(Model.)

# P. D. HAY.

## OILER.

No. 384,762. Patented June 19, 1888.

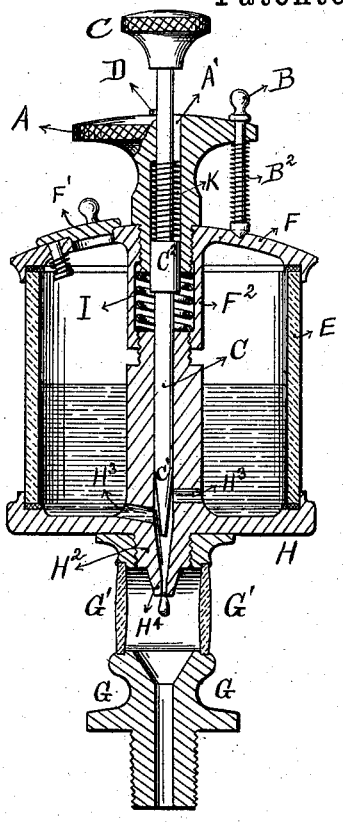


Fig. 1.

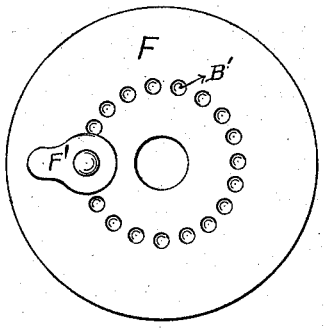


Fig. 2.

Attest.
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by
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# UNITED STATES PATENT OFFICE.

PETER D. HAY, OF DETROIT, MICHIGAN, ASSIGNOR TO THE MICHIGAN LUBRICATOR COMPANY.

## OILER.

SPECIFICATION forming part of Letters Patent No. 384,762, dated June 19, 1888.

Application filed January 17, 1888. Serial No. 261,056. (Model.)

*To all whom it may concern:*

Be it known that I, PETER D. HAY, of Detroit, county of Wayne, and State of Michigan, have invented a new and useful Improvement in Oilers, of which the following is a specification.

My invention relates to that class of oilers which are intended for the lubrication of journal-bearings, and in which the oil is caused to fall drop by drop, preferably, through a glass-inclosed chamber.

In the annexed drawings, making a part of this specification, Figure 1 is a vertical central section. Fig. 2 is a plan view of the cover of the oil-cup.

The same letters are used in both figures in indication of identical parts.

G is the tubular stem which is screwed into the cap of the bearing to be lubricated. This tubular stem is enlarged and forms a sight-feed chamber, having double-convex lenses G′ inserted opposite to one another, to permit the observation of the drop as it forms and falls through said stem.

H is the bottom plate, formed with a tubular stem, H′, threaded at the top. It is provided with a conical valve-seat, $H^2$.

$H^3$ are holes through the stem, through which the oil flows from the interior of the glass chamber E.

F is the cover, formed with a feed-hole and cover, F′, and also with a stem, $F^2$, which has a thread cut inside of its lower end to receive the corresponding thread upon the stem H′.

A is a plug which is screwed into the center of the plate F, and C is a needle-valve passing through the center of plug A and through the stem $F^2$ and through the stem H′, and having its point tapered at C′ to fit the conical valve-seat $H^2$.

The interior of the plug A is chambered to receive a spiral spring, K, which surrounds the needle C and bears at one end against the top of the recess in the plug and at the bottom against a collar, $C^2$, on the needle, its object being to push the needle downward, which it may do whenever the pin D on the spindle is in line with the groove A′ in the plug A.

I is a spiral spring placed in a chamber within the stem $F^2$, and bearing it at one end against the plug A and at the other against the end of stem H′. The object of this spiral spring is to press the thread of the plug A against the corresponding threads of the cap F, so that friction enough may be created to prevent the plug A from being moved by the jarring of the machinery. As an additional guard, a pin, B, is passed through a hole in the flanged top of the plug A, and has its point projected into one of the recesses B′, formed in a circle on the top surface of the cap F, it being projected by a spiral spring, $B^2$, the upper end of which rests against the under side of the flange on the plug A, the other against the projection on the lower end of the stem B.

The operation of this oiler is as follows: The glass-inclosed chamber E is filled with oil through the feed-hole in the top. The needle C is elevated, as shown in Fig. 1, and sustained upon the pin D, which rests on the surface of the plug A. The pin B is then held up and the plug A is turned so as to raise or lower the tapered end of the needle-valve C to adjust the space between it and the conical valve-seat $H^2$, so as to give the required amount of oil through the nipple $H^4$. When this feed of oil has been satisfactorily adjusted, the machine will go on receiving the proper amount of lubricant, and when it is designed to stop the machine the feed of oil may be stopped by drawing the needle or spindle C down upon its seat, so as to entirely cut off the outflow of oil. The pin B will hold the plug A in position, so that when the engineer starts his machine again it needs only to lift the spindle C and support it upon the head of the plug A by the pin D to have the oiler continue its work just as it was regulated before the machine was stopped.

It will not be in all cases necessary to use the pin B, as when the motion is an easy one the friction caused by the expansion of spring I will be sufficient to prevent the plug A from turning by the jar of the machinery. In cases where the motion is more violent and the pin B is required to be used, it will not be necessary to use the spring I.

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

1. In combination with the oil-chamber pro-

vided with a valve-seat in the oil-passage, the cap F, having a tubular stem, $F^2$, a plug, A, having a groove, A′, and adjustably connected to the cap, and a central needle-valve, C, having a pin, D, substantially as set forth.

2. In combination with the oil-chamber provided with a valve-seat in the oil-passage, the cap F, having a tubular stem, $F^2$, a plug, A, having a groove, A′, and adjustably connected to the cap, a central needle-valve, C, having a pin, D, and a spring, K, acting on the needle, substantially as set forth.

3. In combination with the oil-chamber provided with a valve-seat in the oil-passage, the cap F, having a tubular stem, $F^2$, the adjustable plug A, having a groove, A′, a spring-pressed pin, B, and a central needle-valve, C, having a pin, D, substantially as set forth.

4. In combination with a glass-inclosed chamber, E, the cap F, having a tubular stem, $F^2$, the bottom plate, H, formed with a tubular stem, H′, oil-hole $H^3$, and a valve-seat, $H^2$, the spring I, the plug A, having a groove, A′, and the central needle-valve, C, having a pin, D, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

PETER D. HAY.

In presence of—
R. MASON,
F. W. MARVIN.