E. McCOY.

STEAM-CYLINDER LUBRICATOR.

No. 173,032. Patented Feb. 1, 1876.

Fig. 1.

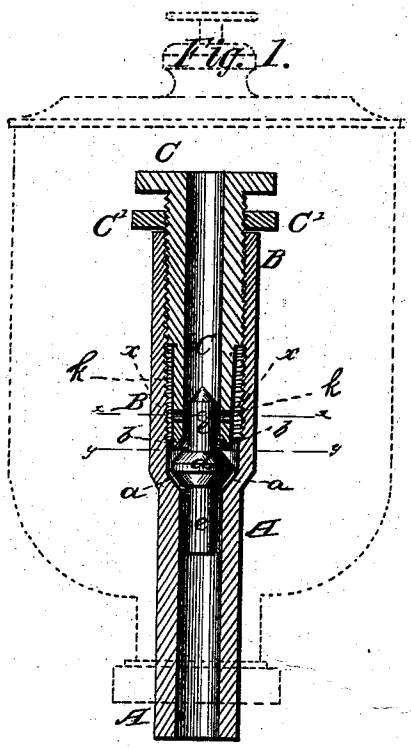


Fig. 2.

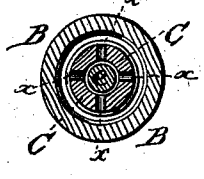
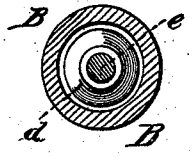


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ELIJAH McCOY, OF IONIA, MICHIGAN, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM J. STIFF, OF SAME PLACE.

IMPROVEMENT IN STEAM-CYLINDER LUBRICATORS.

Specification forming part of Letters Patent No. **173,032**, dated February 1, 1876; application filed December 10, 1875.

To all whom it may concern:

Be it known that I, ELIJAH McCOY, of Ionia, in the county of Ionia and State of Michigan, have invented certain new and useful Improvements in Steam-Cylinder Lubricators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to that class of steam-cylinder lubricators in which the steam is allowed to pass up through a central tube in the oil-cup, and the oil pass downward through the same tube; and the nature of my invention consists in the construction and arrangement of said central tube with a regulator at its upper end, and an interior valve, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a central vertical section, and Fig. 2 is a cross-section on the line *y y*, Fig. 1; and Fig. 3 is a cross-section on line *x x*, Fig. 1.

A represents the central tube within the usual oil-cup, which tube communicates at its lower end with the interior of the steam-chest, in the ordinary manner. The upper portion of the tube A is enlarged, as shown at B, forming an interior valve-seat, *a*. In the upper end of said enlarged portion B is screwed a regulating-tube, C, having a jam-nut, *c'*, upon it to hold it firmly at any point desired, so as to make the central tube higher or lower, as desired. The lower portion of this tube C is reduced in diameter, so that when it is inserted an oil-chamber, *k*, is formed between it and the tube B. The lower end of the regulating-tube C forms a valve-seat, *b*, and in the sides of said tube are small perforations *x x*, as shown.

It will be understood that the central tube A has no lateral openings, so that when it is placed within the usual oil-cup no oil can reach the valve excepting that which is passed in at the top of the regulating-tube, and through the perforations in the bottom of said regulating-tube, by the displacement of oil corresponding to the amount of steam injected.

d represents a double valve, provided with a valve-stem, *e*, projecting on both sides thereof. This valve is placed in the space between the valve-seats *a* and *b*. Its normal position is down on the seat *a*, preventing any oil from passing downward; but when the steam passes up through the tube A it raises the valve *d*, which then makes a joint at *b*, at the bottom of the regulator-tube C, allowing the steam to pass up into the chamber B, around the tube C, and through the perforations *x* into said tube, and escape into the cup.

I am aware that an oil-cup having a central tube capable of being extended and contracted is not new, and I am further aware that an oil-reservoir provided with a screw-plug which is hollow only at its bottom, and perforated at that point to admit the oil, is not new, and hence I do not claim such as being, broadly, my invention; but with such latter inventions known to me the oil is admitted just above the valve, and as the steam condenses, and the water collects in the bottom of the reservoir, and rises to the perforations, the oil is stopped, and water instead will pass down.

With my invention the regulating-tube C is hollow to its top, and oil is fed in through the top of this tube directly onto the valve, and the difficulty above described could not occur.

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

The combination of the chamber B, the regulating-tube C, open from top to bottom, and having perforations *x*, and the valve *d*, with stem *e* and valve-seats *a b*, all constructed substantially as and for the purposes herein described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ELIJAH McCOY.

Witnesses:

C. OSCAR THOMPSON,

S. W. BARKHAM.