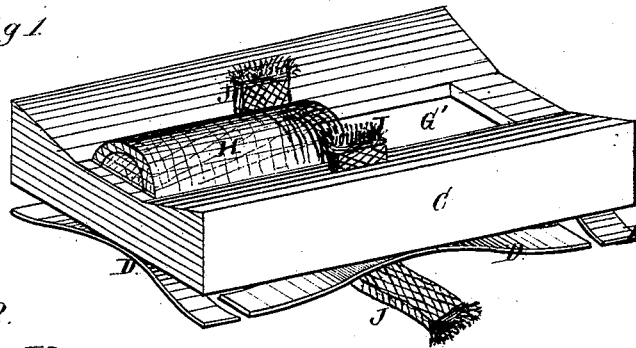


J. LICHTENSTEIN.  
Car-Axle Lubricator.

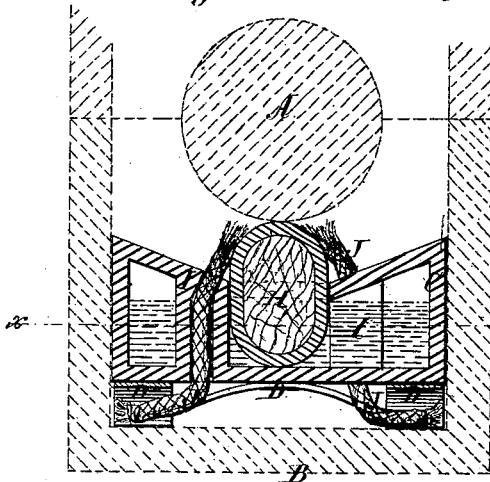
No. 109,525.

Patented Nov. 22, 1870.

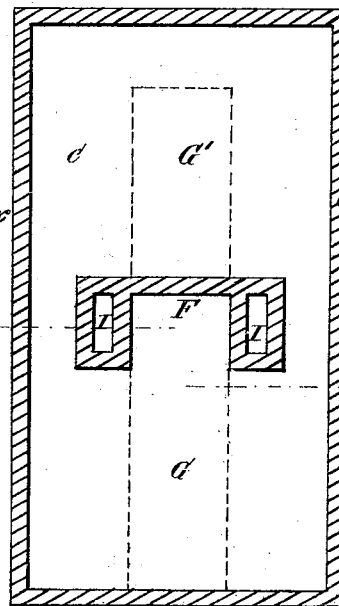
*Fig 1*



*Fig 2*



*Fig 3*



Witnesses:

*L. Harich*  
*J. Rohley.*

Inventor:

*J. Lichtenstein*  
*per Basters & Hagemann*  
*Attorneys.*

# United States Patent Office.

JOSEPH LICHTENSTEIN, OF BALTIMORE, MARYLAND, ASSIGNOR TO HIMSELF, CHARLES F. SMITH, AND WILLIAM H. PEIRCE, OF SAME PLACE.

Letters Patent No. 109,525, dated November 22, 1870.

## IMPROVEMENT IN CAR-AXLE LUBRICATORS.

The Schedule referred to in these Letters Patent and making part of the same.

### *To all whom it may concern:*

Be it known that I, JOSEPH LICHTENSTEIN, of the city and county of Baltimore, in the State of Maryland, have made certain new and useful Improvements in Lubricators for Journals of Car-Axles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a perspective view of my improved lubricator;

Figure 2 is a transverse vertical section of the same in the line *y y*, fig. 3; and

Figure 3 is a horizontal section in the line *x x*, fig. 2.

Similar letters of reference in the drawing denote corresponding parts.

My invention has for its object to improve the construction of lubricators for the journals of car-axles, whereby the same are rendered more economical and efficient in use; and to this end

It consists, first, in dividing the lubricator into two compartments by means of a transverse partition, one compartment being adapted to receive the capillary substance employed to supply the lubricant to the journal of a car-axle, and the other being left open and extending in front of the journal, thus affording means for supplying the lubricator with oil, &c., and also for inspection of the latter from time to time.

The invention consists, further, in constructing the lubricator-box with vertical openings for the passage of strips of capillary substance, whereby the lubricant escaping from the journal or lubricator into the axle-box is returned to the journal and prevented from accumulating in the axle-box.

In the accompanying drawing—

A is the journal of a car-axle, and

B the axle-box.

C is the lubricator-box, supported within the axle-box, beneath the journal, by means of the bent springs D. The lubricator is made in the form of a shallow rectangular box, having a concave top, and of sufficient area to fill the axle-box B.

The top of the lubricator is provided with a central longitudinal opening to receive the capillary substance or block H, and transversely of the box, at or near its center, a partition, F, extends, dividing the former into two compartments, G and G', communicating with each other around the ends of the partition.

The block H of the capillary substance is inserted in the compartment G, and is of sufficient size to fill the openings in the top of the lubricator above G, and

extend to and in contact with the under surface of the journal, as shown in fig. 1.

The lubricator having been filled with the lubricant, the latter is carried to the journal through the medium of the block H, by capillary attraction, as will be readily understood.

The length of the block H is equal or nearly so to the journal, but the lubricator-box projects to the front of the latter, so that the compartment G shall be exposed to view for supplying the lubricant, &c., and for inspection from time to time.

The partition F does not extend at either end entirely across the box, but terminates in two passages, I, which pass vertically through the lubricator from top to bottom.

Through these passages are passed wicks or strips J of capillary substance, whose lower ends enter the axle-box beneath the lubricator, and whose upper ends reach the journal of the axle or upper surface of the block H.

By this construction any lubricant which may accidentally escape into the axle-box is carried, by capillary attraction, back to the journal, or at least to the upper surface of the lubricator. As the passages are completely inclosed within the lubricator they have no communication with the interior of the latter; and consequently the lubricant cannot pass through them to the axle-box.

Inasmuch as the journals of car-axles vary somewhat in length, the length of the block H must also vary to correspond thereto. To accommodate these differences the partition and passages must be arranged nearer to or further from the center of the lubricator, as will be readily understood, care being taken, however, that sufficient space is left to form the chamber G' in front of the journal for the introduction of the lubricant, &c.

Having thus described my invention,

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

1. In combination with the lubricator, the partition F and passages I, substantially as described, for the purpose specified.

2. The lubricator for the journals of car-axles, consisting of the shallow rectangular box C, the partition F, passages I, block H, wicks J, and springs D, substantially as herein shown and described.

J. LICHTENSTEIN.

Witnesses:

R. GAULT,

R. ACKENHEIL.