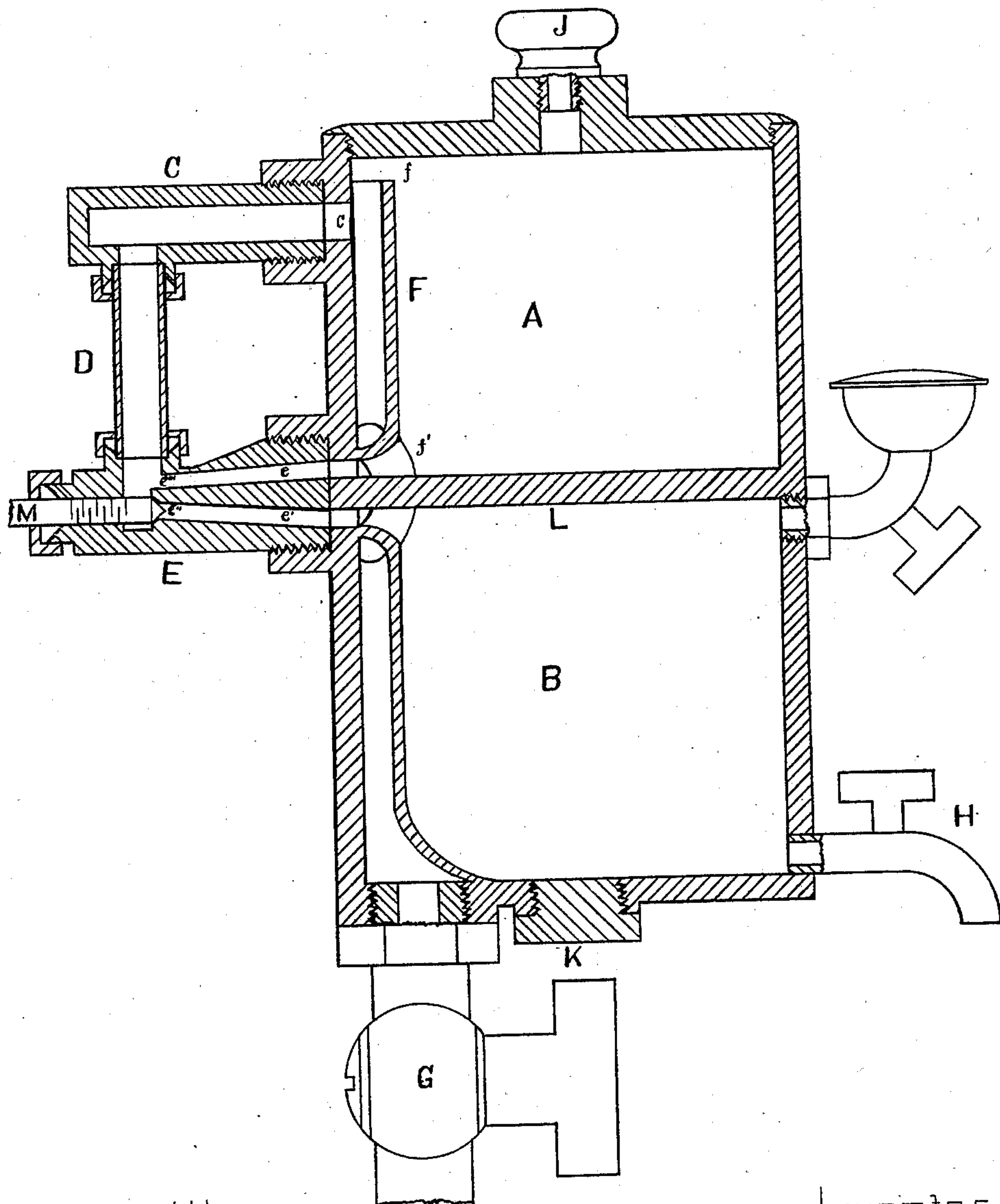


(No Model.)

W. L. PARKER.
STEAM CYLINDER LUBRICATOR.

No. 294,068.

Patented Feb. 26, 1884.



Witnesses

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WASHINGTON L. PARKER, OF CHICAGO, ILLINOIS.

STEAM-CYLINDER LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 291,068, dated February 26, 1884.

Application filed April 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, WASHINGTON LE ROY PARKER, of Chicago, Illinois, have invented a new and useful Improvement in Steam-Cylinder Lubricators, which has never before been known or used in this or any other country, and of which the following is a sufficient description.

My invention relates to the class known as "visible-feed lubricators," in which the lubricant is seen to pass drop by drop through a transparent tube or chamber; and the immediate objects of my invention are to provide a lubricator which may have the condensing and oil chambers combined in one continuous cylinder or cup; which shall have but one connection with the parts to be lubricated; which shall have the connection or oil-feeding pipe issuing directly from the base in such a manner that the lubricator may be attached directly to the steam-cylinder at the point at which the lubricators in common use are usually attached; which shall feed the lubricant by carrying it drop by drop by and along with a positive current of water of condensation through a transparent tube or chamber, and thence into the parts to be lubricated. These objects I attain by a mechanism which is believed to be sufficiently set forth in the following description, reference being first had to the accompanying drawing, which is a section taken through such lubricator at its center.

A is a condensing-chamber separated from the oil-chamber B by the diaphragm L.

G is a pipe issuing from a point in or near the base and attaching the lubricator to the parts to be lubricated.

F is a tube within the cylinder of the lubricator, connected with and leading from the pipe G through the oil-chamber B, thence through diaphragm L, thence through to the top of the condensing-chamber A, into which it opens at *f*, and also connecting with the plug C and avoiding the entrances of the tubes *e* and *e'*.

E is a plug screwed or otherwise attached to the side of the lubricator-cylinder in the line of intersection of the diaphragm L in such a manner that its tubes *e* and *e'* will open, respectively, into the condensing-chamber A and oil-chamber B, thus connecting the two

chambers. The tubes *e* and *e'* may be so arranged in the plug E that the ends *e'''* and *e''* will be as represented, the end *e''* below the end *e'''*, in which case what is known as a "water-trap" would be formed.

M is a valve in the end of plug E, which closes the tube *e'*.

D is a transparent tube or chamber, which connects the plug E with the plug C.

C is a plug attached to the side of the cylinder above the plug E, but below the upper extremity of the pipe F, and which connects the tube D with the pipe F at the point *c*.

H is a drain-cock for chamber B.

I is an oil-cup for filling.

J is a plug opening into chamber A. The chambers A and B may be made continuous, or they may be screwed together, if desired. The tube or pipe F may be cast with the cylinder, or it may be a separate tube proceeding from the pipe G to the top of the chamber A, as described, and having a branch tube to make its connection with the plug C, in which case the tube F and its branch may be of any desirable size and proportion and relation.

The use and value of my invention will be shown by the following: The lubricator being first attached to the parts to be lubricated by the pipe G, the oil-chamber B filled with oil, and the condensing-chamber with water, the cocks opened, the water will pass from the condensing-chamber A through the tube *e* into the transparent tube D. The valve M being then opened, the connection with parts to be lubricated being also opened, the water will pass slowly from the tube D through the tube *e'* into the oil-chamber B, and the oil so displaced will pass up through the same tube *e'* into the tube D. The water of condensation being formed much faster than thus used, by feeding it into the oil-chamber B will create and maintain a constant and very considerable current or flow of water from the base of the condensing-chamber A through tubes *e* and D, and thence into F. The oil displaced as described into the tube D will be carried by this current into the parts to be lubricated.

Heretofore many visible-feed lubricators have been devised in which the lubricant is seen to pass drop by drop through a transparent chamber; and lubricators have also

been devised that carry the lubricant by a current of condensed steam.

The novelty of my invention may be seen in this, that the oil and condensing chambers 5 may be made in one continuous piece; that the lubricator may be attached by a pipe issuing from the base to the steam-cylinder at the point at which such lubricators as are now commonly employed are attached; that the 10 transparent tube or chamber through which the lubricant passes may be disposed at any desirable angle, since the lubricant is carried through it by a current, and thus the whole may be made more compact; that a continu- 15 ous current of water through the feed-connections keeps the transparent tube and all other parts of the feed-connections free from any deposits, or from clogging oil, likely to retard the action; that the lubricant is carried 20 by a positive feeding current of water of condensation through a transparent tube or chamber, and thence to the parts to be lubricated.

Having thus shown the construction, utility, and novelty of my device, what I claim as my 25 invention, and desire to secure by Letters Patent, is—

1. In a visible-feed lubricator, the plug E, having the tubes *e* and *e'*, so arranged as to form a water-trap, as and for the purpose set forth.

30 2. In a visible-feed lubricator, the plug E, having the tubes *e* and *e'*, so arranged that when it is attached to the cylinder at the line of intersection of the diaphragm a connection of the chambers A and B will be effected, 35 as and for the purpose set forth.

3. In a visible-feed lubricator, the combination of the plug E, having the tubes *e* and *e'*, arranged as described, and the valve M, with the transparent tube or chamber D, plug C, 40 and the pipe F, as and for the purpose set forth.

4. In a visible-feed lubricator, the pipe G, connected with the feed-pipe F, and issuing from the base of the cylinder and attaching 45 directly to the parts to be lubricated, as de-

scribed above, as and for the purpose set forth.

5. In a visible-feed lubricator, the combination of condensing-chamber A and oil-chamber B, connected by a single passage through 50 the plug E by the tubes *e* and *e''*, with the plug E and transparent tube or chamber D, as and for the purpose set forth.

6. In a visible-feed lubricator, the combination of chambers A and B, separated by dia- 55 phragm L, with plug E, having tubes *e* and *e'*, arranged as described, and valve M, with transparent tube D, plug C, pipes F and G, as and for the purpose described.

7. The method of feeding oil in a lubricator, 60 which consists in carrying it drop by drop from the oil-chamber in and by a current of moving water to the parts to be lubricated.

8. In a visible-feed lubricator, the transparent tube or chamber D, connected at its base 65 by a double connection with the base of the condensing-chamber and the top of the oil-reservoir, as described.

9. The combination of the transparent tube or chamber D with the condensing-chamber 70 A, being connected therewith, as described, and for the purpose set forth.

10. In a lubricator, the method of feeding oil to the parts to be lubricated, which consists in discharging it in drops from the oil- 75 chamber by means of hydrostatic pressure and then carrying it by and in a current of water to the parts to be lubricated.

11. In a lubricator, the method of feeding oil to the parts to be lubricated, which con- 80 sists in discharging it in drops from the oil-chamber by means of hydrostatic pressure and then carrying it to the parts to be lubricated by means of its inferior specific gravity and the action of a moving current of water.

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Witnesses:

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