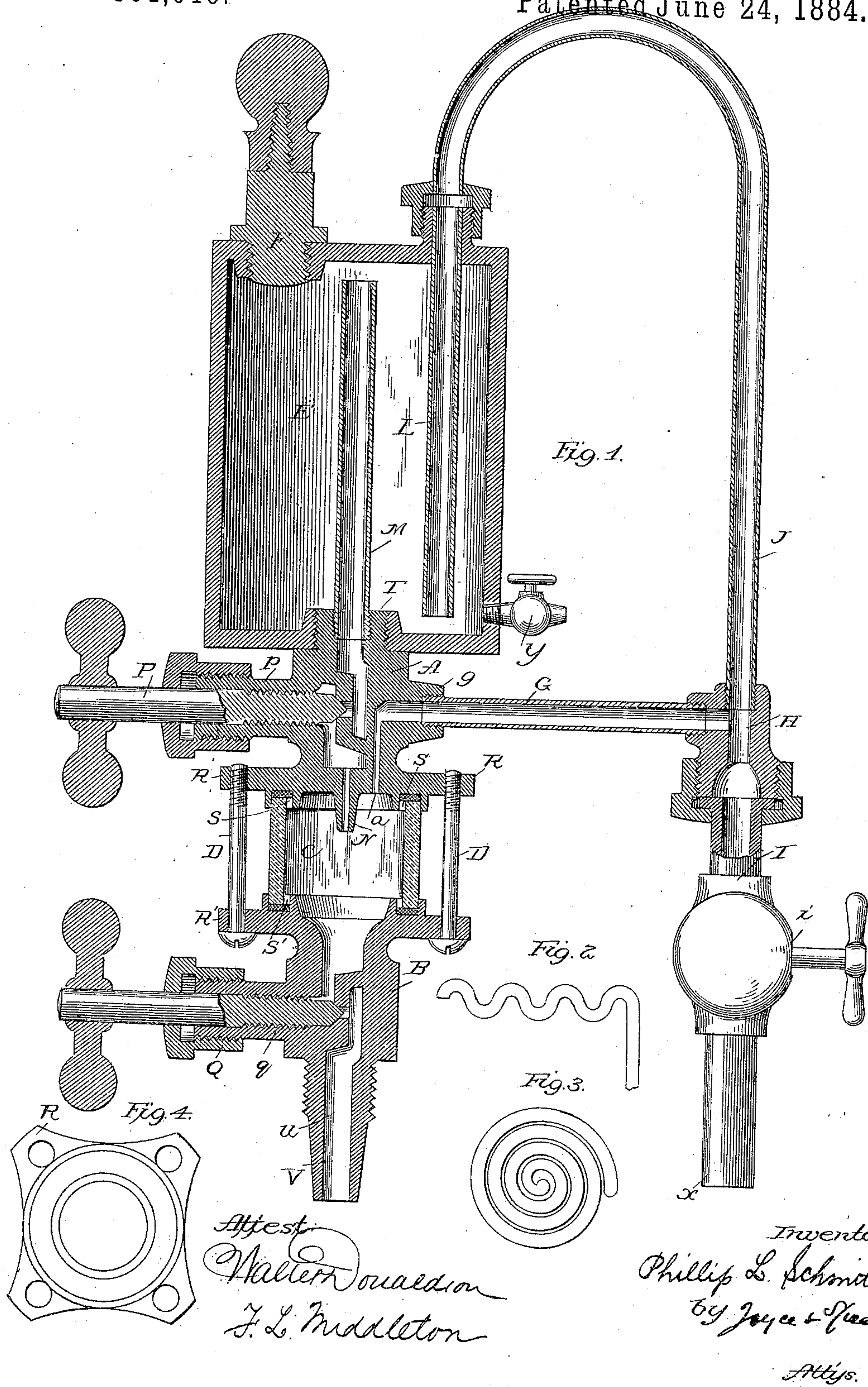


(No Model.)

P. L. SCHMITT.  
LUBRICATOR.

No. 301,010.

Patented June 24, 1884.



Attest  
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J. L. Middleton

Inventor  
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# UNITED STATES PATENT OFFICE.

PHILLIP L. SCHMITT, OF QUINCY, ILLINOIS.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 301,010, dated June 24, 1884.

Application filed April 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, PHILLIP L. SCHMITT, of Quincy, in the county of Adams and State of Illinois, have invented a new and useful Improvement in Lubricators; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to lubricators for steam-engines of that class in which the oil is displaced by the condensation of steam from the boiler.

It consists in details of construction hereinafter explained.

The object of the said improvements is to simplify and improve the construction, as hereinafter explained.

In the accompanying drawings, Figure 1 shows a vertical section of the apparatus. Figs. 2 and 3 represent modifications of the induction-pipe leading steam to the reservoir of the lubricator. Fig. 4 is a plan of the lower end of the upper fitting, and representing also the upper end of the lower fitting.

My invention requires an upper oil-cup, which may be of metal, from which the oil is discharged by displacement, and a lower transparent chamber, through which the oil is dropped as it is displaced, and the passage of it is noted through the glass walls of the chamber.

In Fig. 1, E represents the upper reservoir or cup. It is provided with a hole and plug, F, through which oil may be introduced. At the lower end it has a boss or thickened part screw-threaded for the connection with the part A. A tube, M, rises from the channel in the part or fitting A into the interior of the reservoir to a point near its top. A branch, J, of the main steam-pipe I has an extension, L, within the reservoir with a steam-tight fitting, the said extension terminating near the bottom of the reservoir. A faucet, Y, is provided for drawing off the water from the reservoir. The fitting A is of the form shown in the figure. It has an upper screw-plug, T, a threaded projection, p, for the valve P, and a boss, g, for the live-steam pipe G, and the valve P shuts against a seat, through which is a communicating passage leading from the pipe M to the nipple N. The lower part of the fit-

ting is formed with an annular groove, S, around the nipple, and is in a suitable shape to serve as the top of the lower bottom. Outside of the annular grooves are ears R, as shown in Fig. 4, for connection of the bolts D. The lower fitting, B, is made with its upper part corresponding to the lower part of the upper fitting, and this upper part serves as the bottom of the lower chamber, to which it is connected by bolts D, clamping between the two parts, and in the glass cylinder C is a suitable packing. It is provided with an annular groove, S', with ears R', corresponding to the ears R on the upper fitting. The lower fitting is provided with an extension, q, for the valve Q, by means of which the passage is closed from the lower chamber to the threaded extension U. The threaded extension U is adapted to be screwed into the steam-pipe on the line with the end X of the pipe I, the nipple V projecting into the pipe. The pipe I is provided with a valve, i, for the purpose of controlling the flow of steam. The pipe J is joined to the pipe I by a three-way connection, H, by means of which the pipe G is made to connect with the upper fitting, A, by communication with a passage, a, in said fitting, which passage leads into the lower chamber.

It will be understood that the pipe J is in its upper part a condensing-pipe; but the pipe G being shorter, a communication by more direct passage to the interior of the chamber is a live-steam pipe that conveys the live steam into said chamber.

The lubricator is filled in the ordinary manner through the upper part by removing the plug F. By opening the valve i the steam is admitted through the pipe J into L, and, condensing, displaces the oil and flows it into the tube M. The valves P and Q being open, a proper amount of oil passes through the lower chamber, in which it can be seen as it drops from the nipple. The live steam from the pipe G will prevent the oil from banking up in the glass chamber, and will force the oil through the valve in the steam-pipe. When the oil is all fed out, it may be supplied in the manner above explained. Instead of the pipe J being made as in Fig. 1, I may form this tube as in the modified Fig. 2, or as in Fig. 3, whereby

a greater amount of condensing-surface is obtained.

I claim as my invention—

1. The oil cup or reservoir having an induction-pipe for the steam and the escape-pipe for the overflow of oil, in combination with the lower chamber, having the glass-wall passages, as described, leading thereto with proper valves, and leading also to the steam-pipes, and the live-steam pipe G, all substantially as described.

2. The upper fitting, A, having an extension, T, for connection with the reservoir, an ex-

tension, *p*, for the valve, and one for the pipe G, and a lower part formed with grooves S, and the ears R, whereby it is adapted to form the top of the lower chamber, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PHILLIP L. SCHMITT.

Witnesses:

MICHAEL PIGGOTT,  
J. T. BAKER.