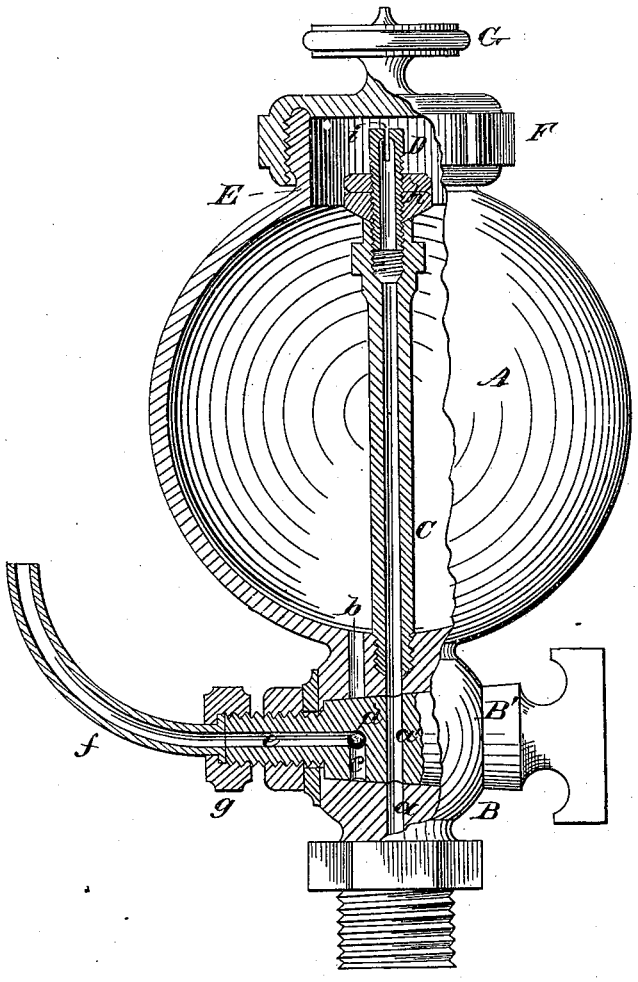
J. W. REED.
Lubricator.

No. 199,224. Patented Jan. 15, 1878.



WITNESSES:

Henry N. Miller

J. H. Scarborough.

INVENTOR:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH W. REED, OF KALAMAZOO, MICHIGAN.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **199,224**, dated January 15, 1878; application filed November 2, 1877.

To all whom it may concern:

Be it known that I, JOSEPH W. REED, of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented a new and Improved Lubricator, of which the following is a specification:

The invention will first be described in connection with the drawing, and then pointed out in claim.

In the drawing, A is an oil-reservoir, which, in the present case, is a hollow sphere, which is connected with the stop-cock B, having the passage *a* in its body and an opening, *a'*, in the plug, which coincides with the passage in the body. It also has a passage, *b*, which extends from the plug B' to the inner surface of the reservoir.

Two passages, *c d*, are made in the plug at right angles to each other, and in line with the passage *b*, so that the plug may be turned so as to bring either of them opposite the said passage. The passage *c* is parallel with the passage *a'*. A passage, *e*, communicates with the passages *c d*, and with a curved pipe, *f*, that is connected with the smaller end of the plug B' by a coupling, *g*.

A tube, C, is screwed into the passage *a*, and extends upward to the upper portion of the oil-reservoir, and is threaded internally to receive the nozzle D, which is prevented from becoming accidentally loosened by jam-nuts *h*. This nozzle has at its upper end a thin transverse slot, *i*, which is cut sufficiently deep to permit steam to enter the oil-reservoir through the top of the slot, and to allow of the escape of oil through the lower portion of the slot to the tube C, as the water resulting from the condensation of the steam causes the oil to rise in the reservoir.

The mouth E of the oil-reservoir is provided with a screw-cap, F, having a soft-metal lining, which is forced down upon the seat formed around the mouth by turning down the cap by means of a wrench, the periphery of the cap being provided with lugs to receive the wrench.

The cap is provided with a milled hand-wheel, G, for convenience in handling.

The lower end of the stop-cock is threaded and screwed into the steam-chest or steam-pipe of an engine.

The reservoir is filled with oil, and the passage *a'* in the plug is arranged to coincide with the passage *a* in the stop-cock body, and the passage *c* is arranged to point downward. Steam ascends through the stop-cock B and tube C, and as it condenses in the oil-reservoir it displaces the oil, which flows over through the slot *i* into the tube C, which, together with the stop-cock B, conducts it downward into the steam-chest or steam-pipe.

When the reservoir is to be filled, the water is removed by turning the plug B through a quarter of a revolution, so as to bring the passage *d* into communication with the passage *b*, when the passage *a* will be closed, preventing the escape of steam to the oil-reservoir, and the water will run out through the passages *b d e* and tube *f*.

When it is desired to blow the dirt from the lubricator, the plug is turned through a half-revolution, bringing the passages *b c* into communication with each other, and at the same time bringing the passage *a'* in the plug into line with the passage *a* in the body, so that steam may enter the reservoir through the pipe C, and escape through the passages *b c e* and pipe *f*.

This device continuously and perfectly lubricates the cylinder of the engine.

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

A lubricator having tube with adjustable slotted nozzle at upper end, and a reservoir mounted upon a stop-cock, the latter provided with passages, all substantially as shown and described.

JOSEPH WARREN REED.

Witnesses:

MARTIN V. OSBORN,

EDWIN W. DE YOE.