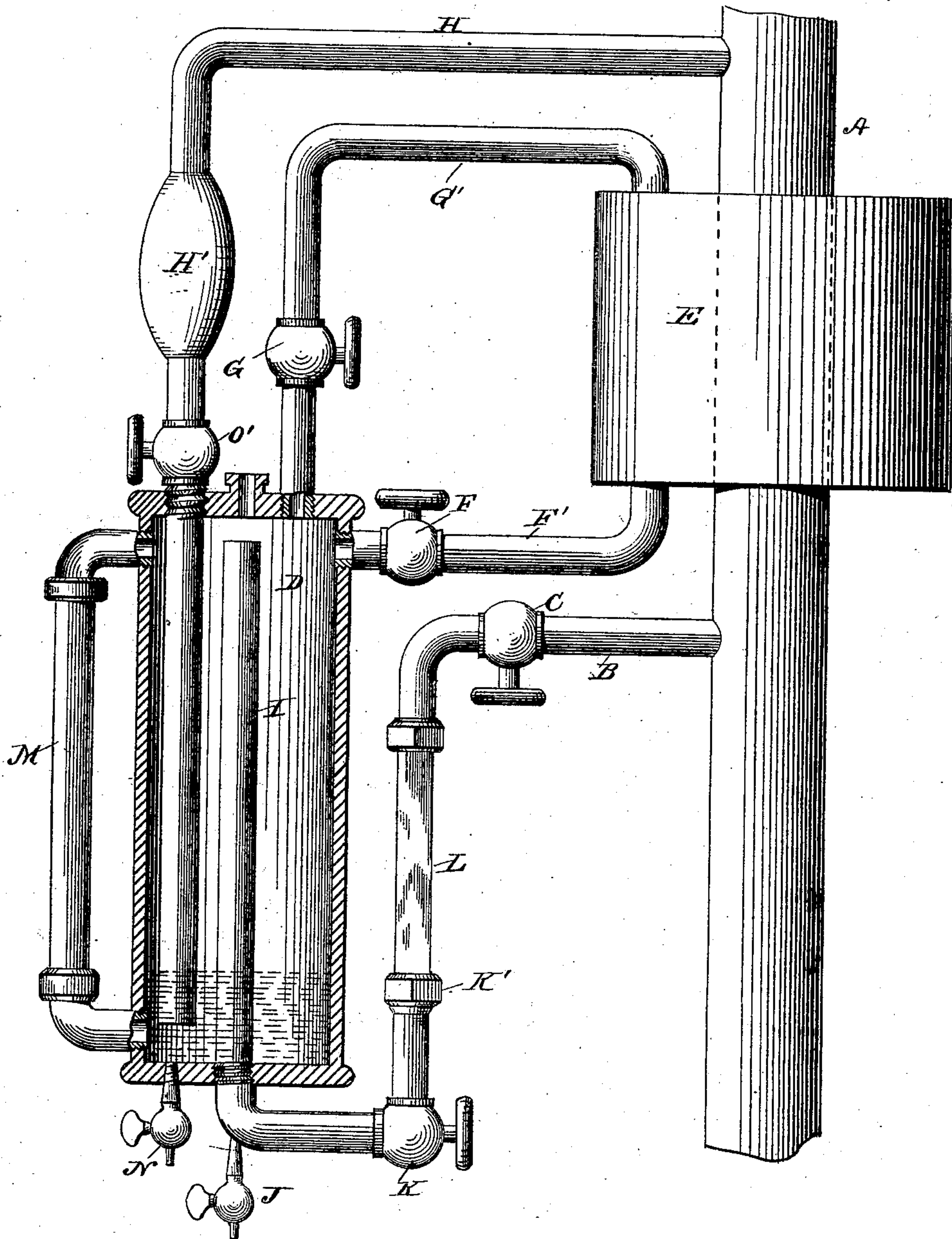


(No Model.)

M. S. CABBELL.  
Apparatus for Lubricating the Cylinders of Steam  
Engines.

No. 237,957.

Patented Feb. 22, 1881.



Attest,  
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# UNITED STATES PATENT OFFICE.

MILTON S. CABBELL, OF QUINCY, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO  
JOHN M. CABBELL AND HERMAN MOECKER, OF SAME PLACE.

## APPARATUS FOR LUBRICATING THE CYLINDERS OF STEAM-ENGINES.

SPECIFICATION forming part of Letters Patent No. 237,957, dated February 22, 1881.

Application filed January 4, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, MILTON S. CABBELL, of Quincy, in the county of Adams and State of Illinois, have invented a certain new and Improved Apparatus for Lubricating the Cylinders, &c., of Steam-Engines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which the figure is a view of the apparatus, partly in section and partly in elevation.

This invention relates to devices for uniformly feeding oil to the steam-chests, cylinders, &c., of steam-engines, so as to lubricate such parts properly; and it consists in certain improvements which I will now proceed to describe.

Referring to the drawing, A represents the steam-pipe of the engine, through which the oil is to be carried to the cylinder or other part to be lubricated.

B is a smaller steam-pipe, connected to pipe A and provided with a valve, C.

D is an oil cup or chamber, from which the supply of oil is taken; E, a reservoir, from which the chamber D is filled. The steam-pipe A passes through this reservoir and keeps the oil therein at all times warm, so that it will flow readily.

F is a valve which controls the flow of oil from the reservoir through a feed-pipe, F'.

G' is a pipe connecting with the upper part of both the oil-chamber D and reservoir E, and affording a vent when chamber D is being filled. Said pipe G' is provided with a valve, G.

H is a pipe, also connected to the large steam-pipe A, and extending down through the top of chamber D nearly to the bottom thereof, as shown.

H' is a condensing-chamber, located in pipe H above chamber D; O', a valve in said pipe H; I, another pipe, extending up through the bottom of chamber D nearly to the top thereof, and connected, by means of a valve, K, pipe K', and glass gage L, to the steam-pipe B.

M is a glass gage attached to the oil-chamber D, for indicating the quantity of oil contained in the latter; N, a drain-cock for draining off the contents of the oil-chamber when desired, and J a petcock for blowing off or emptying the pipe I.

The operation of this apparatus is as follows:

The supply-valve F and vent-valve G are first opened and the oil allowed to flow from the reservoir through pipe F' into the oil-chamber D. As the latter fills with oil the pipe I also fills down to the closed valve K. Valves F and G are then closed and steam-valves C and O' opened. Upon this being done, steam begins to condense in pipe H and condenser H', and also in pipe K' and gage L. Valve K is then opened slightly, and the oil in pipe I is forced by hydrostatic pressure through valve K, and rises in the form of drops through the water of condensation in pipe K' and gage L, and passes out through steam-pipe B into the main steam-pipe A, and thence to the cylinders or other parts to be lubricated.

The ejecting-pipe I is kept at all times full of oil from the chamber D, the oil in the latter being gradually displaced by the water of condensation from pipe H, as will be readily understood.

The amount of oil in oil-chamber D is at all times indicated by the gage M, and when the oil becomes exhausted the chamber can be refilled, as before, from the reservoir E.

By opening the valve K more or less the quantity of oil fed to the part to be lubricated can be regulated at pleasure, the gage L affording means for observing the feed.

This apparatus secures a constant and uniform supply of oil to the part to be lubricated, and, further than to observe that a proper quantity of oil is maintained in chamber D, no special care or attention is required to keep it in order. The water of condensation can be drawn off from chamber D through the drain-cock N when it is required to refill the chamber with oil, and when it becomes necessary to blow off the pipe I the petcock J, at its lower bend, can be opened.

I claim as my invention—

1. In an oil-feeding apparatus, the combination of the oil-reservoir, having the valved supply-pipe and the valved vent-pipe, with the oil cup or chamber, into which both said pipes lead, substantially as described.

2. In an oil-feeding apparatus, the combination, with the oil cup or chamber, of the pipes H and I, connected with the steam-pipe A, as described, the oil-reservoir, and its supply and vent pipes, substantially as described.

Witnesses: MILTON S. CABBELL.

WM. SCHAEFER,  
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