No. 647,715. Patented Apr. 17, 1900.

P. BROWN.

JOURNAL BOX.

(Application filed Dec. 23, 1897.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

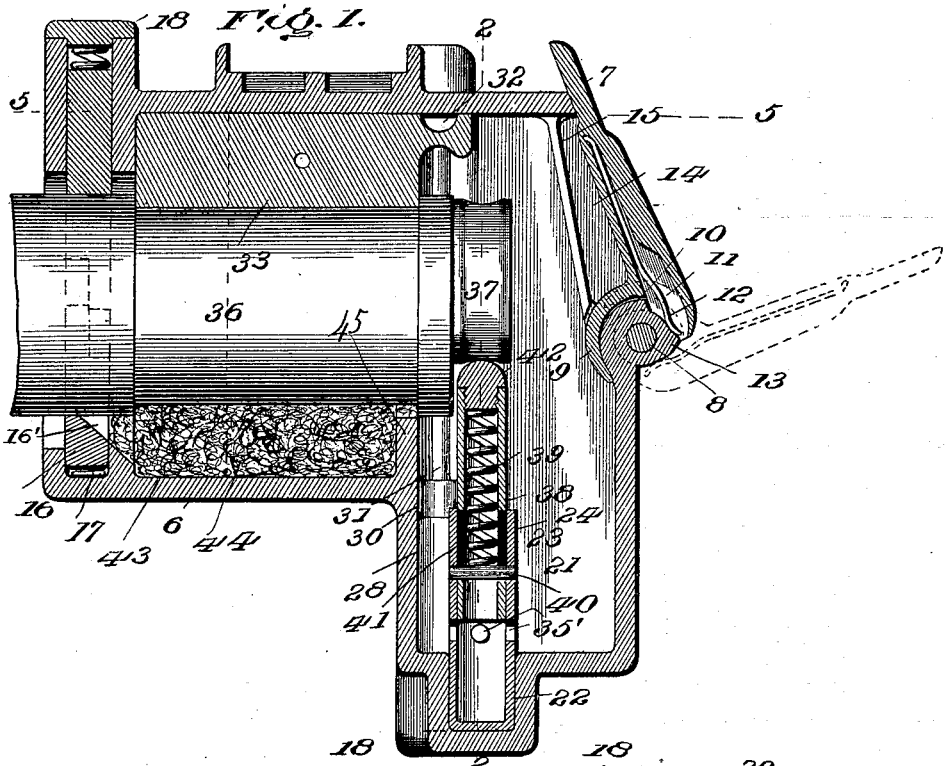

Fig. 2.

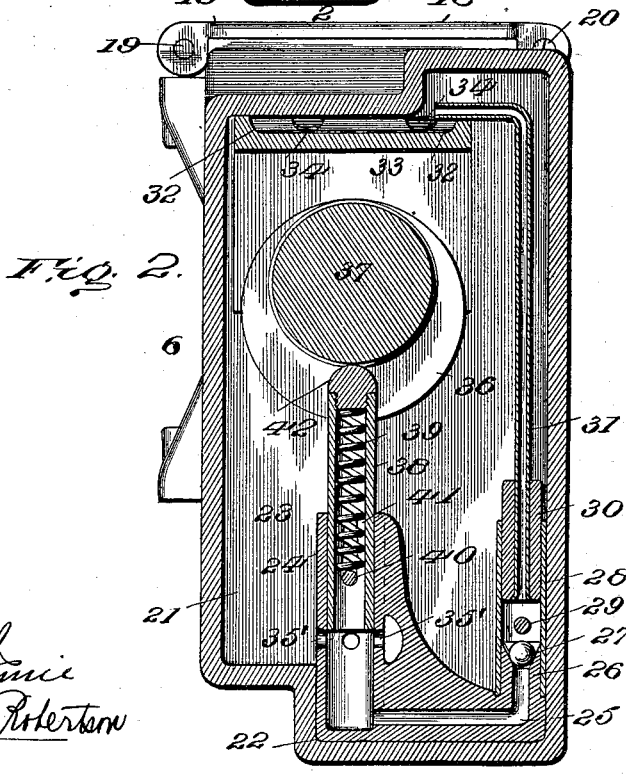

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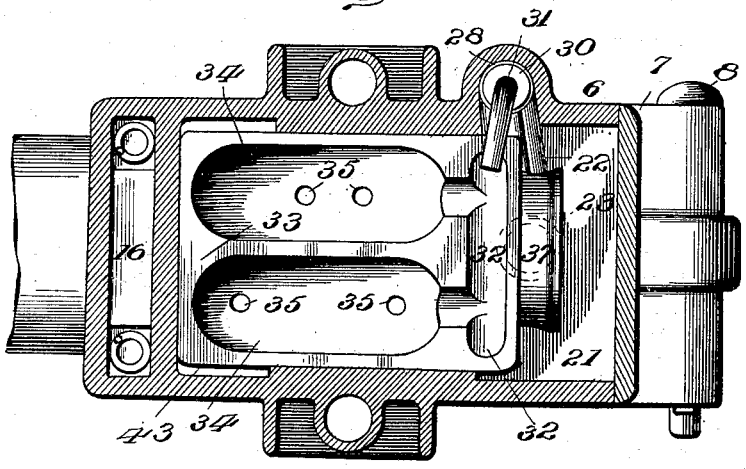
Fig. 3.



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UNITED STATES PATENT OFFICE.

PERRY BROWN, OF WILMINGTON, DELAWARE.

JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 647,715, dated April 17, 1900.

Application filed December 23, 1897. Serial No. 663,252. (No model.)

To all whom it may concern:

Be it known that I, PERRY BROWN, a citizen of the United States, residing at Wilmington, in the county of New Castle, State of Delaware, have invented a certain new and useful Improvement in Journal-Boxes, of which the following is a specification, reference being had to the accompanying drawings.

This improvement relates more particularly to that class of railroad journal-boxes which are provided with pumps to supply the bearing with the necessary lubricating material; and the invention consists in the peculiar construction hereinafter more particularly described and then definitely claimed at the end hereof.

In the accompanying drawings, Figure 1 is a vertical central longitudinal section of a journal-box constructed according to my improvement. Fig. 2 is a vertical cross-section on the line 2 2, Fig. 1. Fig. 3 is a horizontal section on the line 5 5 on Fig. 1.

Referring now to the details of the drawings by numerals, 6 represents the body of the box, provided with a lid 7, hinged to the body by a pivot 8, which lid has a curved flange 9, that shuts down over a curved projection 10 at the back of the hinge to keep the lubricant from working out. A recess 11 is formed in the lid, in which a spring 12 is set, whose upper end is slightly bent, as shown, to keep it in place. The lower end of this spring bears against a projection 13, formed on the fixed part of the hinge and so shaped that it will cause the lid to remain either as shown in full or as in dotted lines. When the lid is opened or closed, the spring as it passes off the center of the projection will cause the lid to move to the extreme end of its throw in either direction. At each side of the lid is a flange 14, which closes against a rib 15, formed on the side of the body to prevent the lubricant working out.

I provide a dust-guard comprising two parts 16 and 17, held in contact with the axle by springs 17 and covered by a lid 19, but as these parts are not here claimed further description is unnecessary.

In front of the box is a reservoir 21 to contain the lubricant, and in the bottom of this reservoir is formed a recess 22, in which sets a pump 23, comprising a cylinder 24, having an extension 25 at one side, an upturned end 26, in which is a seat for a ball-valve 28, having a pin 29 passing across it which prevents the ball-valve from rising too far. Fitting in the top of this tube 28 is a cylindrical plug 30, carrying a small pipe 31, whose upper end is turned over so as to terminate at and discharge into a groove 32 in the brass 33, which groove communicates with lubricant-cells 34, formed in said brass, and which are provided with holes 35, through which the lubricant may pass to the journal 36.

On the end of the journal is an eccentric 37, which as the journal revolves presses down the piston 38 against the pressure of a spring 39, set in the piston, and which finds its point of pressure against a pin 40, set fast in the cylinder and passing through the slots 41 in the piston and against a hardened-steel cap 42, screwed into the piston, and which is kept in contact with the eccentric by the pressure of said spring. When the piston is in its upward position, the oil or lubricant runs in the cylinder 24 through the holes 35′, and as the axle revolves the eccentric presses down the piston, thus forcing the oil through the extension 25 and up the pipe 31, from whence it passes to the groove 32, the cells 34, and thence to the journal 36, from whence it passes back into the reservoir 21 to be again pumped up to the journal, by which means said journal is always kept perfectly lubricated.

Below the journal is a receptacle 43 for waste 44, which absorbs the oil or lubricant and spreads it over the entire surface of the journal. This receptacle is divided from the oil-reservoir by a partition 45, which extends across the full width of said receptacle and serves to keep the "waste" in position and also to contain a quantity of oil in the bottom of the waste-receptacle, by which the waste is kept saturated even after the oil in reservoir 21 is exhausted.

What I claim as new is—

1. The combination in a journal-box, of a pump-cylinder 24, provided with inlets for the lubricant, a hollow piston 38 working in said cylinder, a spring 39 inclosed in said piston for forcing it in one direction, an eccentric 37 on the end of the journal for driving

it in the opposite direction, a discharge-pipe 31 leading from an extension 25 of the cylinder and a brass 33 provided with receptacles for the discharge from the pump, and having outlets for distributing the lubricant on the journal, all substantially as described and shown.

2. The combination of a journal-box having a waste-receptacle 43, adapted to hold the waste in place and confine it beneath the axle, a lubricant-reservoir 21 set at a lower level than the waste-receptacle, said receptacle and reservoir being divided from each other by a partition 45 the width of said receptacle, with a pump set in said reservoir, means for operating said pump, and a pipe for carrying the lubricant from the pump to a point above the journal, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses, this 21st day of December, 1897.

PERRY BROWN.

Witnesses:
THOS. E. ROBERTSON,
BENJ. F. EDWARDS.