springs, plates to secure said bearings in the chambers, rollers journaled at their ends in said bearings, a distributing-frame in contact with said rollers and the axle or journal and supported on the journals of said rollers, and the extension-strip on each side of the said frame and having pins to fit adapted holes in the sides of the frame, substantially as shown and described.

JAMES DONOVAN.

Witnesses:
O. K. FRASER,
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