B. G. MARTIN.

CAR-AXLE LUBRICATOR.

No. 188,389. Patented March 13, 1877.

Fig. 3.

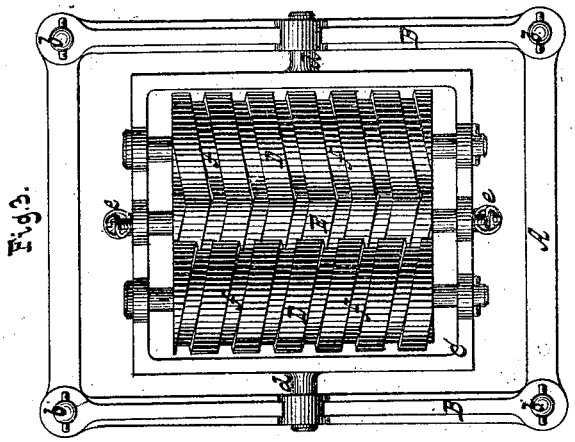


Fig. 2.

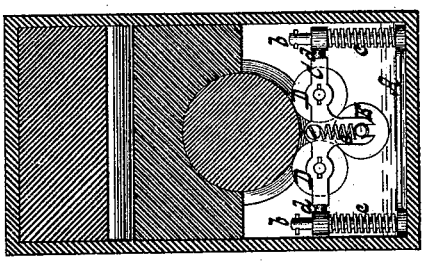
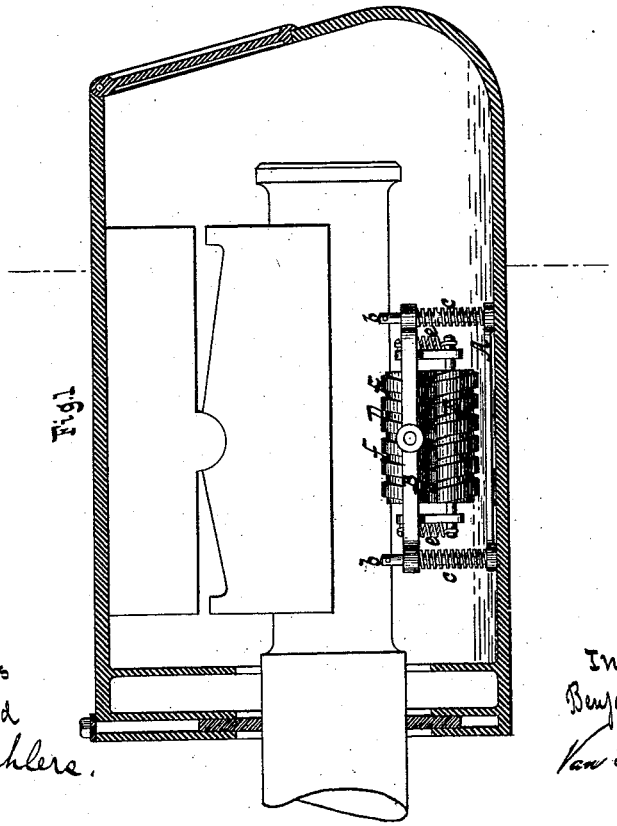


Fig. 1



Witnesses
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# UNITED STATES PATENT OFFICE.

BENJAMIN G. MARTIN, OF NEW YORK, N. Y.

## IMPROVEMENT IN CAR-AXLE LUBRICATORS.

Specification forming part of Letters Patent No. **188,389**, dated March 13, 1877; application filed November 25, 1876.

*To all whom it may concern:*

Be it known that I, BENJAMIN GREEN MARTIN, of the city, county, and State of New York, have invented a new and useful Improvement in Car-Axle Lubricators, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a sectional side view of my lubricator as applied to a car-axle. Fig. 2 is a sectional end view of the same. Fig. 3 is a plan or top view of the lubricator on a larger scale than the previous figures.

Similar letters indicate corresponding parts.

This invention relates to certain improvements in lubricators for car-axles; and the invention consists in a novel arrangement and combination of parts, the main feature of which is the combination, with distributing-rollers and a spring-supported frame, of a swinging or oscillating frame, which permits the distributing-rollers to accommodate themselves to the journal of the axle.

In the drawing, the letter A designates an open rectangular frame, from the corners of which rise four posts, *b*, which form the guides for bars B, and around each of which is placed a spiral spring, *c*, for supporting said bars. These bars form the bearings for trunnions *d*, which extend from the sides of a frame, C, that forms the bearings for the distributing-rollers D D, and for the feed-roller E. The distributing-rollers are situated parallel to each other, at a little distance apart, as shown in Fig. 3, and the feed-roller is exposed to the action of springs *e*, which keep the same in close contact with the distributing-rollers. The distributing-rollers D D are provided with spiral grooves *f*, running in opposite directions, and the feed-roller is also provided with a spiral groove, which may run in either direction.

When my lubricator is placed into an axle-box beneath the journal of the axle, as shown in Figs. 1 and 2, the springs *c* serve to keep the distributing-rollers in close contact with the journal, while the feed-roller dips into the lubricating material contained in the bottom of the box. When the axle revolves a revolving motion is imparted to the distributing-rollers and to the feed-roller, and the lubricating material taken up by the latter is transmitted to the journal by the distributing-rollers, and it is spread in opposite directions over said journal by the action of the spiral grooves in the distributing-rollers.

These spiral grooves are of particular advantage if tallow or other solid or semi-fluid material is used for lubricating, since said spiral grooves soon become filled up with such lubricating material, and transfer the same to the journal of the axle as fast as it is required.

The object of the swinging frame C is to permit the distributing-rollers to accommodate themselves to the position of the journal.

When a liquid lubricating material is used the feed-roller and the distributing-rollers may be made smooth, and they may be covered with felt, leather, or other absorbent material, to facilitate the transmission of the lubricating material from the well to the journal.

It must be remarked that if the space between the axle and the bottom of the box is narrow the feed-roller can be dispensed with. In this case the distributing-rollers dip into the lubricating material in the bottom of the box, and, when the axle revolves, they take up a quantity of the lubricating material and distribute the same over the journal.

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

1. The combination of the spring-supported frame or bars B, the frame C, capable of having an oscillating or swinging motion in said bars, and the distributing-rollers D D, journaled in said frame, substantially as and for the purpose described.

2. The combination of the spring-supported frame B, the frame C, arranged to oscillate or swing in said spring-supported frame, the distributing-rollers D, journaled in the swinging frame, and the spring-supported roller E, as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 22d day of November, 1876.

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

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.