

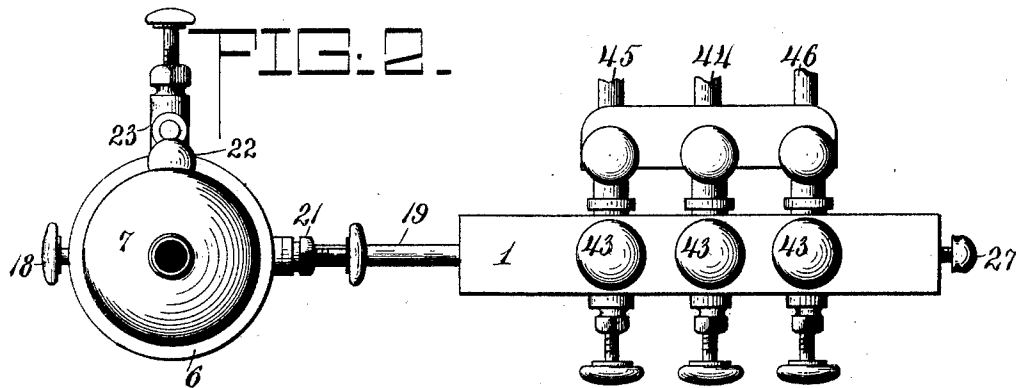
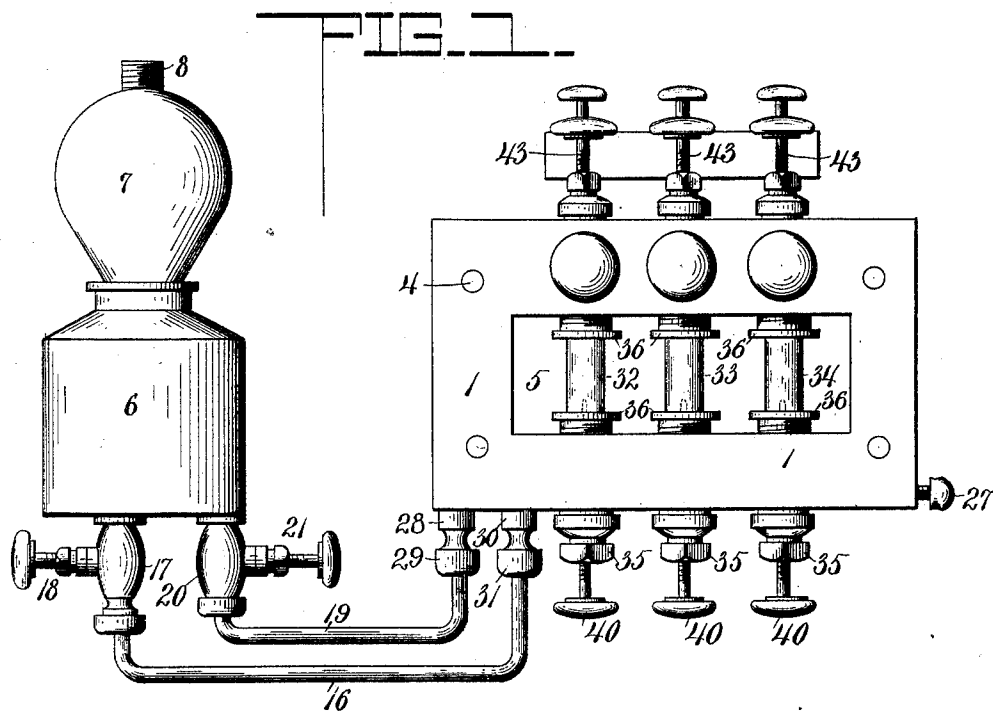
(No Model.)

2 Sheets—Sheet 1.

J. K. REESE.
LUBRICATOR.

No. 586,714.

Patented July 20, 1897.



WITNESSES

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W. W. Coyle.

INVENTOR

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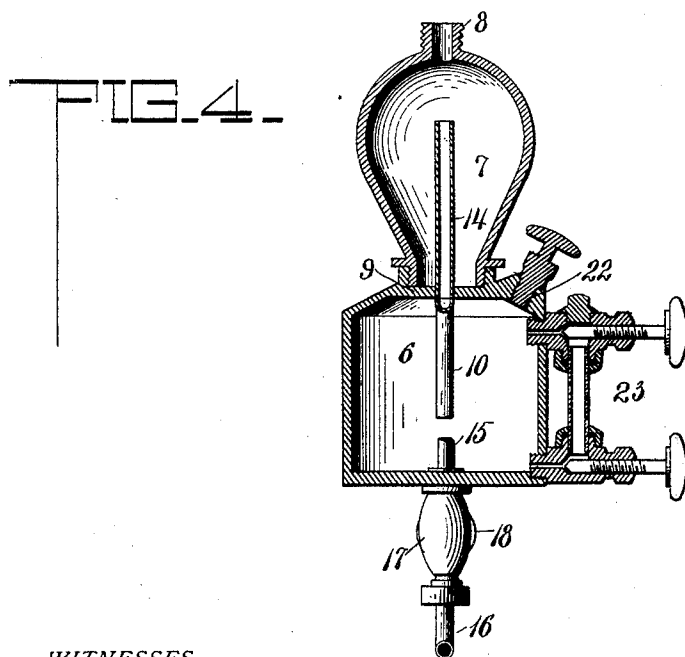
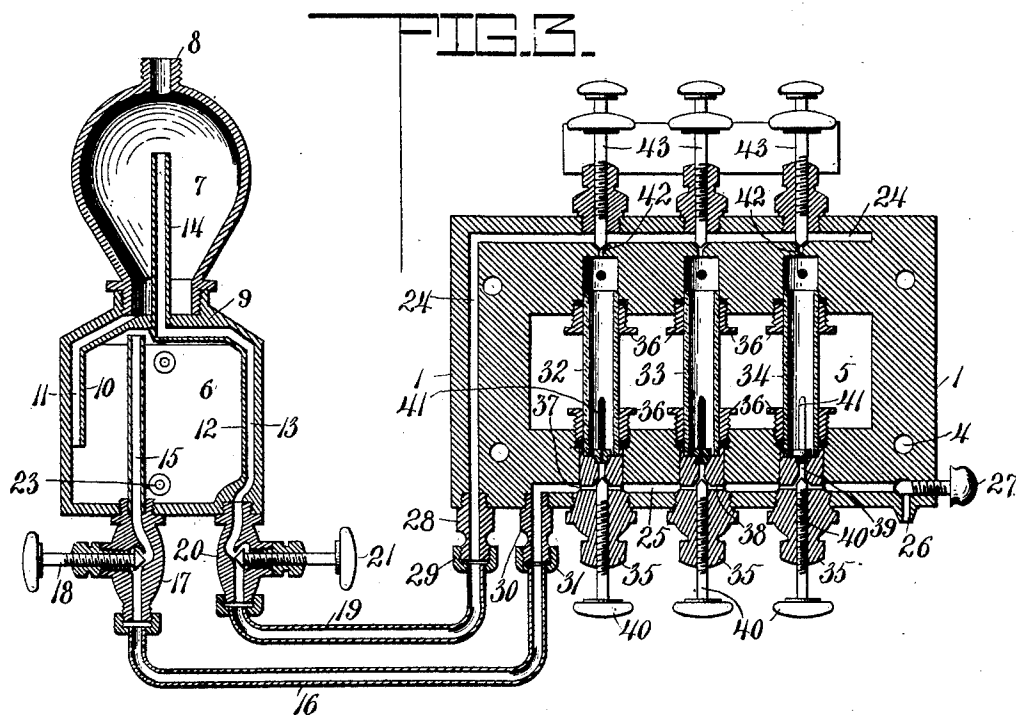
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UNITED STATES PATENT OFFICE.

JOSEPH K. REESE, OF ROANOKE, VIRGINIA.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 586,714, dated July 20, 1897.

Application filed April 16, 1897. Serial No. 632,393. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH K. REESE, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented certain new and useful Improvements in Triple-Feed Lubricators for Steam-Engines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to lubricators of that type wherein the oil contained within the oil-reservoir is displaced by the water of condensation of steam entering therein and caused to flow through the oil-supply passage leading to the parts to be lubricated.

The object of my invention is to provide a triple-feed lubricator for steam-engines having connection with and adapted to lubricate the two cylinders on opposite sides of the engine and the movable parts inclosed within the pump-cylinder of the air-brake mechanism.

In carrying out these objects my invention consists in certain novel details of construction, combinations, and arrangements of parts hereinafter more fully described, and specifically set forth in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation view of an oiler constructed in accordance with my invention. Fig. 2 is a top or plan view of the same. Fig. 3 is a longitudinal section taken through the center of the valve-casing and oil-reservoir, showing the construction of the parts thereof. Fig. 4 is a central vertical sectional view of the oil-reservoir, taken on a line at right angles to the section shown in Fig. 3.

Referring to the drawings, the numeral 1 designates the valve-case of a lubricator which is adapted to be secured within the cab or adjacent the cab of a locomotive. This case is constructed of two sections 2 3, fitted together and connected by bolts 4. Said sections are provided at the center with a longitudinal opening 5, which constitutes an inspection or peep-sight opening, whereby the feed of the oil through the sight-glasses may be readily inspected, as will be hereinafter described.

The numeral 6 designates the oil-reservoir, to which a steam-dome 7 is connected, said dome being provided with a threaded nipple

8, having connection with the steam-supply pipe. The oil-reservoir is provided at the top with a division-wall 9, extending horizontally below the opening at the top thereof and nearly closing the said opening and provided with an extension 10, projecting parallel with one side wall of the reservoir and forming a port or passage 11 for access of condensed steam into the body of the reservoir. The reservoir is also provided with a second division-wall 12, extending from the bottom of the said first division-wall immediately below the top opening of the reservoir and thence extending parallel with the side wall of the case opposite the division 10 and forming a port or passage 13 for the passage of live steam. A short tube 14 screws into the horizontal part of the division-wall 9 and is in line with the opening into the port or passage 13, while the upper end of said tube terminates a little above the center of the steam-dome.

An oil-eduction tube 15 extends up from the bottom of the oil-reservoir to near the top thereof and is adapted to carry off the oil displaced by the water of condensation, which flows out into the oil-supply pipe 16, leading to the valve-casing 1, a controlling-cock case 17 and cock 18 being connected with and interposed between the said oil-tube and oil-supply pipe to control the passage of oil there-through. The steam port or passage 13 is in communication with the steam-supply pipe 19, leading to the valve-case, the passage of steam therethrough being regulated by a case 20, having a cock 21 connecting the reservoir and said steam-supply pipe.

It will be understood that in operation when the steam-dome is full of steam a portion of the steam will pass through the short tube 14 and the steam port or passage 13 and steam-supply pipe, and the condensed steam will also pass through the port or passage 11, formed by the division-walls 9 10, into the oil-reservoir, the water of condensation serving to displace the oil, which will overflow into the oil-eduction tube and out from the same into the oil-supply pipe.

The oil-reservoir is provided with an opening 22 therein for filling the same with oil and is also provided with a gage-glass 23, whereby the amount of oil remaining in the

reservoir may be readily ascertained whenever desired.

The valve-case 1 is provided with a steam port or passage and an oil-supply passage 5 25, the steam-passage extending vertically through one end of the valve-case and thence horizontally across the top of the case, while the oil-passage extends horizontally along the bottom of the case and at its terminus communicates with a waste outlet or passage 26, 10 controlled by a plug-valve 27. The end of the steam-supply pipe 19 is connected with a screw-plug 28 by a union or screw collar 29, said plug having an opening therethrough 15 in communication with the said steam port or passage in the valve-case, while the oil-supply pipe 16 is similarly connected with a screw-plug 30 by a screw collar or union 31, said plug having a passage or opening in communication with the oil-supply passage. 20

The sight-glasses or feed-tubes 32 33 34 are contained within the valve-case and exposed at the longitudinal opening 5 therein. The lower ends of these feed-tubes are seated in 25 sockets in screw-plugs 35 and confined within the case at the top and bottom of the said opening by screw-collars 36. The screw-plugs are connected with the valve-case at the bottom thereof and project through the 30 oil port or passage therein, being provided with circumferential grooves 37 to permit the oil to pass freely around them and feed-openings 38, leading to oil-passages 39 in said plugs, the said passages being controlled by valves 35 40. Nipples 41 are screwed into the said plugs at the upper end of the oil-passage therein and project into the feed-tube and are adapted to permit a small quantity only of the oil to pass into the tube. The steam port or passage 40 in the valve-casing is also in communication with the feed-tubes at the upper end thereof by means of passages 42, said passages being controlled by valves 43. In operation the steam passing through said port or passage 45 enters into the feed-tubes and condenses therein until the water of condensation completely fills the said tubes, when condensation ceases. The oil passing through the oil-supply passage in the base of the valve-chamber 50 enters into the passage 38 of the screw-plugs 35 and passes out through the nipples 41 and is fed up drop by drop through the sight-glasses and out into the steam-supply passage 24. In the present instance the valve-case has pipe connections 44 45 46, adapted to 55 extend to and be respectively connected with

the two steam-cylinders of the engine and the air-brake cylinder for supplying lubricant thereto to lubricate the movable parts thereof.

My invention provides a simple and effective construction of triple-feed lubricators, by means of which the two steam-cylinders and the air-brake cylinders of an engine may be quickly and efficiently lubricated. 60

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is— 65

1. In triple-feed lubricators for steam-engines, the combination of an oil-reservoir having a steam-dome, an oil-eduction tube 70 and two independent ports or passages for steam, one leading to the interior of the reservoir and the other to the exterior thereof, a valve-case provided with a longitudinal opening and steam and oil ports or passages 75 leading to pipes having connection with the two steam-cylinders and the air-brake cylinder of a locomotive, three feed-tubes within the valve-case and exposed at the said opening, and steam and oil supply pipes connecting 80 between the oil-reservoir and valve-case, substantially as described.

2. In triple lubricators for steam-engines, the combination of an oil-reservoir having a steam-dome, and two independent ports or 85 passages for steam, one leading to the interior of the reservoir and the other to the exterior thereof, a tube 14 in communication with the latter port or passage and extending up into the steam-dome, a valve-case consisting of 90 two separable sections provided with a longitudinal opening, a steam-passage extending from the bottom to the top thereof and thence longitudinally above said opening, an oil-passage in the bottom of the case below said 95 opening, three sight-feed tubes within the valve-case and exposed at the said opening, said tubes connecting the oil and steam passages and provided at the lower ends thereof with feed-nipples, valves controlling the supply of oil thereto, and supply-pipes connecting 100 between the oil-reservoir and the steam and oil supply passages of the valve-case, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses. 10

JOSEPH K. REESE.

Witnesses:

W. H. TRENT,

W. W. GILESPIE.