

(No Model.)

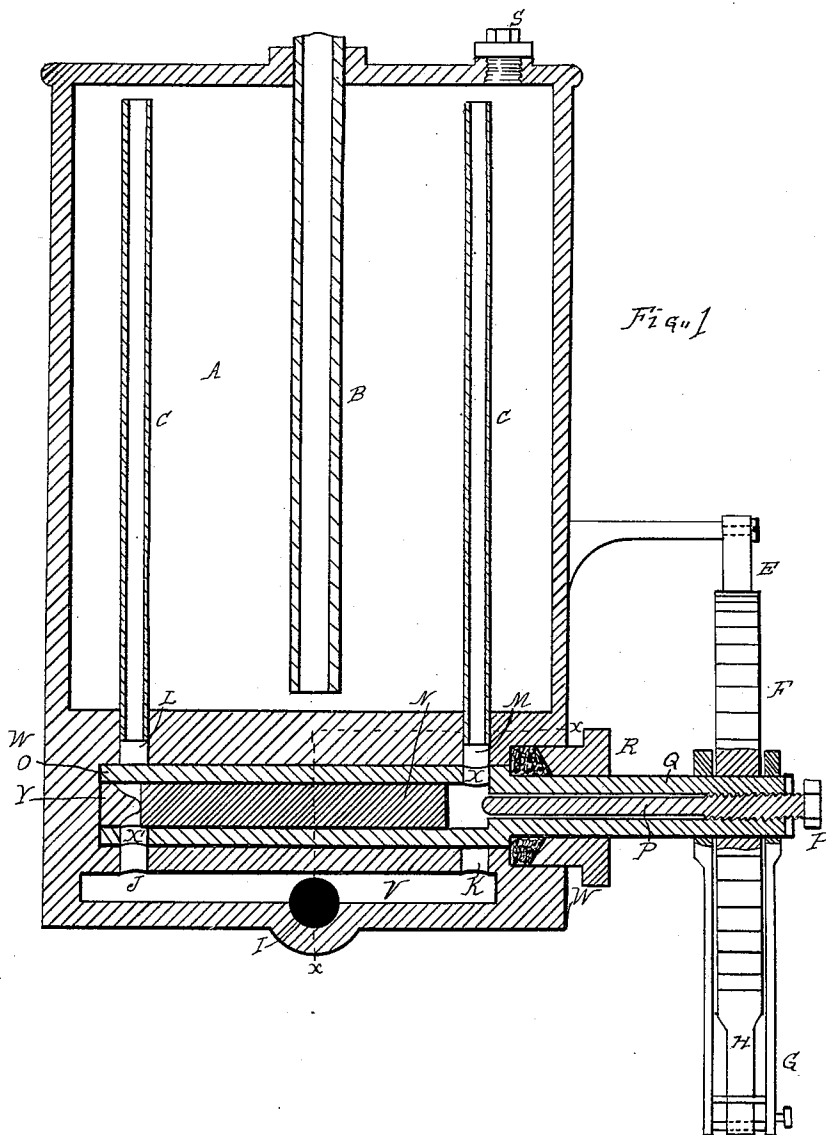
2 Sheets—Sheet 1.

H. N. HEWLETT.

LUBRICATOR.

No. 377,254.

Patented Jan. 31, 1888.



Witnesses

Sumner Coelius,
Emma Hesselbacher.

Inventor

Henry N. Hewlett.

By His Attorney,

Geo. H. Lothrop

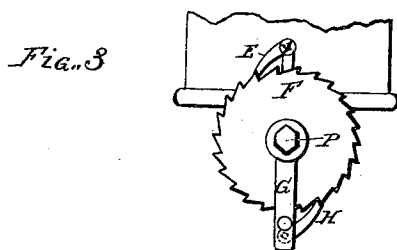
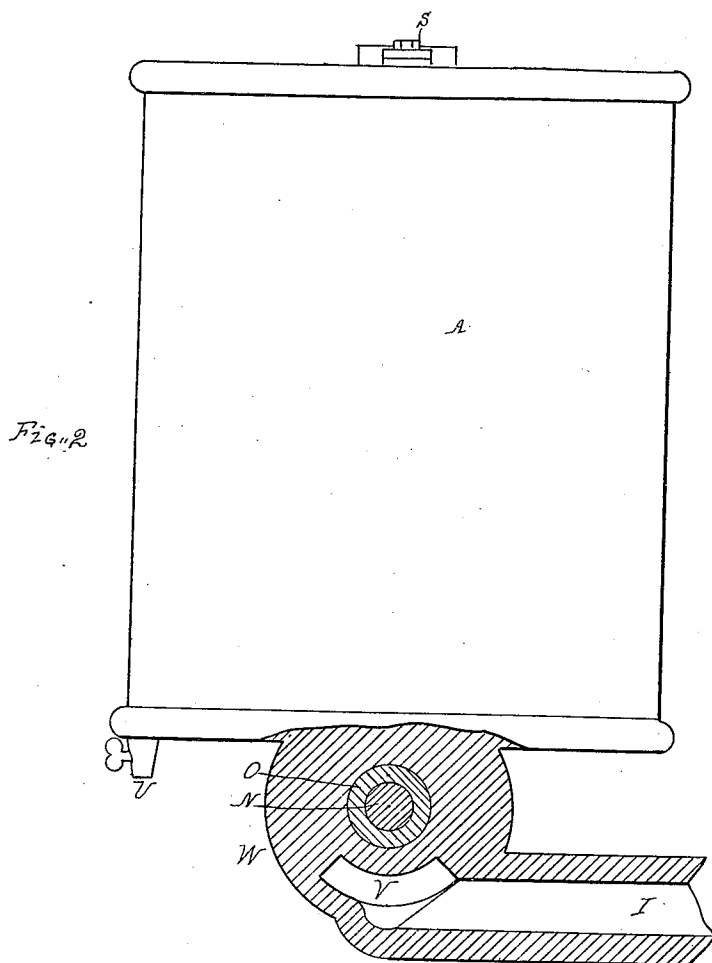
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UNITED STATES PATENT OFFICE.

HENRY N. HEWLETT, OF OSCODA, MICHIGAN.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 377,254, dated January 31, 1888.

Application filed August 23, 1887. Serial No. 247,669. (No model.)

To all whom it may concern:

Be it known that I, HENRY N. HEWLETT, of Oscoda, in the county of Iosco and State of Michigan, have invented a new and useful Improvement in Lubricators, of which the following is a specification.

My invention is an improvement in lubricators, hereinafter fully described.

Figure 1 is a vertical section. Fig. 2 is an elevation at right angles to Fig. 1, partly in section on line *x x*, Fig. 1; and Fig. 3 is a side elevation illustrating the ratchet-wheel for imparting motion to the valve.

A represents the body of the lubricator.

B represents a pipe which leads water from condensed steam into the body of the lubricator, delivering it near the bottom.

C C represent two oil-delivery pipes which lead from near the top of the body of the lubricator down into passages L M, leading through the bottom of the lubricator.

W represents an enlargement formed on the under side of the bottom of the lubricator, which enlargement has therein a cylindrical bore which communicates with passages L M, formed within the top wall of the said enlargement, and having beneath this a slot or passage, V, which connects with the bore of said enlargement by the two passages J K, and from the passage V a pipe, I, leads to the place to be lubricated.

O represents a hollow cylinder adapted to fit closely in the bore projection W, and having at its end a hollow shaft, Q, which projects outward from the end of the projection W, passing through a stuffing-box R. The hollow cylinder O has a port, X X', near each end through its walls, the port X' being adapted to register alternately with the passages L and J and the port X with the passages M and K. The inner end of the cylinder O is closed by a pointed plug, Y.

N represents a solid piston adapted to fit and move in the hollow cylinder O, its range of motion being limited by the pointed plug Y at one end and by the end of the screw-pin P, which lies within the hollow shaft Q and is made adjustable therein by a screw-thread which engages with a thread cut on the inside of said hollow shaft Q, as is clearly shown in Fig. 1.

F represents a ratchet-wheel secured on shaft

Q, and G represents a frame carrying a pawl, H, adapted to engage with ratchet-wheel F, and which rotates said wheel intermittently when frame G is oscillated by connecting with any movable part of an engine.

E represents a pawl pivoted to a bracket formed on the bottom of a lubricator, which prevents the ratchet-wheel W from turning except in one direction.

S represents a filling-plug, and U represents a drain-cock.

The operation of my invention is as follows: The lubricator being filled with oil, and water being admitted through pipe B, usually under steam-pressure, the oil in the lubricator is floated upward and forced downward through pipes C C. In the position shown in Fig. 1 oil will flow through the passage M and port X in the cylinder O, and will fill that portion of said cylinder which lies between the end of piston N and the screw-plug P. The frame G, being oscillated by the engine, slowly rotates ratchet-wheel F, and with it shaft Q and cylinder O, until port X' will register with passage L. The pressure through pipe B now forces oil through passage L and port X' and drives piston N to the other end of cylinder O, forcing out through port X and passage K into the passage V the oil previously deposited in said cylinder, and that portion of cylinder O between the end of piston N and plug Y is filled with oil, which, by the rotation of the cylinder O, is forced out through port X' and passage J into passage V, whence the oil delivered is forced out through pipe I to the place to be lubricated.

It is evident that with this lubricator all the passages may be large, so that they will not become clogged by thick or impure oil, that oil may be fed under direct pressure to a journal, and that it will feed very steadily and not faster than permitted by the rotation of the cylinder O, and that by varying the speed of rotation of cylinder O the rate of feed of the oil may be increased or diminished. It is also evident that when this lubricator is applied to machinery it will work only so long as the machinery is running, stopping without any attention when the machinery stops and starting without any attention when the machinery starts—two very desirable features not found in hydrostatic lubricators as now constructed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with a lubricator having two oil-delivery pipes, a rotary cylinder having therein two ports at opposite sides adapted to register with the oil-delivery pipes and having a movable piston therein, mechanism for rotating said cylinder, and an enlargement having delivery-passages registering with the ports of said cylinder, substantially as shown and described.

2. In a lubricator, the combination, with the oil-delivery pipes C C and an enlargement having passages L M, of the hollow cylinder O and hollow shaft Q, the cylinder having therein

ports X X', and the hollow shaft provided with a screw-plug, P, substantially as shown and described.

3. In a lubricator, the combination, with the body A, of the water-pipe between the oil-pipes C C, the rotary cylinder O, having therein the ports X X' and piston N, and the enlargement W, having therein delivery-passage V and the passages J K, substantially as shown and described.

HY. N. HEWLETT.

Witnesses:

A. H. FISH,
T. E. WYLIE.