2 Sheets—Sheet 1.

W. H. & F. C. BURDEN.

Car Axle-Box.

No. 200,893. *Fig. 1* Patented March 5, 1878.

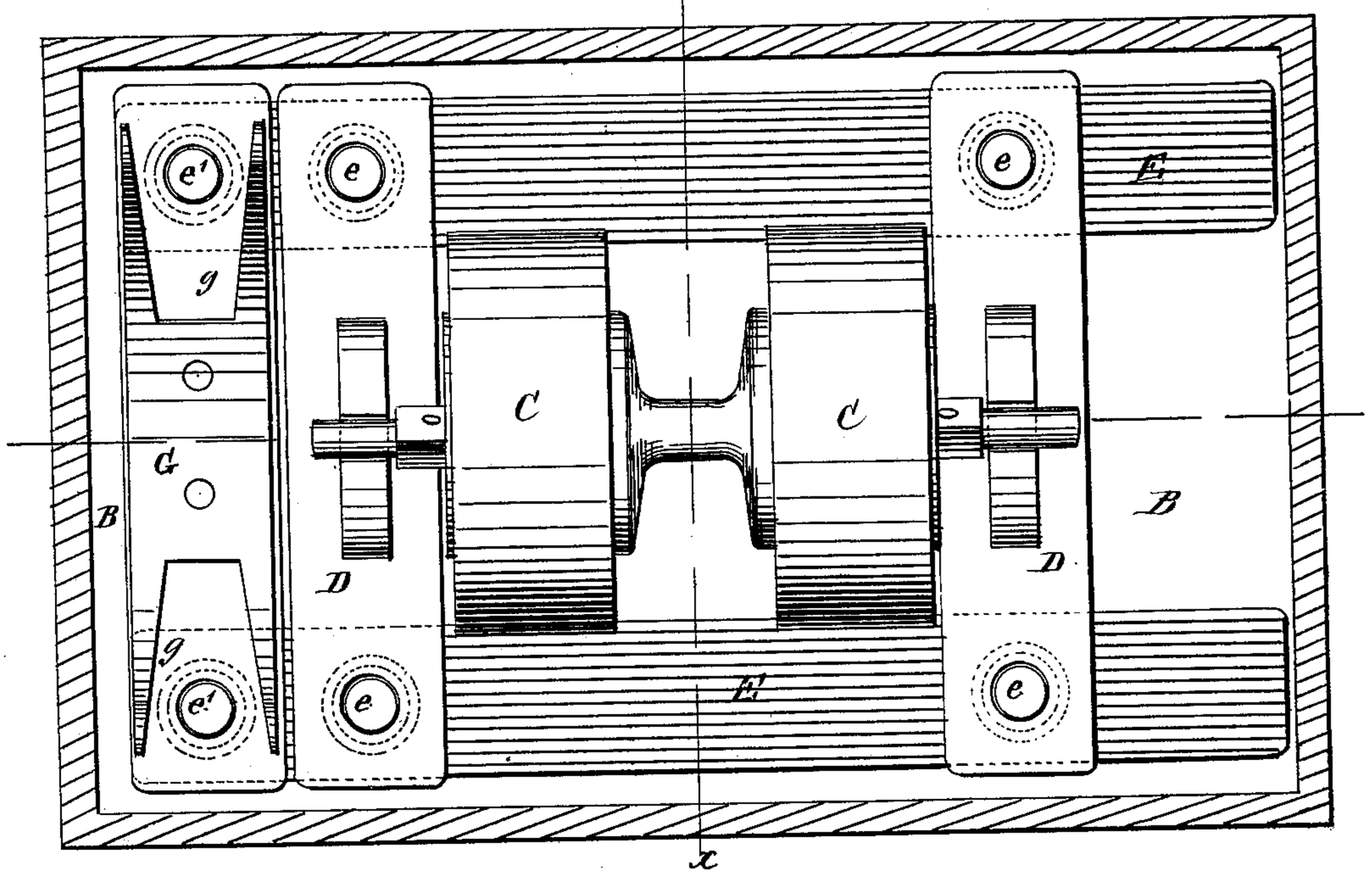
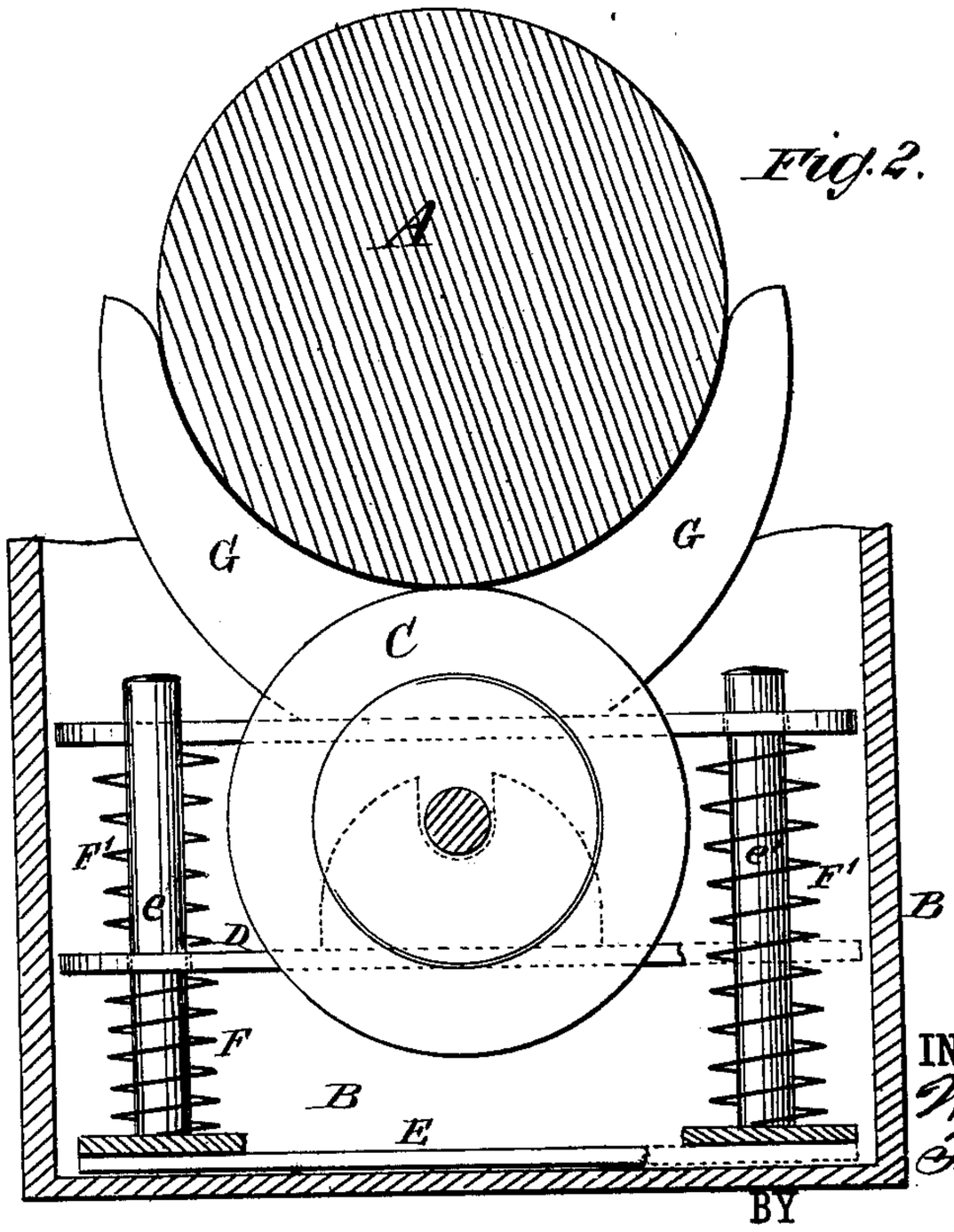


Fig. 2.



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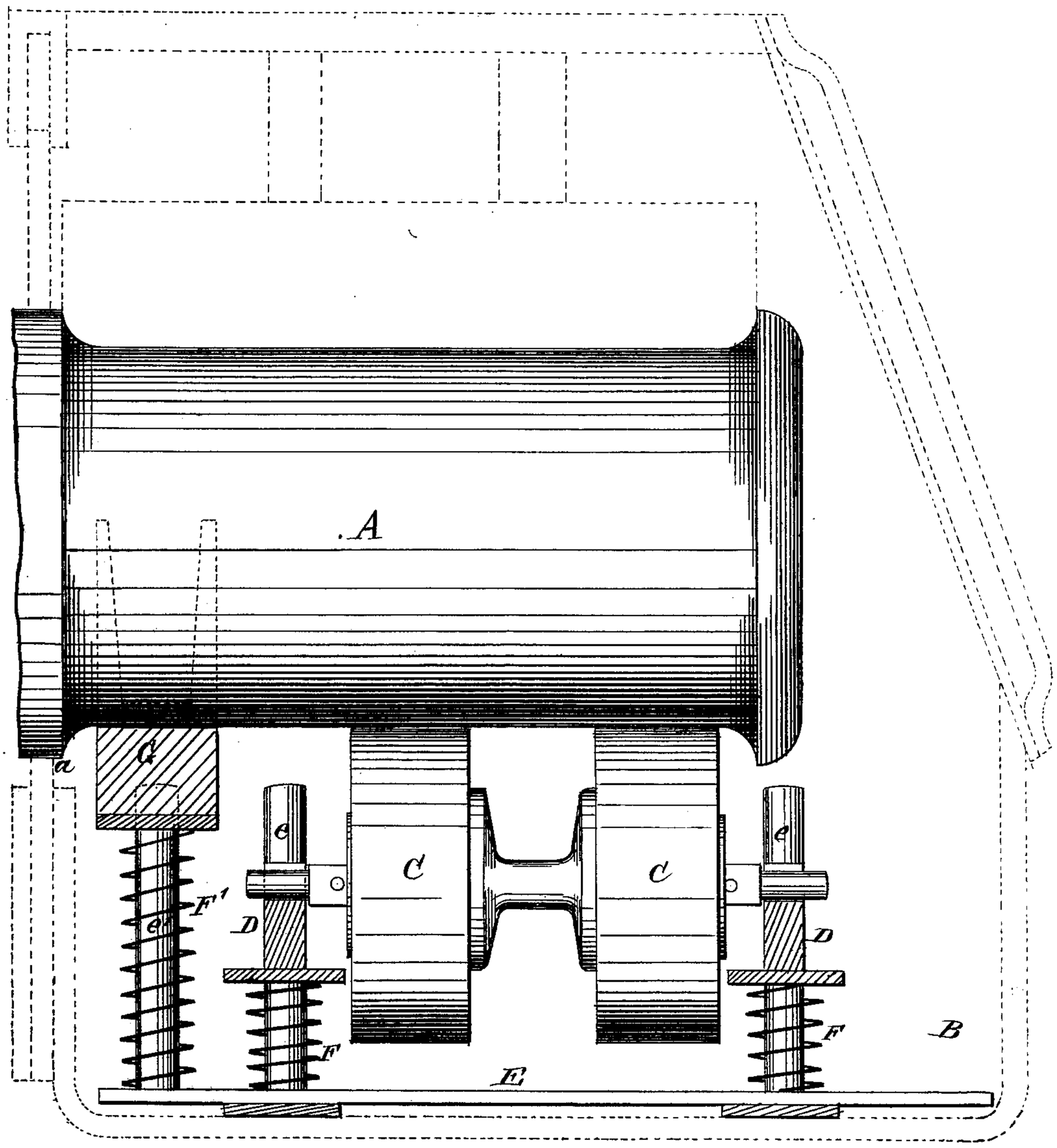
2 Sheets—Sheet 2.

W. H. & F. C. BURDEN.

Car Axle-Box.

No. 200,893. **Patented March 5, 1878.**

Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM H. BURDEN AND FREDERICK C. BURDEN, OF CLEVELAND, OHIO.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **200,893,** dated March 5, 1878; application filed December 24, 1877.

To all whom it may concern:

Be it known that we, WILLIAM H. BURDEN and FREDERICK C. BURDEN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and Improved Oiler for Journals, of which the following is a specification:

The object of our invention is to provide an improved device for oiling the journals of the axles of railroad-cars.

The invention consists in the combination, with a journal and oil-receptacle in an axle-box, of a friction roller or rollers and an oil-guard, said rollers and guard being mounted upon sliding bearings supported on springs in the manner hereinafter described.

In the accompanying drawing, in Sheet 1, Figure 1 represents a top view of my improved oiler, the inclosing axle-box being shown in horizontal section. Fig. 2 is a vertical cross-section of the same, taken through the line *x x* of Fig. 1. In Sheet 2, Fig. 3 is a sectional side elevation of the same as when in position in the axle-box, the latter being shown in dotted lines.

Similar letters of reference indicate corresponding parts.

A is the journal. B is the lower part or oil-receptacle of the axle-box.

In axle-boxes as heretofore constructed the oil is drawn up from the box B to lubricate the journal by the capillary attraction of the fibers of a quantity of cotton-waste packed in the box B underneath the journal. A large portion of the oil thus supplied escapes at *a* on the inner side of the car-wheel, and is wasted.

By our invention the use of cotton-waste is entirely dispensed with, and the escape of oil at *a* is prevented, as will be seen.

C are rollers secured upon a metallic shaft which is journaled on the sliding bearings D, the latter being guided by and on the standards *e* of the supporting-frame E, and pressed upward by spiral springs F to keep the rollers C in contact with the journal A, in order to cause them to be revolved from the journal by friction.

The box B being supplied with oil to a depth sufficient to cause the friction-rollers C to revolve with their faces in the oil, a small quantity of the latter will be carried with the rollers C on their faces for each revolution, thus applying the lubricating substance to the surface of the journal in a constant minute stream as long as the car keeps running.

G is a guard and guide to prevent the oil from flowing out at *a*, and to guide it back into the receptacle B.

The oil-guard G is made in the shape of a bearing, closely fitting and partly encircling the journal A, against which it is held in contact by the spiral springs F′, the oil-guard being supported on the said springs F′, and fitted to slide upon the standards *e′* of the frame E in the same manner as the bearings D of the friction-rollers C.

The oil-guard G is forked at *g* on both sides of the center, as seen in the drawing, in order to more effectually lead down and return to the box B the oil stopped by the guard G from flowing out of the box at *a*.

We do not claim, broadly, an oil-guard or device for preventing the oil flowing along an axle-journal.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

The combination of the friction-rollers C and the forked oil-guard G with the journal A and the box B, said oil-guard being curved or semicircular in form, and located at the inner end of the axle-journal, to operate substantially as and for the purpose specified.

WILLIAM HENERY BURDEN.
FREDERICK CHEEVER BURDEN.

Witnesses:
GEORGE T. CHAPMAN,
GEO. L. CHAPMAN.