(No Model.)

J. W. REED.

LUBRICATOR.

No. 295,198. Patented Mar. 18, 1884.

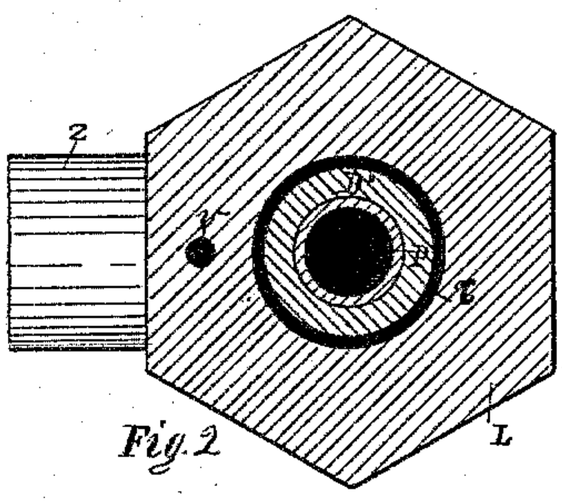

Fig. 2

Fig. 1

Fig. 4

Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH W. REED, OF KALAMAZOO, MICHIGAN.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 295,198, dated March 18, 1884.

Application filed December 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. REED, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Lubricator, of which the following is a specification.

My invention has for its object certain improvements in a lubricator patented to me January 15, 1878, No. 199,224. A further object consists in an improved gage to the oil-reservoir.

In the accompanying drawings, forming a part of this specification, Figure 1 is a vertical section of my improved lubricator, certain parts being left whole; Fig. 2, a horizontal section on line 2 2 in Fig. 1; Fig. 3, a horizontal section on line 1 1 in Fig. 1; and Fig. 4 is a detached part of Fig. 1 in perspective.

The stop-cock D in this present construction is provided with a stop, *h t*, well understood, adapted for closing the passage *c c* of said stop-cock D. A tube-support, R R, with base L, is detachably coupled with the upper threaded portion of the stop-cock D. The upper end, D′, of the stop-cock above the threaded portion is made smaller, so as to leave a passage, *r*, Figs. 1 and 2, surrounding it. Passages *f f* connect the passage *r* with the stop-cock passage *c c*. The support R to the oil-tube *a a* has a central chamber, *x x*. Into the upper end of said chamber the lower end of the adjustable oil-tube *a a* is extended. The oil-tube *a* is held at the desired height by jam-nuts *c″ c′*, and has slots *r′* in the top, as in my former invention above referred to. The lower end of the adjustable oil-tube *a* is provided with series of perforations, *i*, around its periphery and entering its hollow center.

P is a stationary oil-tube, just large enough to loosely receive in its upper end the lower end of the adjustable oil-tube *a*, and small enough to leave a passage around said tube P between it and the wall of the chamber *x*.

The base L of the tube-support R is provided with an integral extension, Z, in which is located a stop, *e*, for opening and closing the water-passage *v v*. The oil-reservoir B is detachably mounted upon a threaded portion of the base L of support R, and surrounds said support, Fig. 1. The screw-cap at the top of the reservoir B, in addition to the large wrench-seat *e′* has a small wrench-seat, C, which may be used with the application of a small wrench in cases of emergency—such as the loss of the large wrench, and the like.

The reservoir B has a partition, A, to assist in supporting the oil, the larger bulk of which is above it, to keep the oil warm in cold weather and to strengthen the reservoir as well. This partition has a central opening, larger than the tube-support R, located through it. By removing the screw-cap the oil is placed in the reservoir B, which oil settles to the bottom. By opening the stop *t* the steam rises up the passages *c*, *f*, and *r*, and into the chamber *x*, entirely surrounding the oil-tubes and the end D′ of the stop-cock D. The steam enters holes *i* of the adjustable oil-tube. The amount of steam entering said tube *a* is controlled by the number of holes *i* exposed in chamber *x*. The steam goes up the tube *a* and into the reservoir, where it condenses and settles to the bottom, displacing oil in proportion to its volume after becoming condensed. The oil which is displaced by the condensed steam enters slot *r′* of the tube *a* and runs down to the lower closed end of the tube P, filling up said tube until the oil runs out of the hole *y* in said tube into the passage *r r*, and thence through passage *c c* into the steam-chest (not here shown) with which the stop-cock is connected. When the oil has been all displaced by a like volume of condensed steam, the latter may be drawn off by opening the stop *e*, and allowing it to run out through the passage *v v*.

The glass gage *n* is connected with one side of the oil-reservoir B by means of lugs *b b* screwed into the wall, Figs. 1 and 2. The upper lug extends inward and downward, as at 7, to prevent an undue pressure of steam in the glass gage *n* should the upper surface of the oil come below said lug at any time. The gage *n* is shielded from the weather and any danger of being broken by a casing, T, surrounding the same. This case has a vertically sliding door, F, located movably in grooves in the side walls, I, of the case T. By raising the door the gage *n* can be examined. The rear wall of the case is formed to fit the contour of the reservoir B, which in this case is round, Fig. 3.

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

1. The combination, with a stop-cock and an oil-tube support having the integral base detachably connected with said stop-cock, of an oil-reservoir surrounding the tube-support and detachably connected with the base thereof, all substantially as set forth.

2. The combination, with an oil-reservoir having a horizontal partition, the latter adapted to admit the location of a vertical oil-tube through it, and the passage of the oil and condensed steam as well, of a stop-cock and an oil-tube, substantially as described.

3. The combination, with a stop-cock, vertical oil-tube, and an oil-reservoir, of the tube-support having the integral base, said base provided with the integral side extension for the location and reception of the water-passage and cock, substantially as specified and shown.

4. The combination, with a stop-cock and an oil-reservoir, of an oil-tube support having the central chamber and an oil-tube located therein, substantially as specified.

5. A lubricator consisting of an oil-reservoir, a stop-cock provided with the upper small end, passages leading from the periphery of said small end into the central passage of the stop-cock, an oil-tube support having the central chamber, and oil and water passages shown, a stationary oil-tube having the perforations through the wall of its lower end, and the adjustable oil-tube having the perforations to receive the steam, all substantially as set forth.

6. The combination, with an oil-reservoir, of a gage having its upper passage which leads from the reservoir into the gage extended inward and downward for the object stated, substantially as set forth.

7. The combination, with the oil-reservoir and the gage-casing having the sliding door, of the gage provided with the screw-lugs securing the gage and the casing to the reservoir by passing through the wall of said casing, substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH W. REED.

Witnesses:
JOHN W. ROWLEY,
M. B. WEST.