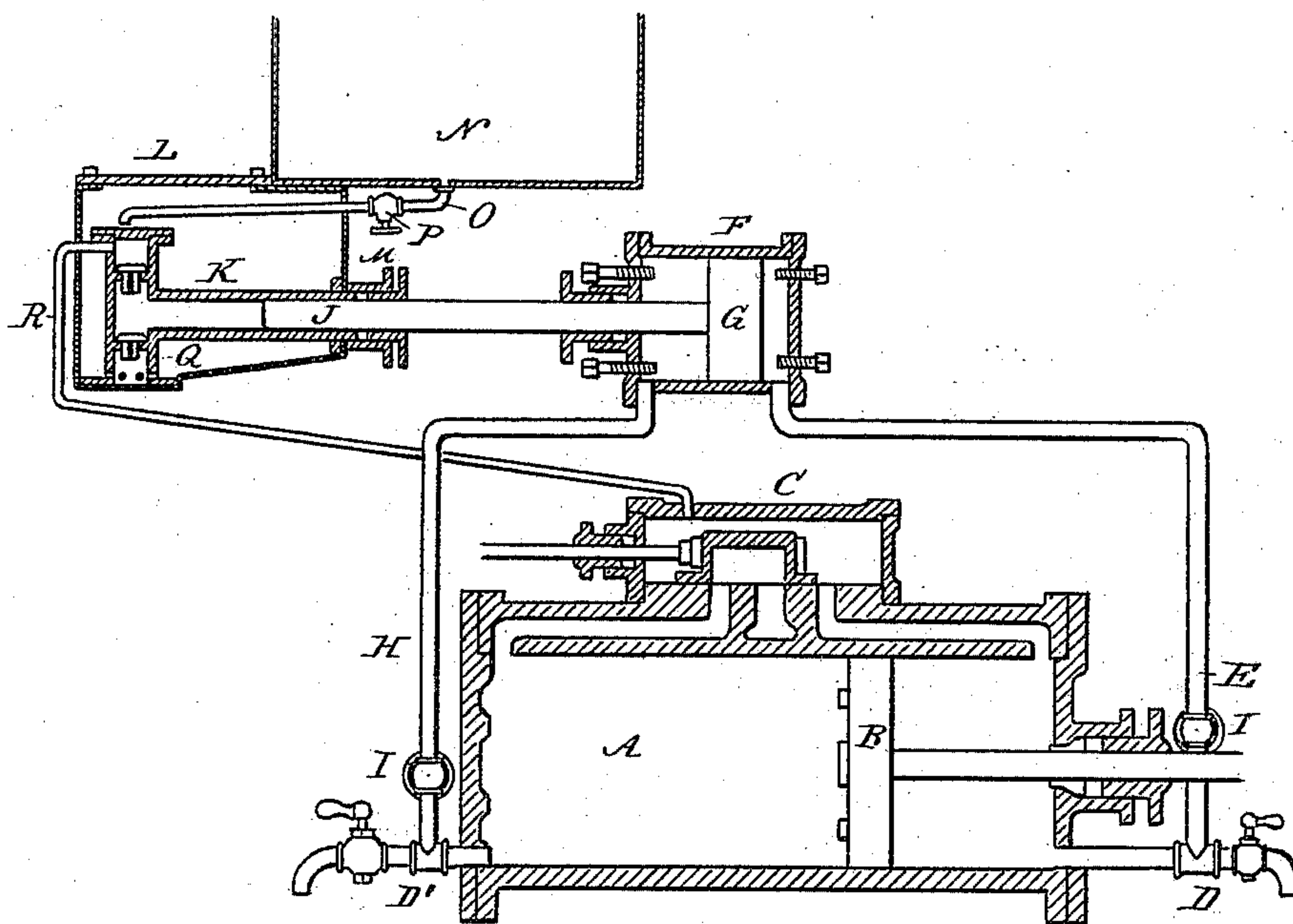


(No Model.)

A. C. DEARING  
LUBRICATOR.

No. 298,836.

Patented May 20, 1884.



Attest:

A. Barthel  
by J. Hunt

Inventor:

Anson C. Dearing  
by his Atty J. S. Sprague

# UNITED STATES PATENT OFFICE.

ANSON C. DEARING, OF DETROIT, MICHIGAN.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 298,836, dated May 20, 1884.

Application filed August 27, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ANSON C. DEARING, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Lubricators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification.

This invention relates to certain new and useful improvements in lubricating devices to steam-cylinders, and to avoid the difficulties that arise in the use of that class of lubricators wherein the oil is forced out by the condensation of steam in the cup; and it consists in the peculiar construction, arrangement, and operation of parts, as hereinafter more fully described and claimed.

In the accompanying drawing, which forms a part of this specification, my invention is shown in section, wherein A represents the cylinder of an engine, B the piston, and C the steam-chest and valve, which are all of any of the known constructions.

It is usual to provide cylinders at one or both ends with pipes and cocks, through which water of condensation is drawn or forced out of such cylinders. These pipes and cocks are marked D and D' in the drawing, and the one D is connected by means of a small pipe, E, with one end of a small cylinder, F, within which travels the piston G. The pipe D' is connected to the opposite end of the cylinder F by means of the small pipe H. In both these pipes E and H are inserted regulating-valves I. These parts are so arranged that the pressure of the steam upon one side or the other of the piston B will force alternately a small quantity of steam through the pipes E and H to move the piston G in the cylinder F. The rod of the piston G forms a plunger, J, for the small pump K, which is preferably located in a transparent or partially transparent chamber, L, a stuffing-box, M, in the wall of said chamber, keeping the parts tight.

N is an oil-tank, designed to receive the oil to be fed to the cylinder. This tank, through the pipe O, which is provided with a regulating-valve, P, feeds its oil into the chamber L near its top and front end, as shown, while the oil, leaving the pipe O, drops into that corner of the tank, and is brought within the action of the suction Q of the pump. Under the action of the lubrication of the plunger J the oil is forced through the pipe R to the steam-chest, thereby producing a positive feed under all circumstances, for should steam even be cut off from the cylinder of a locomotive upon a downgrade, the travel of the piston of the locomotive-engine would, by creation of a vacuum alternately at each end of the cylinder, move the piston in the small pump-cylinder F.

I do not desire to confine myself to the exact construction shown, as I may vary the position of the oil-tank, and do away entirely with the chamber L by connecting the suction of the pump directly to the discharge-pipe of the oil-tank, without departing from the spirit of my invention.

What I claim as my invention is—

1. The combination, with a steam-cylinder, of a secondary cylinder whose opposite ends are connected by steam-pipes to the opposite ends of the main cylinder, a pump operated by the piston of the secondary cylinder, and means for supplying oil to said pump, substantially as described.

2. The combination of the cylinder F, connected by pipes with a steam-engine, of the piston G, pump K, operated by said piston-pipe R, chamber L, oil-tank N, and the pipe O, provided with means of regulating the amount of oil passing from the oil-tank to the chamber L, substantially as described.

ANSON C. DEARING.

Witnesses:

H. S. SPRAGUE,  
E. SCULLY.