

B. G. MARTIN.
LUBRICATING CAR-AXLES.

No. 182,942.

Patented Oct. 3, 1876.

Fig. 1.

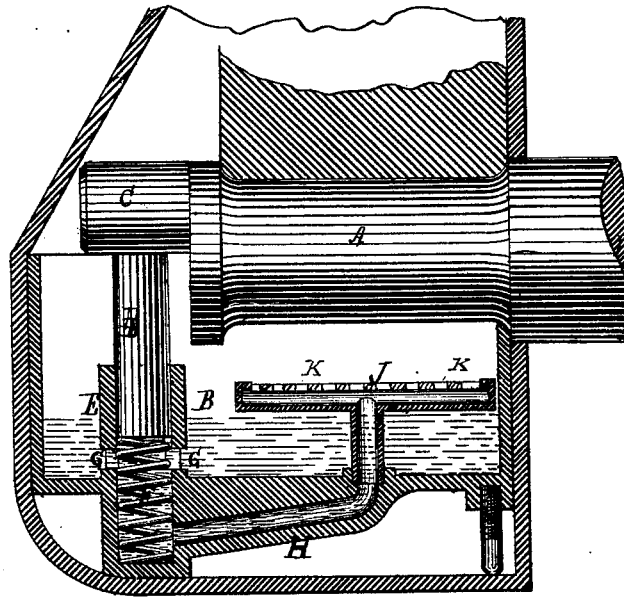


Fig. 2.

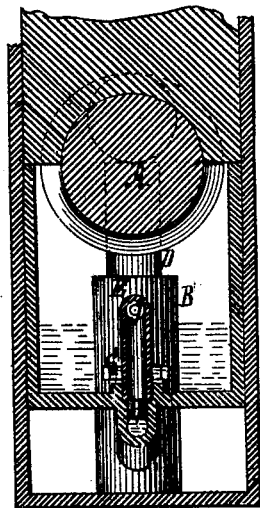
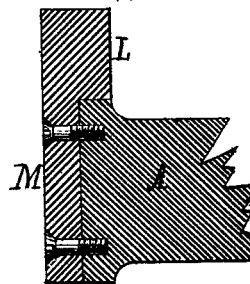


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN LUBRICATING CAR-AXLES.

Specification forming part of Letters Patent No. 182,942, dated October 3, 1876; application filed August 18, 1876.

To all whom it may concern:

Be it known that I, BENJAMIN G. MARTIN, of the city, county, and State of New York, have invented a new and useful Improvement in Lubricating Apparatus for Journals of Car-Wheels, and other purposes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 is a longitudinal section of my improvement. Fig. 2 is a cross-section in the line *x x* of Fig. 1. Fig. 3 is a modification in which the eccentric is placed upon the shoulder of the journal.

Similar letters indicate corresponding parts.

This invention relates to the lubrication of the journals of car-wheels, and to similar purposes; and it consists in the arrangement, on the journal, of an eccentric which is in contact with a spring-piston placed in a cylinder, which extends through the bottom of the lubricator-reservoir, and is connected at its lower end with a pipe, which extends up into the reservoir, where it takes the form of a horizontal pipe perforated on its upper side, and arranged directly under the journal to be lubricated.

The cylinder in which the piston works is perforated at or just above the line where it goes through the bottom of the reservoir, to allow the oil to pass into the cylinder when the piston is raised by its spring above the perforation.

When the piston is forced down by the eccentric, the perforation is closed by the side of the piston, and the oil which had passed into the cylinder is driven by the piston and forced up through the perforated pipe, so that it is projected against the journal. This operation is repeated at each revolution of the journal.

The eccentric can be arranged upon the outer end of the journal by means of a prolongation of the journal, as shown in Fig. 1, or by attaching an eccentric shoe on the outer shoulder of the journal, as shown in Fig. 3.

The letter A designates one of the journals of the axle of a car-wheel, and B is a reservoir for holding the oil for lubricating the

journal, arranged beneath the journal, as shown in the drawing. Upon the end of the journal is an eccentric or cam, C, arranged in such a manner that, as the journal revolves, the swell of the cam acts upon the end of a spring-piston, D, which is arranged to slide in a cylinder, E. The cylinder E is placed in the oil-reservoir B, so that its lower end extends through the bottom of the reservoir with a tight joint, to prevent leakage, and in the bottom of the cylinder is placed a spring, F, which supports the piston and presses it up against the eccentric or cam C. The cylinder E is perforated at G, at or just above the floor of the reservoir, to allow the oil to run into the cylinder, the piston and its spring being so arranged that the bottom of the piston is forced by the spring above the level of the perforation G, when the swell of the eccentric or cam has passed the top of the piston.

From the lower part of the cylinder E there extends a pipe, H, which is carried up through the bottom of the reservoir by a tight joint. The pipe H terminates a little below the journal A in a cross or horizontal pipe, J, closed at both ends, but perforated with numerous holes, K, on its upper side, through which holes the oil is admitted into the cylinder, and forced by the piston into the pipes H and J is projected against the journal. This operation is repeated at every revolution of the journal.

A modification in the arrangement of the eccentric or cam is shown in Fig. 3. This modification enables me to provide a convenient place for the eccentric or cam C without making it in the manner of a prolongation of the journal.

The modification consists in a shoe, L, made with a flange, M, which fits over the outer shoulder of the journal, as shown in Fig. 3, the flange being segmental, its ends running out at the points, so as to make the periphery of the journal eccentric; or an eccentric ring may be placed on the journal.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the eccentric C, mount-

ed on the journal, with the piston D, working in the cylinder E, located in the oil-chamber, and provided with perforations G, and the pipe H, and horizontal perforated pipe J, located directly below the end of the journal, the whole arranged to operate substantially as herein described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 15th day of August, A. D. 1876.

B. G. MARTIN. [L. S.]

Witnesses:

J. VAN SANTVOORD,
E. F. KASTENHUBER.