

(No Model.)

J. FISCHER.

CAR AXLE BOX.

No. 328,204.

Patented Oct. 13, 1885.

Fig. 1

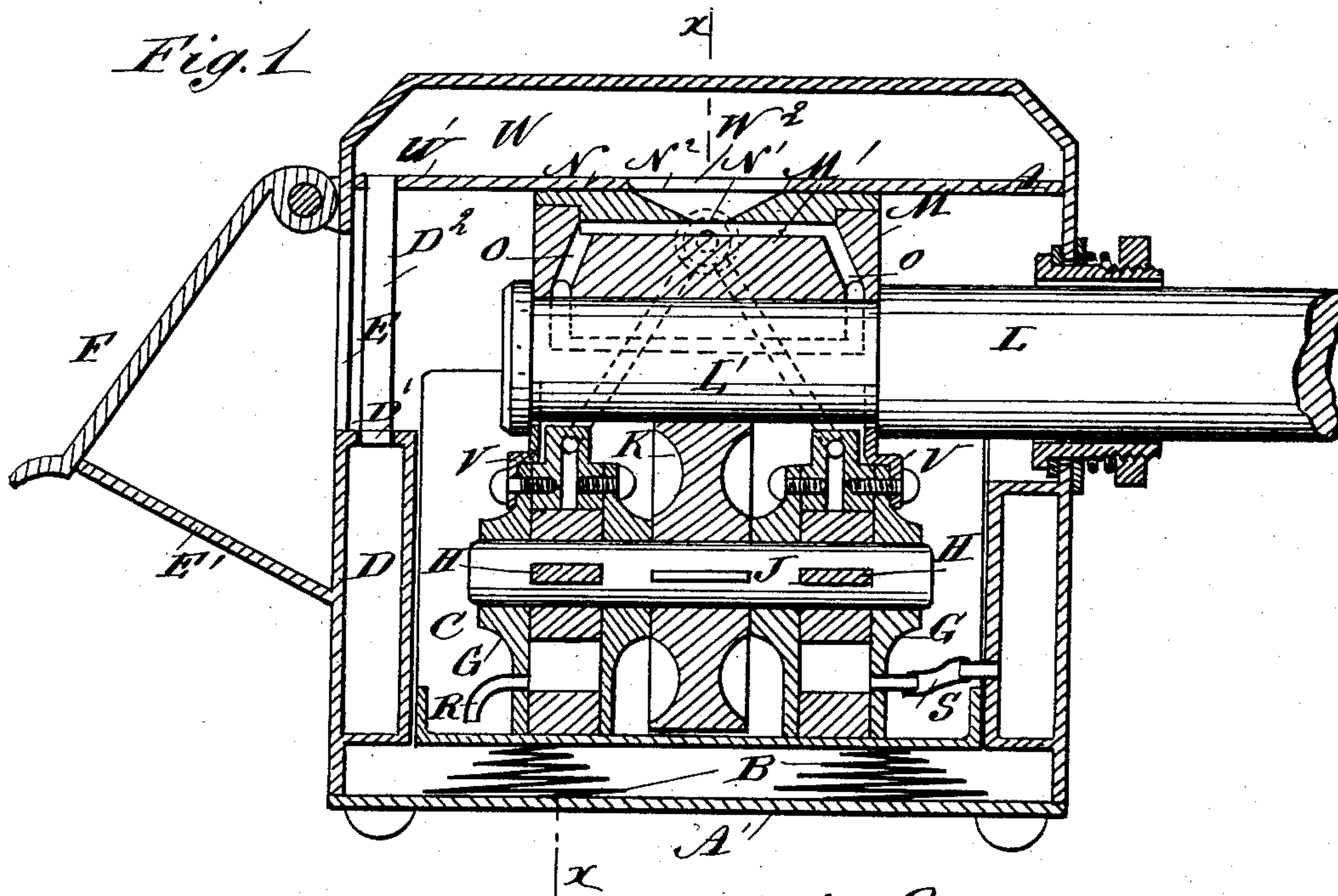
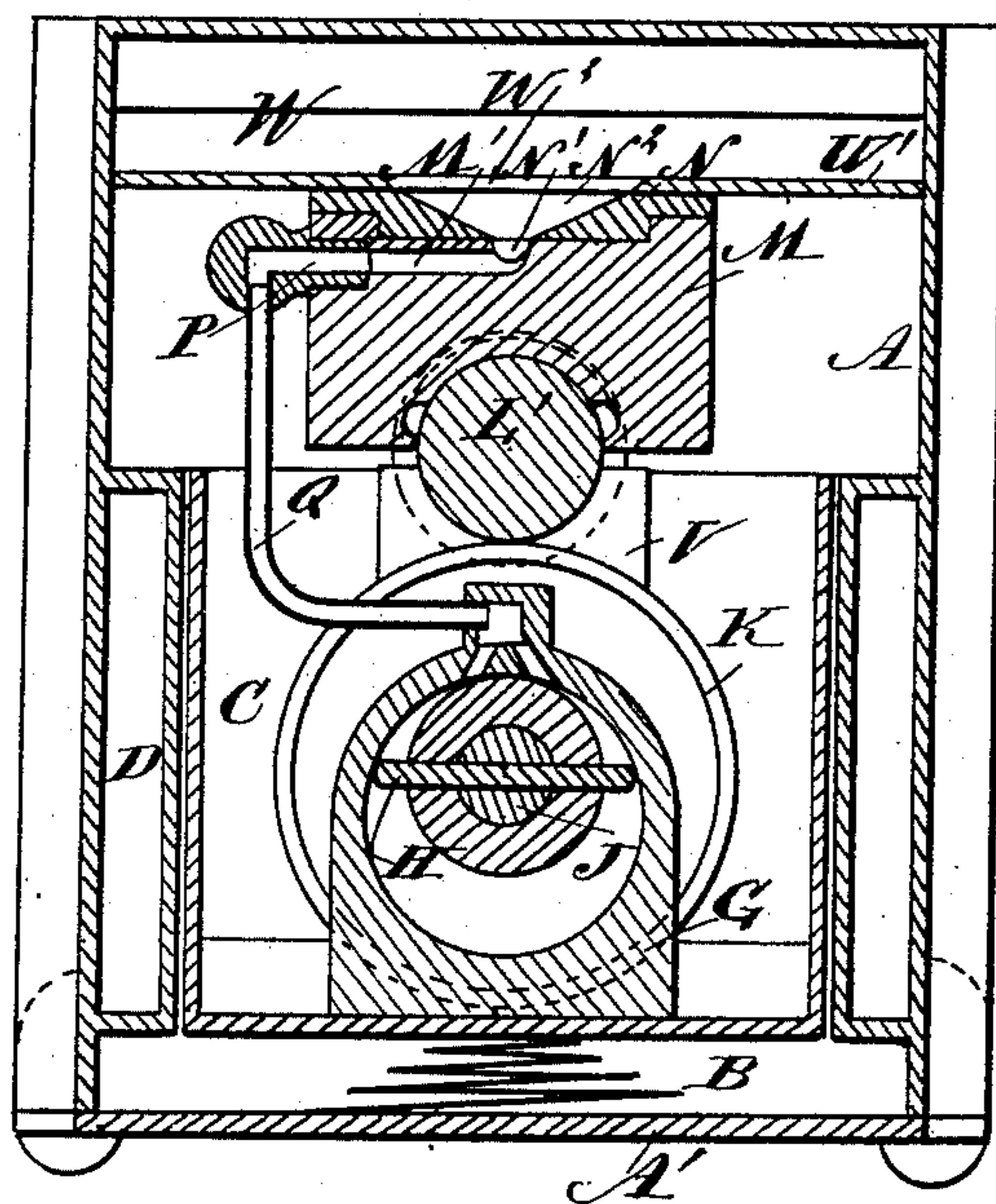


Fig. 2



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CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 328,204, dated October 13, 1885.

Application filed August 3, 1885. Serial No. 173,396. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH FISCHER, of Elizabeth, in the county of Union and State of New Jersey, have invented a new and Improved Self-Feeding Journal-Box, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved journal-box which is so constructed that it continually feeds oil upon the journal.

The invention consists in the combination, with a journal-box, of a shaft in the same, two rotary pumps on the ends of the shaft, and a pulley between the pumps, which pulley is revolved by the axle, thus operating the pumps, which deliver the oil upon the journal.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a longitudinal sectional elevation of my improved journal-box. Fig. 2 is a cross-sectional elevation of the same on the line xx , Fig. 1.

The journal-box A is provided with the removable bottom A', upon which springs B rest, which carry a smaller box, C, fitting quite snugly within an oil-chamber, D, formed on the inside of the journal-box.

The journal-box A has an opening, E, at which a cup, E', projects from the end of the box, which cup can be closed by a hinged door, F.

An oil-chamber, W, is formed in the upper part of the box A by a partition, W', having an aperture, W². A pipe, D², conducts the oil down into an oil-chamber, D, which has an opening, D', in its top at any suitable place for securing the lower end of the tube D². In the case shown the opening D' is at the opening E.

On the bottom of the box C two rotary pump frames or casings, G, are placed, the piston-plates H of which are mounted to work in the ends of a shaft, J, journaled in the casings and carrying a pulley, K, between them, which pulley is in contact with the journal L' of the axle.

On the journal L' a block, M, rests, which has a cavity, M', in its top, in which a plate, N, is placed, having a central aperture, N',

and a cavity, N², in its top, which cavity decreases in diameter toward the bottom.

The block M has channels, O, for conducting the oil &c., from the cavity M' to the journal L', and a channel, P, for conducting the oils into the cavity M'. The oil can pass from the cavity N² through the aperture W² into the chamber W.

The oil is conducted from the pumps G into the channel P by two pipes, Q, united at their upper ends.

One pump is provided with a tube, R, for drawing oil from the bottom of the box C, and the other is connected by a flexible pipe, S, with the oil-chamber D.

On the pump-frames two pieces, V, are held to project upward, and have semicircular recesses in their top edges for receiving the journal L'. When the axle swings more or less in the horizontal, the entire pump mechanism swings with it on the bottom of the box C, and the above-mentioned pieces V are provided to hold the axle in such a manner that it will cause the pumps to swing with it.

The operation is as follows: The pulley is revolved from the journal L', and as the pump-pistons are on the same shaft with the pulley they are revolved also, and thus the pumps are operated as long as the axle revolves. One pump pumps the oil from the tank or oil-chamber D through a pipe, Q, into the cavity in the top of the block M, and from said cavity the oil flows upon the journal, and the excess of oil which is not taken up by the journal passes out through the channels in the block M, through the openings N' and W² into the chamber W, and through the pipe D² into the chamber D, from which it is pumped again. The oil that drops from the journal is collected in the bottom of the box C, and is pumped up through the pipe R.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a journal-box, the combination, with a box having an oil-chamber formed at its top, of a pulley operated from the axle-journal, oil-pumps operated from said pulley, a block resting on the journal and having oil-channels and an aperture, which block is in contact with the under side of the top oil-chamber, an oil-chamber formed on the sides of the

box, and a tube connecting the top oil-chamber with the side oil-chamber, substantially as herein shown and described.

2. In a journal-box, the combination, with a pulley operated from the axle-journal, of a shaft on which the pulley is mounted and rotary pumps on the ends of the shaft, substantially as herein shown and described.

3. In a journal-box, the combination, with a shaft, of two rotary pumps and a pulley mounted on the same, an axle running on the said pulley, a block on the journal of the axle, and tubes extending from the pump to said block, substantially as herein shown and described.

4. In a journal-box, the combination, with the axle L, of the shaft J, two rotary pumps on the ends of the same, a pulley on the shaft between the pumps, a recessed and channeled block on the journal, and tubes extending from the pumps to the said block, substantially as herein shown and described.

5. A journal-box having an oil-chamber formed on its inner side combined with a box fitting within the space surrounded by the said chamber, substantially as herein shown and described.

6. The combination, with a journal-box having an oil-chamber formed in its inside, of a box fitting within the space surrounded by the oil-chamber and oil-pumps in the said box, which oil-pumps are operated from the axle, substantially as herein shown and described.

7. The combination, with a journal-box having an oil-chamber formed on its inside, of a box fitting in the space surrounded by the oil-chamber, oil-pumps in the said box operated from the axle, and a tube connecting one of the pumps with the oil-chamber, substantially as herein shown and described.

8. The combination, with a journal-box having an oil-chamber formed on its inside, of a box fitting in the space surrounded by the oil-chamber, springs interposed between the bottom of the journal-box and the bottom of the box within the journal-box, and oil-pumping devices in the said inner box, substantially as herein shown and described.

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