

(No Model.)

J. J. STEVER.
CAR AXLE LUBRICATOR.

No. 385,213.

Patented June 26, 1888.

Fig. 1.

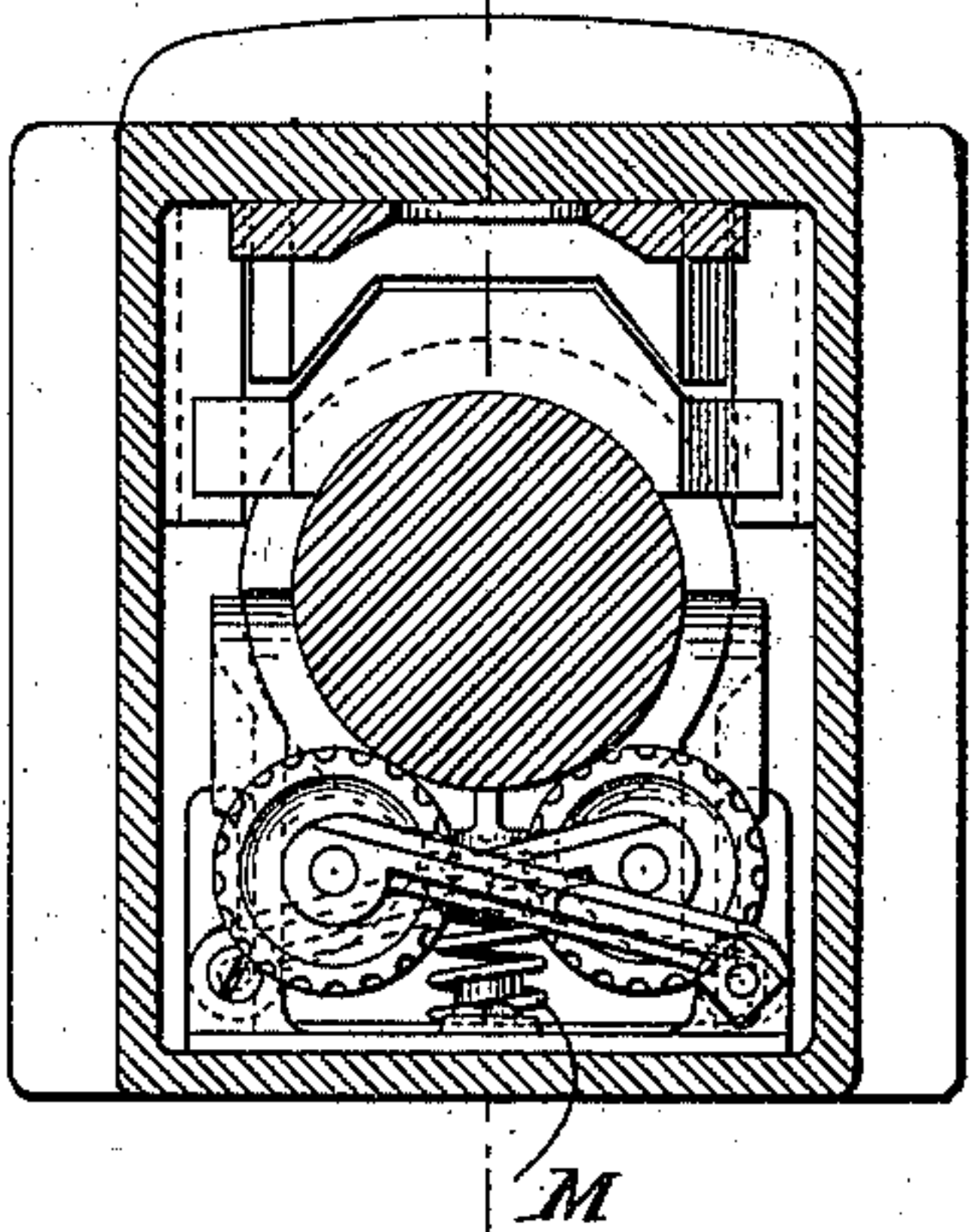


Fig. 2.

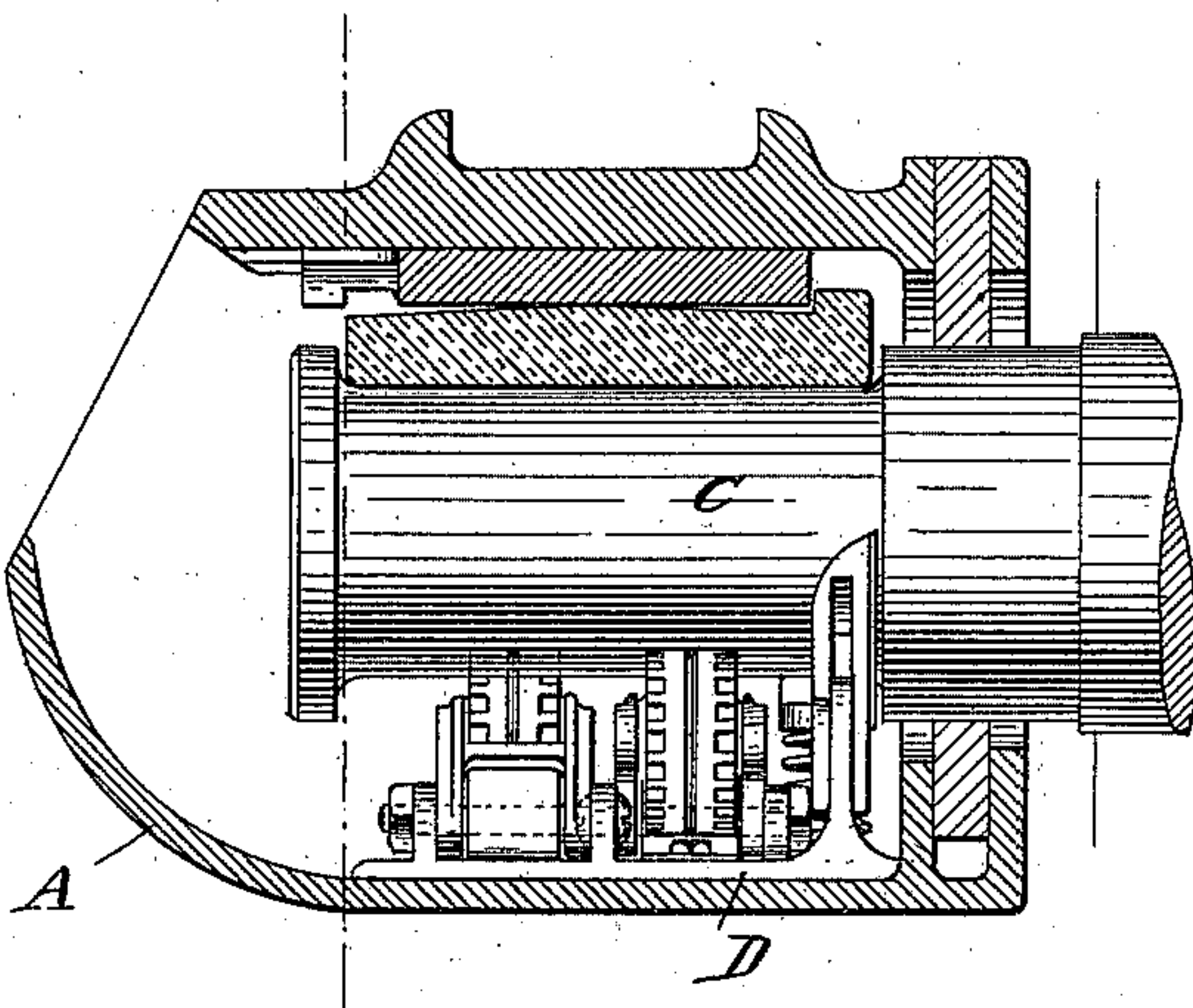
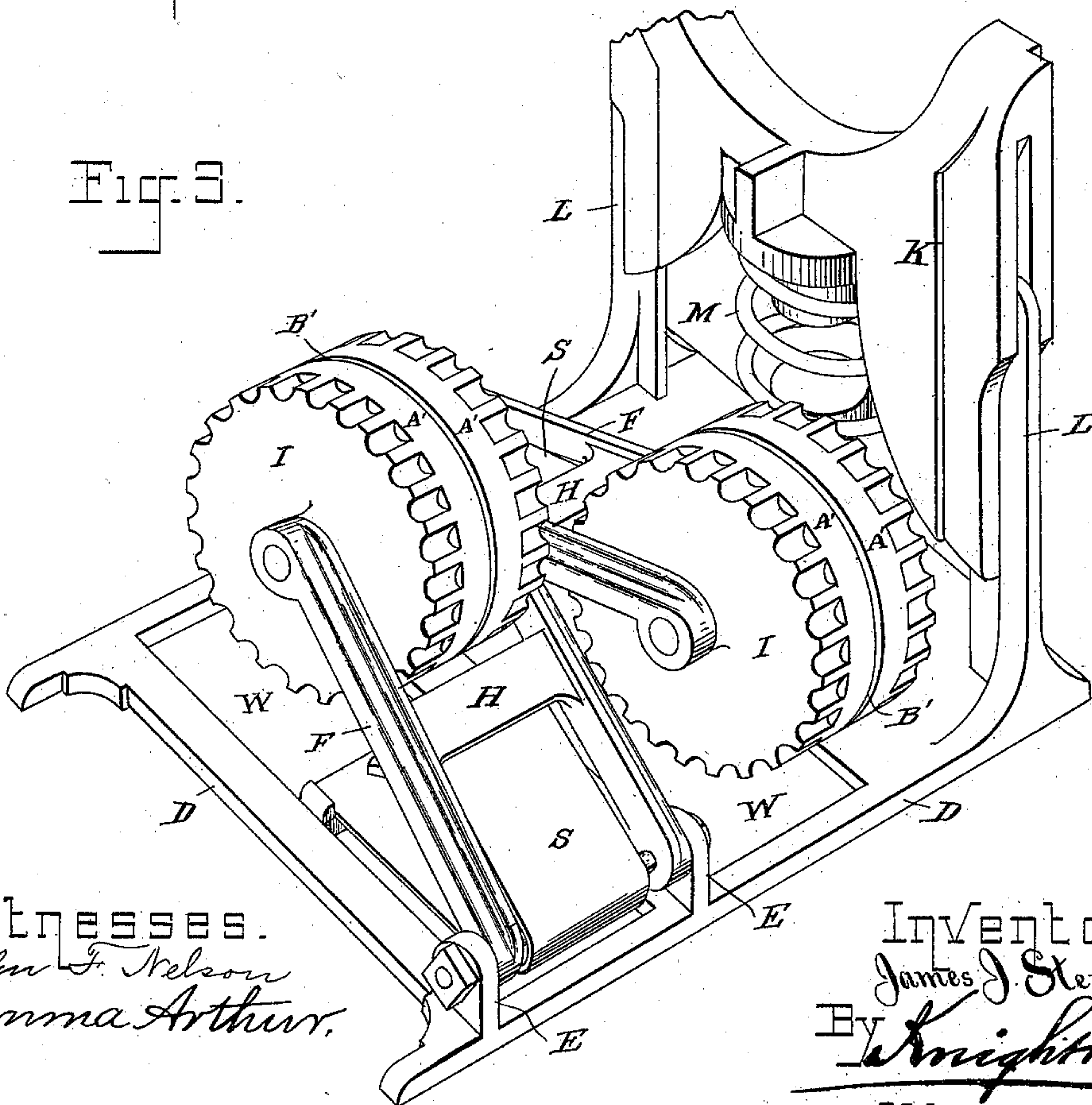


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES J. STEVER, OF OWOSSO, MICHIGAN.

CAR-AXLE LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 385,213, dated June 26, 1888.

Application filed December 20, 1887. Serial No. 258,498. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. STEVER, a citizen of the United States, residing at Owosso, county of Shiawassee, and State of Michigan, have invented certain new and useful Improvements in Car-Axle Lubricators, of which the following is a specification.

My invention relates, primarily, to an oiling apparatus which is adapted to save a vast amount of oil by preventing the extravagant and unnecessary waste which now occurs on the different railways of this country.

The invention relates, specifically, to a device which is adapted to be placed in the axle-box of a railway-car and to feed the oil automatically to the bearings of the axle as it is needed and required.

As the oil has to be applied to the bearing of the axle on the under side, it will be seen that the construction is necessarily different from the oiling apparatus which has been employed from time to time in various classes of machinery, and in which the oil has been invariably applied to the upper surface of the bearing.

Heretofore in the oil-boxes of railway-car axles it has been customary to pack within the box a quantity of saturated waste, the said waste being so arranged around the bearing of the axle that loss of oil or lubricating material was unavoidable, inasmuch as there is nothing to prevent the oil from running out at the rear side of the journal-box. As the result of this the oil spreads out and flows along the axle until it comes to the wheels, at which point it commences to drip, entailing an enormous loss of valuable oil. Another drawback to the ordinary means of oiling the bearings of car-axles is, that the jar of the cars causes the waste and oil in the journal-box to drop down and away from the axle, and as soon as it settles and falls away from the bearing the axle will become dry and heated, and the friction generating will set the waste and oil on fire. This has often occurred, and is the immediate cause of great loss in railway property. To obviate these drawbacks and to provide a simple, effective, and automatic oiler for the bearings of railway-car axles are the objects of my invention.

Referring to the accompanying drawings,

which form a part of this specification, Figure 1 is a transverse section of a journal-box having my lubricator applied. Fig. 2 is a longitudinal section of the same. Fig. 3 is a perspective view on a larger scale.

In the drawings, A is a car-axle box, and B an axle extending into said box and provided with a bearing, C. Located in the bottom of the car-axle box is a frame, D, provided with lugs E E, extending upwardly therefrom, in which are pivoted frames F by means of bolt or hinge G. Springs are provided which surround the bolt or hinge G and bear against the frame at one end and at their upper ends against cross-pieces H, connecting the two branches of the two frames F. At the ends of these frames are set the rollers I. These rollers bear against the bottom of the bearing of the axle, as shown in Figs. 1 and 2, and are flexibly supported and held in contact with the frame D and the frames F and spring S.

The rollers are provided with centrally-located depressions or recesses B' and with plain or smooth surfaces A', which extend outwardly from said recess or central depressions to the edges of the rollers. Portions of the edges, however, are cut away, forming thereby indentations; but the portions contiguous to those not cut away are even with the main surfaces A' of the rollers.

Depressions or wells W are provided, so that when the rollers are depressed they will dip into these wells and carry oil therefrom to the surface of the axle-bearing, the cut-away portions on the rollers carrying oil to the bearing of the axle, and the small portions of the rollers distribute it over the same.

I have found by experimental use that the form herein described, and shown in the drawings, is particularly advantageous, and serves the purpose better and works more economically than any other form of roller.

At K, I show a collar which bears against the inner bearing of the axle-bearing, and serves to cut off the flow of the oil in that direction, thus keeping all of the oil with the axle-box. This collar slides in vertical standards L, and is provided with a central bearing-spring, M, which keeps it in contact with the axle-bearing.

I am aware that disks having approximately

radial grooves on their vertical faces have been suggested for car-axle lubricators; but such a construction is not the equivalent of my invention. My rollers are provided on each side 5 of the flat central surfaces with shallow corrugations. In the curved surface of the roller these corrugations act as buckets, bringing the oil up directly against the journal, which picks up the oil from the buckets as it passes over 10 the same. The intention of the other case referred to is to throw the oil up against the journal centrifugally.

Having thus described my invention, the following is what I claim as new therein and 15 desire to secure by Letters Patent:

1. In a car-axle lubricator, the combination, with a suitable frame, of rollers supported flexibly within said frame, having plain or 20 corrugations on each side of such plain surfaces and parallel with the axis of the roller, substantially as and for the purposes set forth.

2. In a car-axle lubricator, the combination, with a suitable frame, of rollers supported flexibly with said frame, having the smooth or 25 plain surfaces at A', a continuous centrally-located recess, B', and indentations C' upon the edges of the rollers, all arranged substantially as and for the purposes set forth.

3. In a car-axle lubricator, the combination, 30 with a frame, of the rollers flexibly supported within said frame, said rollers being provided with a continuous centrally-located recess, B', and smooth portion A', extending on both sides of said recess to the edges of the rollers, with 35 indentations C' at the edges, all constructed substantially as and for the purpose set forth.

JAMES J. STEVER.

Witnesses:

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