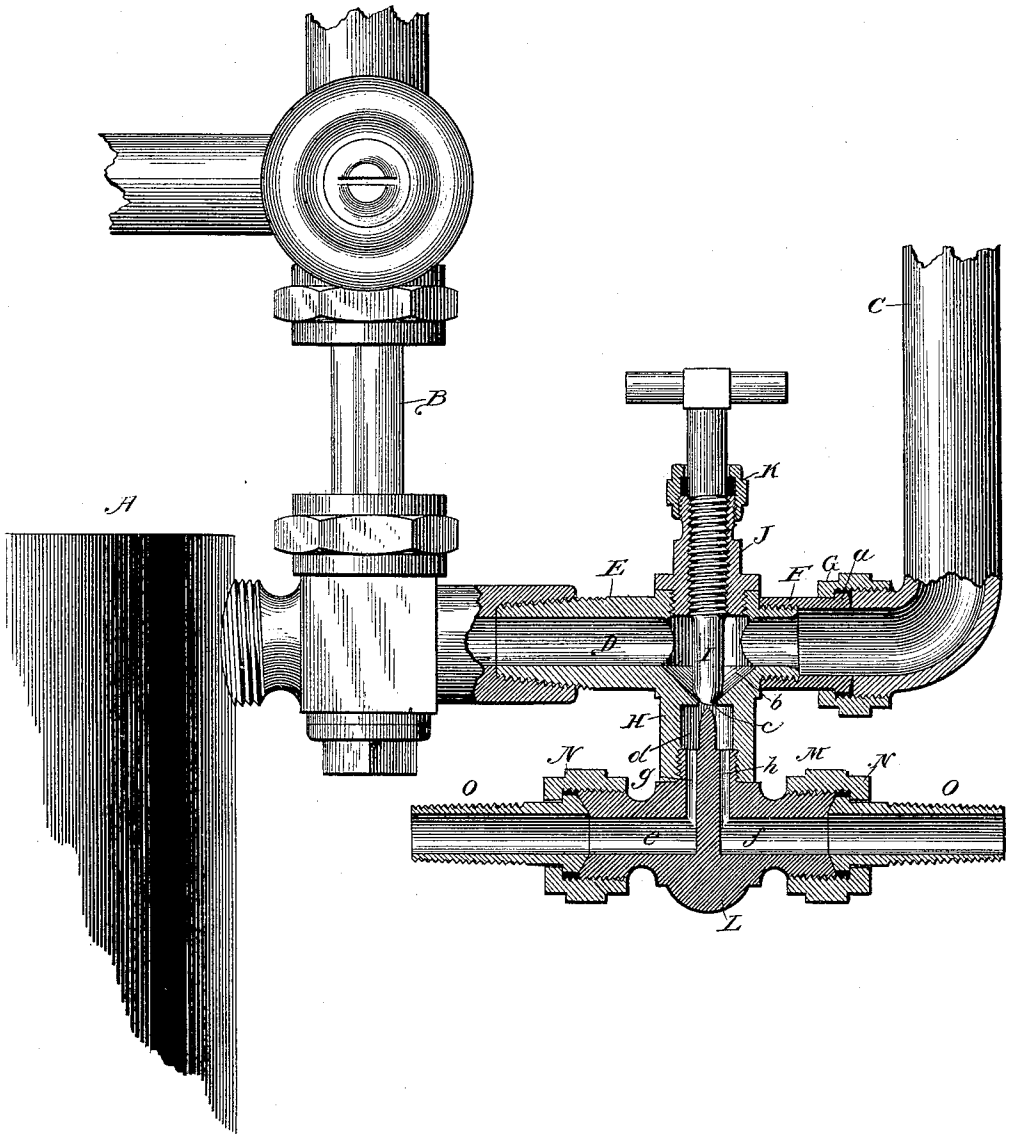
(No Model.)

J. C. THAYER.

ATTACHMENT FOR LUBRICATORS.

No. 320,312. Patented June 16, 1885.



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ATTACHMENT FOR LUBRICATORS.

SPECIFICATION forming part of Letters Patent No. 320,312, dated June 16, 1885.

Application filed May 14, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. THAYER, a citizen of the United States, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Attachments for Lubricators, of which the following is a specification.

This invention relates to improvements in attachments for lubricators for dividing a stream of oil in its passage from a lubricator, so that a uniform feed from a single lubricator may be supplied to a double engine or to any two substantially distinct devices which it is desired to lubricate from a single source of supply.

The object of this invention is to effect a uniform division of a stream of oil in its passage from a lubricator to separate passages connecting with the device to be lubricated, and to attain this object by a very simple and effective construction convenient of access for removing obstructions and at all times making a perfect division of the oil in its flow to said passages. I attain these objects by devices illustrated in the accompanying drawing, in which the division attachment is shown in longitudinal section and secured in its operative position to a lubricator.

This attachment may be secured to any of the present constructions of lubricators which are adapted to feed against opposing pressures of steam, but is shown in connection with a lubricator, A, in which a vertical sight feed-tube is employed and in which the oil is displaced by condensed steam, the steam being supplied to a lubricator from a boiler by means of a pipe, C, which is connected with the lubricator by an open passage, D, through the attachment. Passage D is formed in an approximately +-shaped casting, E, the end of which next the lubricator is externally screw-threaded therein and its opposite end provided with a screw-threaded portion on which is a nipple, F, upset at its outer end, as shown at *a*, to form a bearing for a collar, G, securing the attachment to the steam-supply pipe C before mentioned.

In the casting E, and in the depending arm H thereof, is formed an enlarged chamber, *b*, which has a concave bottom provided with a central aperture, *c*, communicating with an enlarged chamber, *d*, formed in the arm H, which aperture or passage *c* is closed or opened to any extent by means of a valve, I, the stem of which is screw-threaded to work in the upper arm, J, of the casting. The arm J is removably secured to the casting *e* for the purposes of access to the passages before described for removing obstructions and for convenience in casting, and has secured on its upper end a cap, K, in which is a suitable packing for forming a tight joint with the valve-stem.

Screwed into the depending arm H is a casting, L, provided along its length with passages *e f*, separated by a plate, M, preferably formed with, but may be detachable from, the casting L, which said passages, respectively, communicate with the chamber *d* by means of short vertical passages *g h* formed in the casting L and on each side of the division-plate. At its upper end the division-plate has a knife-edge which extends diametrically on a line with the passage *c*, and in quite close proximity thereto, so that oil passing through the opening or passage *c* will be divided in equal parts, one of which will descend the passage G into the passage *e*, and the other will descend the passage H into the passage F, and thence to the devices to be lubricated.

As a convenient means for connecting the passages *e*, each with one side of a double engine, the extremities of the casting L are screw-threaded to receive collars N N, flanged to embrace the corresponding shoulder on nipples O O, which may be screw-threaded, as shown, to connect with pipes leading to the engines.

The casting L is preferably detachable from the depending arm H, not only for convenience of casting, but in order that it may be removed for extracting obstructions or cleaning the same when necessary.

It may here be stated that while I have shown couplings as a convenience for connecting the several portions of the attachment with pipes and passages, they do not form a part of my invention, which, broadly, is a division-plate in a passage intermediate the lubricator and two-way passages; nor is my invention to be limited to the employment of a valve in connection with such a division-plate, although such a valve is desirable.

With the parts in the position shown—that

is to say, with the valve closed—as soon as the lubricator begins its operation and oil commences to flow from the lubricator into the passage D, the valve is raised a suitable distance to permit the desired amount of oil entering the chamber D, which oil in passing through the opening C comes in contact with the knife-edge of the division-plate and is equally divided, one part flowing to one side of the engine and the other part to the other side of the engine through the passages before described. It will, however, be seen that in the devices used in connection with a lubricator in which the flow of oil therethrough may be regulated, the valve I may be dispensed with, for there will be no necessity of this additional means for determining the amount of oil to be supplied to the engine.

The convex bottom of the chamber *b* may be omitted; but in practice I prefer to use such a bottom in order that the oil may equally concentrate over the opening C, so as to promote a more effective division thereof, and especially when the feed of oil is quite slow.

By such an attachment I am enabled to accomplish with a single lubricator, what has before required two; and it would be no departure from my invention to employ a division-plate which will equally divide the stream of oil into three or more equal portions and supply as many different passages.

The connection of the attachment in the manner shown renders it ready of access without making any disconnection between the lubricator and the steam-supply pipe thereof, for it will be observed that by the removal of the collars N casting L can be entirely removed from the nipples O and from the arm H, and obstructions removed or the casting be renewed when for any cause defective.

The removing of the casting, and the after removal of the arm J, will give all necessary access to the several passages in the attachment.

While the form of the several castings shown is also preferred, it will be no departure from my invention to materially modify this form and to change the direction of the passage therein.

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

1. In an attachment for lubricators, the combination, with the oil-passage thereof, of a division-plate provided with a knife-edge and extending across said passage, whereby the oil being fed may be divided into two or more equal divisions or streams, substantially as described.

2. In an attachment for lubricators, the oil-passage thereof and a valve for opening and closing said passage, in combination with a division-plate provided with a knife-edge, substantially as described.

3. The passage D and a passage, *c*, in combination with the separate passages *g* and *h* and a division-plate between said passages provided with a knife-edge extending across the passage *c* and removable therefrom, substantially as described.

4. The casting E, provided with the passages D *c c*, in combination with the casting L, provided with two or more passages, and a division-plate removable from the casting E, substantially as described.

5. The passage D, provided with an enlarged chamber having a concave bottom, *b*, an opening *c*, and a valve, I, governing the flow of oil through the passage *c*, in combination with the division-plate and separate oil-passages extending down the sides thereof, substantially as described.

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