184. LUBRICATION,
Lubricators,
Sight feeds.

96

Draftsman.

J. J. COSTELLO, Jr.

LUBRICATOR.

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905,057.

Patented Nov. 24, 1908.

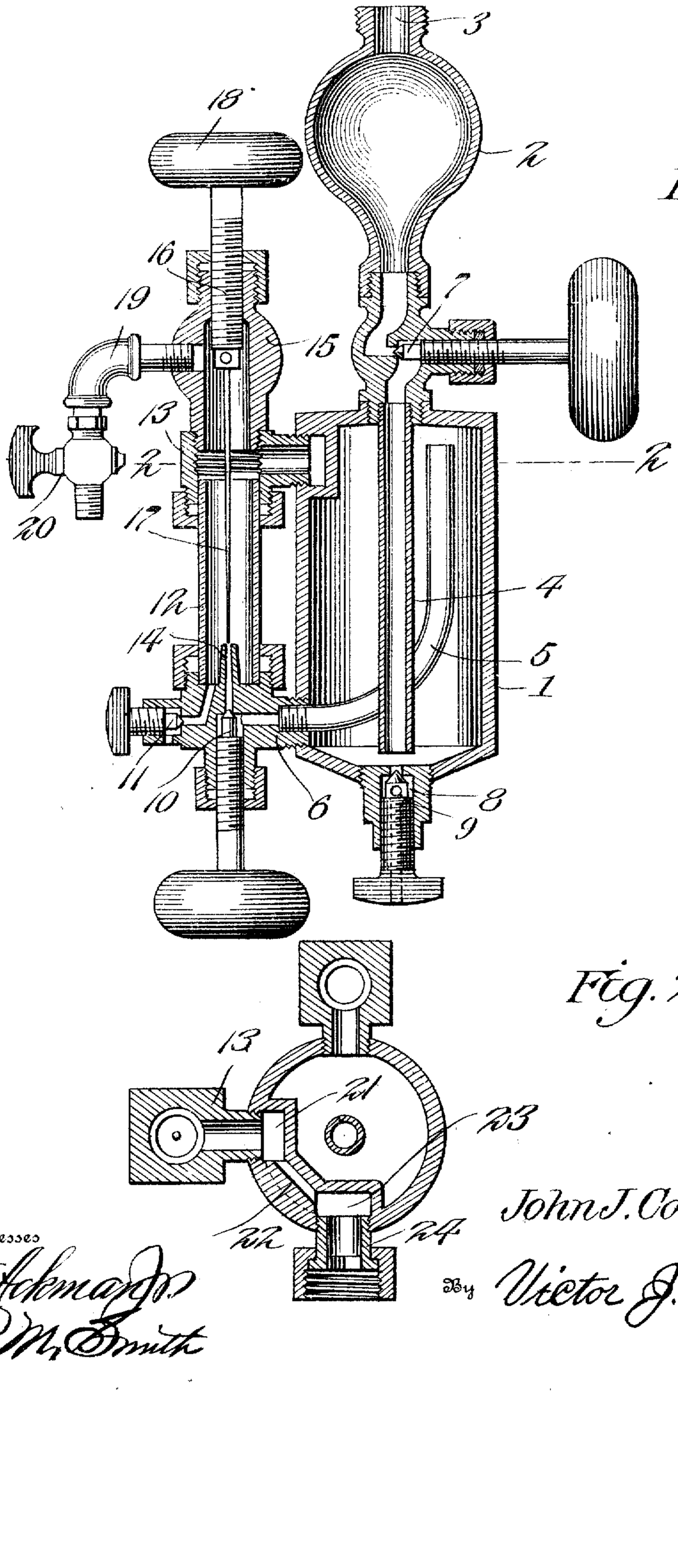

Fig. 1.

Fig. 2.

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UNITED STATES PATENT OFFICE.

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LUBRICATOR.

No. 905,057. Specification of Letters Patent. Patented Nov. 24, 1908.

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To all whom it may concern:

Be it known that I, JOHN J. COSTELLO, Jr., a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented new and useful Improvements in Lubricators, of which the following is a specification.

This invention relates to lubricators, the object of the invention being to provide a device applicable to the ordinary lubricator now in use which will overcome the objectionable feature of the oil, when in a cold and thick condition finding its way to the inner surface of the sight feed glass which results in smearing and soiling said glass and rendering the same in effect opaque so that the feeding of the oil can no longer be observed, and thus the engineer does not know whether the lubricator is working or not.

By means of the invention hereinafter described, the oil is caused to pass upward through the water contained in the sight feed glass and is prevented from coming in contact with the glass even when the oil is cold or thick, thus keeping the glass perfectly clean so that the feed of the oil may be readily observed at all times.

A further object of the invention is to provide means whereby the lubricator and the parts connected therewith as well as the contents thereof may be quickly heated so as to liquefy the oil and insure the proper feeding of the same to the point of delivery.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a vertical sectional view of a lubricator, showing the invention applied thereto. Fig. 2 is a horizontal cross section through the same taken on the line 2—2 of Fig. 1.

Referring to the drawings, 1 designates the body of the lubricator, 2 the condensation chamber provided with a steam inlet 3, 4 the condensation tube extending down within the body of the lubricator and 5 the oil pipe the receiving end of which is located well up towards the top of the lubricator so that the oil carried up within the lubricator by the water of condensation will pass downward through said tube pipe into the casing 6 of the oil supply needle valve.

7 designates the cut-off which controls a passage leading from the condenser to the condensation tube 4, and 8 designates the drain cock in the bottom of the lubricator which is provided with a hole 9 extending therefrom by means of which the contents of the lubricator may be drained off when necessary. 10 designates the oil regulating valve which has a threaded engagement with the casing 6, while 11 designates a drip valve for permitting the water contained in the sight feed glass to be drained off when necessary.

The sight feed glass 12 has its lower end connected with the casing 6 and its upper end connected to a tubular extension 13 which communicates with the upper portion of the lubricator as shown in Figs. 1 and 2. The oil delivered to the casing 6 by the pipe 5, passes the regulating valve 10 and then passes upward and escapes from a dropping tube 14 and in the ordinary construction of lubricators, the drops of oil then move rapidly upward through the water of condensation in the sight feed glass 12 and onward to the point of delivery.

In carrying out the present invention, I provide a tubular head 15 in which is mounted the screw-threaded shank 16 of a needle or conductor 17, the said shank being provided with an operating head or handle 18 whereby said needle or conductor may be adjusted. Connected to one side of the head 15 and communicating therewith is a blow-off connection 19 having a stop cock 20 controlling the passage therein. The conductor 17 is in the form of a long needle the lower end of which is normally located in close relation to the point of the dropping tube as seen in Fig. 1 so that as the drops of oil emerge from the dropping tube 14, they come in contact with the point of the needle or conductor and in their upward movement said drops cling or adhere to the needle and are thereby prevented from moving laterally and coming in contact with the sight feed glass. By means of the screw adjustment of the shank 16, the point of the needle may be set as far up or down as may be found expedient, and the said conductor or needle is also useful in cleaning out the passage leading from the regulating valve 10 to the upper end of the dropping tube 14. The oil after passing up the conductor passes through the connection 13 into a receiving space 21 partitioned off in the upper portion of the lubricator 1, the oil then passing

through a small port 22 into another space 23 approximately of the same size as the space 21, the oil being delivered from the space 23 through a connection 24 to another branch of the steam pipe, it being understood that one branch of the steam pipe communicates with the connection 24 and another branch with the steam inlet 3 of the condenser above described.

The conductor or needle 17 attracts the drops of oil as they emerge from the dropping tube, and said drops move upward along the conductor, finally escaping therefrom and passing through the connection 13 to the point of delivery.

In case the oil becomes dirty or clogged in the sight feed glass or in the upper portion of the lubricator, by opening the blow-off cock 20 the steam will pass in through the connection 24 and out through the connection 13 up through the head 15 and out through the blow-off connection thus carrying the dirty oil with it and leaving the remaining oil clean and heated. In this way the body of oil is heated without letting out the water of condensation in the bottom of the lubricator.

Having thus described the invention, what is claimed as new, is:—

1. In a lubricator comprising a sight feed glass and dropping tube, a conducting needle extending through the sight feed glass and having the point thereof arranged in close proximity to the dropping tube, a channeled head by which said needle is carried having a detachable connection with the lubricator, and a blow-off connection carried by said head.

2. In a lubricator comprising a sight feed glass and dropping tube, a channeled head having a detachable connection with the lubricator, a conducting needle carried by said head and adapted to pass through the sight feed glass with the point thereof in close proximity to the dropping tube, means for adjusting said needle, and a blow-off connection communicating with said head and having a stop cock, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN J. COSTELLO, Jr.

Witnesses:

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