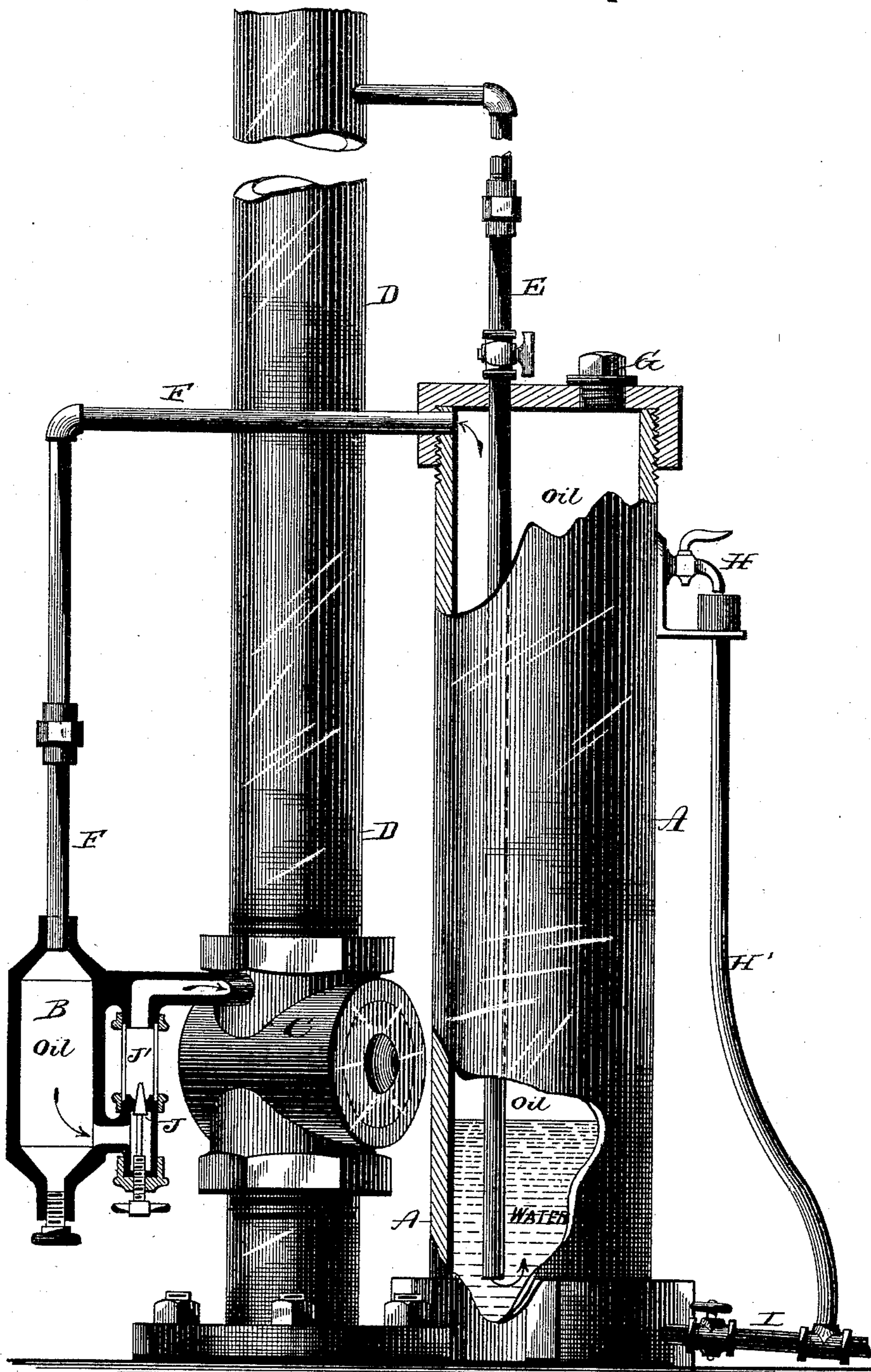


(No Model.)

C. C. RUEGER.  
LUBRICATOR.

No. 436,927.

Patented Sept. 23, 1890.



Witnesses  
*P. H. Hougham*  
*G. F. Downing*

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# UNITED STATES PATENT OFFICE.

CHARLES CONRAD RUEGER, OF BUTTE CITY, MONTANA.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 436,927, dated September 23, 1890.

Application filed January 25, 1890. Serial No. 338,102. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES CONRAD RUEGER, of Butte City, in the county of Silver Bow and State of Montana, have invented certain new and useful Improvements in Lubricators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in force-feed lubricators, the object being to provide means for utilizing steam, oil, and water pressure for creating a steady and automatic feed of the lubricant and keeping such lubricant in constant readiness to flow.

A further object is to provide means for holding a considerable supply of oil, whereby the time, labor, and attention usually requisite for keeping the lubricator supplied are economized, and at the same time the entire quantity is kept in good condition for being fed and is fed in quantities corresponding to the amount of steam being used and the consequential speed of the engine or other machine to which the lubricator is attached.

With these ends in view my invention consists in certain novel features of construction and combinations of parts, as will be herein after described, and pointed out in the claims.

The accompanying drawing is a view in side elevation, partly in section, showing my invention applied to a steam-pipe.

A represents the oil-reservoir. This is preferably of cylindrical form and can be placed where most convenient, it only being essential that the oil should be kept warm enough for the flow of very viscid engine-oils in cold weather. This reservoir is furnished with a removable screw-plug G at the top, which is adapted to be removed in order to fill the reservoir with the lubricant.

A pipe E, leading into the reservoir, ending at or near the bottom of the reservoir, conducts steam from the steam-pipe D and discharges it beneath the oil. This steam, by virtue of its contact with colder bodies, condenses, and the water formed fills the pipe E and settles at the bottom of the reservoir, displacing the oil at some point above as soon as an outlet is formed for it.

Pipe F, leading from the upper end of the

reservoir, carries off this lubricant as it is required for use and displaced by the water from beneath. From the pipe F the oil is discharged into the supply-chamber B of the oil-cup and thence it passes through the regulating-valve J into the sight-feed tube J' above it. From this point the lubricant passes into the steam-pipe D just above the throttle-valve C in the case illustrated. As pipe E is connected with the same steam-pipe D, the same pressure is maintained on both sides of the oil, thus keeping it balanced, and the feeding of the oil is effected principally by the pressure of the column of condensed water in pipe E and the siphon action of pipe F.

The valve H, or glass indicator, if preferred, in the reservoir A is for the purpose of indicating when the oil has been displaced at this point by the water, when the latter is removable through the pipe I at the bottom of the reservoir. The discharge from the pipe H' and I is run into one settling-tank, so that valuable oil can be saved for further use.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth, but claim the application of a large storage-reservoir for oil, when arranged to supply the oil automatically by the means described or their equivalent, in connection with any lubricating-cup or other device, the generally-limited storing capacity of which makes frequent attention to them necessary. The principle is applicable in any case where an overbalance of pressure can be created which will force the oil in the direction of the parts to be lubricated, by means of steam, water, air, or the gravity of the oil itself.

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

1. The combination, with an oil-reservoir, a steam-pipe, and a pipe leading from the latter into the oil-reservoir and terminating at or near the bottom of the latter, of an oil-discharge pipe leading from the reservoir at or near its top for discharging the oil into the steam-pipe as it is required for use, and a draw-off pipe leading from the reservoir near

the top of the latter, but below the oil-discharge pipe, and a pipe leading from the reservoir at or near the bottom of the latter, substantially as set forth.

- 5 2. The combination, with an oil-reservoir, a steam-pipe, and a pipe leading from the latter into the oil-reservoir and terminating at or near the bottom of the latter, of an oil-discharge pipe leading from the reservoir at or  
10 near the top, a small oil-chamber into which said oil-discharge pipe discharges its contents, connections between the small oil-chamber

and the steam-pipe, a draw-off pipe leading from the oil-reservoir near the top of the latter but below the oil-discharge pipe, and a  
15 pipe leading from the lower end of said reservoir, substantially as set forth.

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

CHARLES CONRAD RUEGER.

Witnesses:

RUDOLPH A. BERGIERY,  
JOHN WESTON.