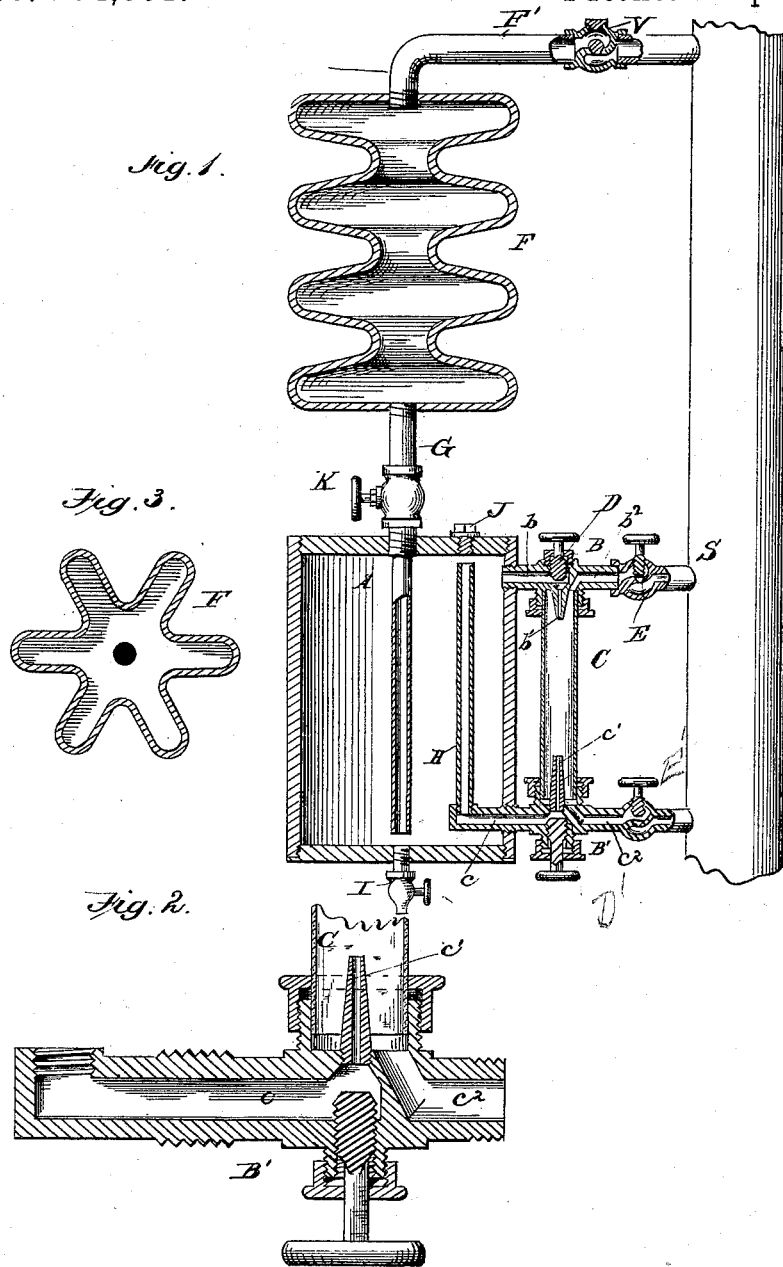


(No Model.)

C. VERNIAUD.
LUBRICATOR.

No. 264,001.

Patented Sept. 5, 1882.



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UNITED STATES PATENT OFFICE.

CLAUDIUS VERNIAUD, OF QUINCY, ILLINOIS.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 264,001, dated September 5, 1882.

Application filed February 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, CLAUDIUS VERNIAUD, of Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Lubricators for Steam Machinery; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical sectional view of my invention, showing its practical application to the steam-pipe of an engine. Fig. 2 is a sectional view of one of the fittings detached. Fig. 3 is a cross-sectional view of a condenser having longitudinal corrugations instead of lateral corrugations, as in the condenser shown in Fig. 1.

Similar letters of reference in the several figures denote the same parts.

This invention consists of an improved lubricator for steam machinery, constructed and operated as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, A represents the oil chamber or reservoir; B, a fitting secured to the upper part of the said chamber A, having a passage, *b*, leading into a vertical glass tube, C, and adapted to be opened and closed by means of a valve, D, and having another independent passage, *b'*, leading from the said tube C into a globe-valve, E, connected to the steam-pipe S, which leads to the part of the engine to be lubricated.

B' is another fitting, similar to the fitting B, connected to the lower part of the oil-chamber A, and having a pipe, H, connected to it within the oil-chamber, and extending up vertically within the chamber to a point at or above the passage *b* of the upper fitting, B, as shown. The fitting B' has passages *c*, *c'*, and *c''*, similar to the passages *b*, *b'*, and *b''* in the upper fitting, the passage *c* leading into the pipe H, the passage *c'* leading into the lower end of the glass tube C, and being controlled by the valve D, and the passage *c''* leading from the glass tube C into another globe-valve, E', connected to the pipe S. The connections between the fittings B B' and the oil-chamber A, the glass tube C, and the globe-valves E E' are all made air and water tight.

F represents the condenser, from the upper

end of which extends a pipe, F', leading into the steam-pipe S, and having a check-valve, V, arranged in it. From the lower end of said condenser leads a pipe, G, that passes down into the oil-chamber to within a short distance of the bottom thereof, as shown, being provided with a controlling-valve, K, between the oil-chamber and the condenser.

J represents a plug in the upper part of the oil-chamber, which can be removed for the filling of said chamber with oil, and I is a pet-cock, by which the contents of the oil-chamber can be drawn off when desired.

The oil-chamber being filled with oil and the valves D D' E E' being closed, the oiler may be operated as follows: Steam from the steam-pipe S enters the pipe F', passes the check-valve V therein, and enters the condenser F. The valve K is then opened more or less, so as to allow the water of condensation to pass to the bottom of the oil-chamber. The valve D may then be opened, so as to permit the oil to pass through the passages *b* *b'* into the glass tube C until the quantity of oil is admitted to the said glass tube sufficient for a charge. The valve D is then closed. The globe-valve E' or both the globe-valves E and E' are opened and the charge of oil is caused to pass into the steam-pipe S, to be thence conducted to the parts of the engine to lubricate it.

Instead of opening the valve D to charge the glass tube C, the valve D' may be opened, whereupon the oil will pass down the pipe H and through the passage *c* *c'* of the lower fitting, B', into the glass tube C, and then, upon the valve D' being again closed, the charge of oil in the glass tube C may be discharged into the steam-pipe by manipulation of the globe-valves E E', as before. Two ways of charging the glass tube C are thus provided, and if either one or the other set of passages from the oil-chamber should from any cause become stopped the other set would prove effective.

If it is desired to supply the oil continuously from the oil-chamber to the steam-pipe instead of in charges, as described, this object can be readily accomplished by leaving one or the other or both of the oil-valves D D', as well as one or both of the valves E E', open slightly, as will be readily understood.

In order to afford as great a condensing-surface as possible within comparatively small

compass, I preferably corrugate the condenser either longitudinally, as shown in Fig. 1, or laterally, as shown in Fig. 3.

The check-valve in the pipe F' is for the purpose of preventing the oil from being all sucked out of the oil-chamber when the engine is working with steam shut off, and is consequently producing a partial vacuum in pipe S. When steam is in the pipe S the check-valve opens and admits it into the condensing-chamber; but when the steam is cut off with the engine still working the partial vacuum formed in the pipe S causes the check-valve to close, and all communication with the oil-chamber is thereby closed.

I claim as my invention—

1. The combination of the oil-chamber, the condenser, and the pipe leading from the condenser into the oil-chamber with the charging-tube C, having the upper and lower fittings, each adapted to receive oil through an over-flow-passage within the oil-chamber and dis-

charge it into the charging-tube, and each also having an independent passage leading to the steam-pipe, and with valves for controlling the flow of oil into the opposite ends of the charging-tube, and valves for controlling the flow of oil through the independent passages to the steam-pipe, substantially as described.

2. The combination of the oil-chamber, the condenser, and the pipe leading therefrom to near the bottom of the oil-chamber with the upper and lower fittings, B B', their passages and valves, the vertical pipe connected to the lower fitting within the oil-chamber, the glass charging-tube, and the globe-valves connected to the fittings and to the steam-pipe, substantially as described.

CLAUDIUS VERNIAUD.

Witnesses:

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