

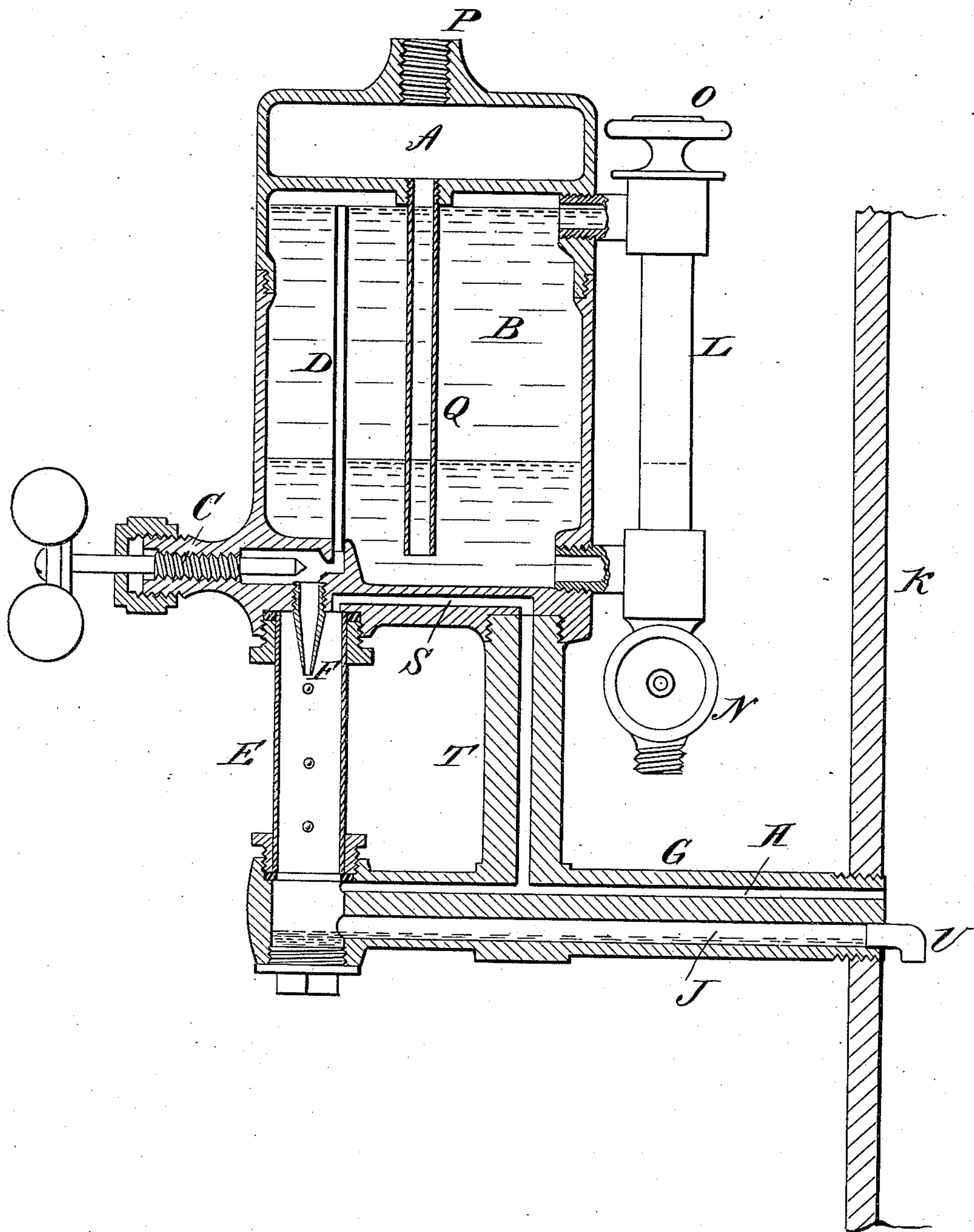
(No Model.)

S. TOWNSEND

LUBRICATOR.

No. 313,034.

Patented Feb. 24, 1885.



WITNESSES:

*Donn Twitchell.*

*C. Sedgwick*

INVENTOR:

*S. Townsend*

BY

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# UNITED STATES PATENT OFFICE.

SAMUEL TOWNSEND, OF DETROIT, MICHIGAN.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 313,034, dated February 24, 1885.

Application filed October 16, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL TOWNSEND, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Lubricators, of which the following is a full, clear, and exact description.

My present invention is an improvement on the lubricator for engine-cylinders shown in an application for patent heretofore made by me, and allowed September 2, 1884, Serial No. 141,645; and it consists in a construction which gives a downward-drop sight-feed, and in connection therewith a circulation of steam which prevents accumulation of oil in the feed-tube, as hereinafter described and claimed.

Reference is to be had to the accompanying drawing, in which the lubricator is shown by a sectional elevation.

B is the oil-reservoir, provided with a gage-tube, L, at one side for indicating the quantity of oil contained in the reservoir. At the top of the tube L is a screw-cap for removal to allow filling, and at the lower end is a blow-off cock. At the top of the reservoir is a separate chamber, having a nipple, P, for connection of a steam-pipe, and from the bottom of this chamber a tube, Q, descends to near the bottom of the reservoir.

E is the glass sight-tube, attached to the under side of the reservoir A, and to an arm, G, that is to be screwed into the steam-pipe, supporting the engine-cylinder, as at K.

F is a jet-nozzle at the upper end of straight tube E, connecting by a passage with the rising-tube D in the reservoir, and C is a screw-plug regulating the flow of the oil through pipe D to the jet.

The arm G has two passages—a lower one, J, and an upper and smaller passage, H—both of which enter the lower part of the sight-tube. A branch tube, T, connecting arm G and the bottom of reservoir B, connects the smaller

passage H with a passage, S, that enters the sight-tube at the side of jet F. Within the steam tube K the lower passage, J, is fitted with a quarter-bend, U, turning downward, so as to aid the circulation of steam.

In operation the oil in the reservoir is kept up, so as to overflow into tube D by the water condensed from steam in chamber A, the flow of steam being properly regulated, and the oil escapes in drops from the jet F. The steam entering by passage H goes to the sight-tube by passage S, and returning by passage J carries out the oil that accumulates on the small quantity of water at the bottom of the sight-tube, thus preventing the oil from rising higher in the tube. It is to be observed that the action of the steam is not that of an injector, blowing the oil down, but there is a circulation of steam that insures the continuous and uniform flow of oil outward.

By making feed-valve C with a double face and arranging it to open wider, the water and steam can be blown out through jet F and blow-off cock N dispensed with.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a downward-drop sight-feed tube, of the arm G and branch T, provided with the passages H J S, substantially as described, whereby a circulation of steam is caused to carry the oil out of the bottom of the sight-tube, as specified.

2. The combination, with sight-tube E, of arm G, having two passages, H J, connecting with the sight-tube, one passage have a branch entering behind the drop-jet F, so as to insure an even circulation of steam, as specified.

SAMUEL TOWNSEND.

Witnesses:

WILLIAM SCOTT,  
ROE STEPHENS.