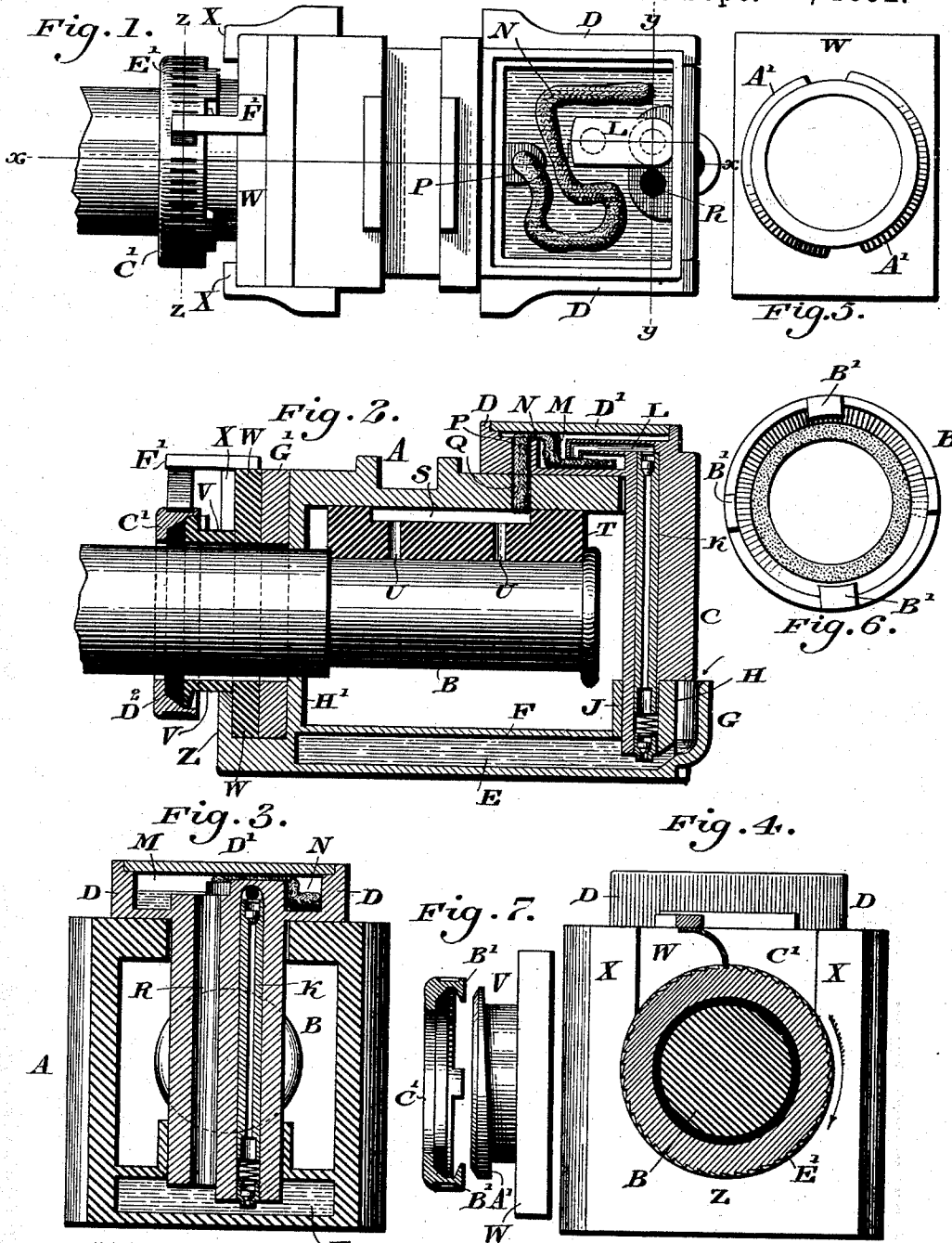


(No Model.)

I. P. & H. A. WENDELL.
AXLE LUBRICATOR.

No. 483,333.

Patented Sept. 27, 1892.



WITNESSES:

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AXLE-LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 483,333, dated September 27, 1892.

Application filed January 23, 1892. Serial No. 419,010. (No model.)

To all whom it may concern:

Be it known that we, ISAAC P. WENDELL and HENRY A. WENDELL, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Axle Boxes and Lubricators, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention consists of an axle box and lubricator constructed as hereinafter described and claimed.

Figure 1 represents a top or plan view of an axle box and lubricator embodying our invention. Fig. 2 represents a longitudinal section thereof on line *xx*, Fig. 1. Fig. 3 represents a transverse section thereof on line *yy*, Fig. 1. Fig. 4 represents a section on line *zz*, Fig. 1. Figs. 5, 6, and 7 represent detached views of the dust-guard or packing.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates an axle-box, and B the journal therein; C, the front lid, and D a top plate which is formed with said lid and provided with a removable lid D'.

E designates a reservoir for oil at the bottom of the box, the same having a covered top formed by the floor F, whereby said reservoir does not communicate directly with the interior of the box. At the front of the walls of the reservoir E is a spout or inlet G, whereby the said reservoir may be supplied with oil, it being noticed that the mouth of said spout is on the outside of the box, being partially covered by the lower end of the front portion of the lid C, it being also noticed that the lower end of the lid C occupies a position between the rear wall H of said spout G and a vertical wall J of the floor F of the box. In said front lid C is a vertical opening which contains a pump K, whose foot dips into the reservoir E and whose discharge end is at top, where it is connected with a horizontally-arranged pipe L, which opens into the chamber M in the top plate D. Within said chamber is a piece N of material of the nature of wicking, one end of which occupies a vertical duct P in a wall in the chamber M and a commu-

nicating duct Q in the top wall of the box A. Aside of the opening which contains the pump K in the front lid C is an overflow-passage R, the top of the wall of which rises above the bottom of the chamber M, so that a proper level of oil may be maintained within said chamber M and the overflow oil will enter the passage R and be directed and returned by the same into the bottom reservoir E.

The valves of the pump K are loose or free in their nature, so that they will be readily operated by the motion of the car. Consequently the oil is taken from the reservoir E of the car, the jolting of which raises the valves of the pumps from their seats, so as to permit the upward flow of the oil into the tube of the pump, and thence into the pipe L, and consequently into the chamber M, whereby by the capillary action of the wicking N it is fed into the chamber S in the journal-bearing T, which is provided with the vertical channels U, leading from said chamber S, so that the oil is directed to the journal and applied to the same in a thorough and uniform manner. It will also be seen that the oil is prevented from being materially affected by the action of dirt, as the lubricating device is substantially closed to the exterior, excepting at the place of supply G.

V designates a collar, which encircles the shoulder of the journal and has at its inner end a plate W, which also encircles said shoulder and is retained by the side flanges X and the lower wall Z of the rear end of the axle-box. On the outer end of the collar V are spiral flanges or sections of screw-threads A', which are adapted to be engaged by lugs B' on a sleeve C', which also embraces the shoulder of the journal. Interposed between the adjacent walls of the collar V and sleeve C' is a packing or gasket D², it being seen that when said sleeve is presented to said collar and the lugs and flanges engage the said sleeve is rotated, and thus the packing is compressed and forced against the journal or shoulder thereof, forming a tight joint, which constitutes a reliable dust-guard, at the rear of the journal.

In order to prevent improper disconnection of the sleeve C', and consequent release of

the packing, the periphery of the sleeve is formed with serrations or teeth E', with which engages a spring tooth or pawl F' on the plate W. When said tooth is raised, the sleeve
 5 may be disconnected from the collar V when so required.

A packing or filling piece G' is interposed between the plate W and contiguous wall H' to the rear of the axle-box, so as to prevent
 10 looseness of said plate on the axle-box.

The front lid and top plate may be readily removed from the axle-box and the lid D' displaced, whereby access is had to the chamber M and wicking N.

15 The plate W, with the attached collar V, is movably held in the rear of the box, so as to adjust itself to the motion of the journal or axle and wear of the same.

In some cases the pumping device and opening therefor may be placed at one side of the
 20 box instead of at the center, as shown.

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

1. An axle-box having a reservoir with covered top, a front lid with pump therein having upper and lower valves loosely seated in its tube, a top plate with a removable lid, said plate having a chamber with inlet and outlet
 25 ducts, and a journal-bearing with a chamber 30 and channels therein, said parts being combined substantially as described.

2. An axle-box having a reservoir in its lower part with a covered top, a front lid with a pump therein having rising - and - falling
 35 valves loosely fitted in its tube, a top plate with a chamber, a pipe in said chamber leading from said pump, and an overflow-passage leading from said chamber through said front
 40 lid to said reservoir, the top wall of said overflow-passage being above the floor of said chamber, said parts being combined substantially as described.

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Witnesses:

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