

(No Model.)

D. L. McCORKINDALE.

ROTARY LUBRICATOR.

No. 324,864.

Patented Aug. 25, 1885.

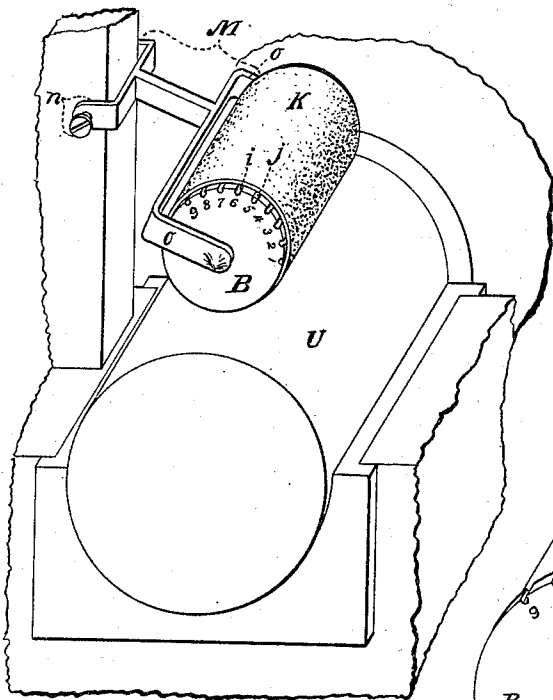


FIG. 1.

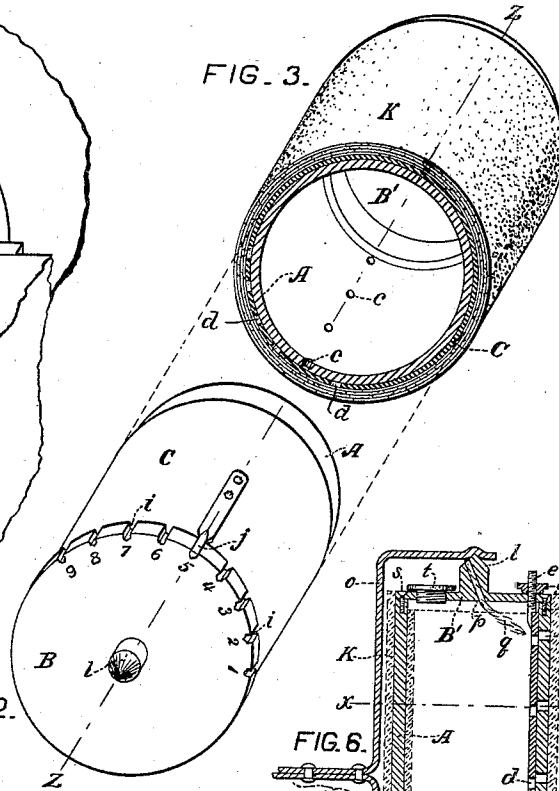


FIG. 2.

FIG. 3.

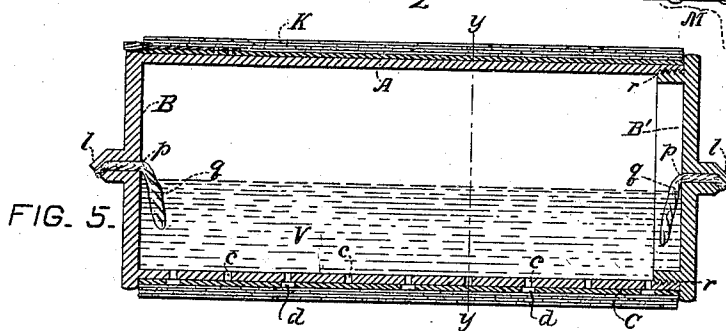


FIG. 5.

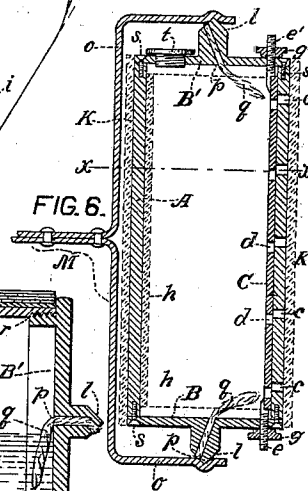


FIG. 6.

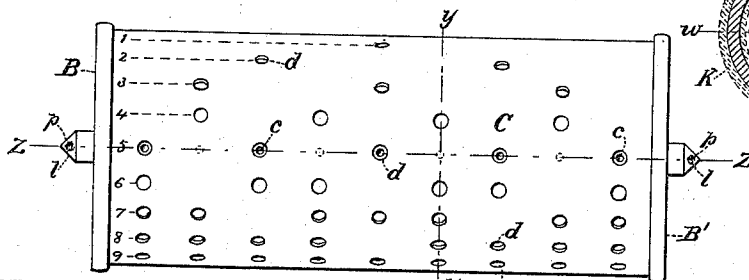


FIG. 4.

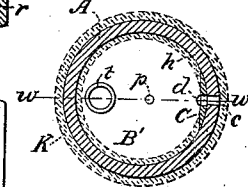


FIG. 7.

WITNESSES:

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UNITED STATES PATENT OFFICE.

DUNCAN L. McCORKINDALE, OF TROY, NEW YORK, ASSIGNOR OF ONE-HALF
TO S. ALEXANDER ORR, OF SAME PLACE.

ROTARY LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 324,864, dated August 25, 1885.

Application filed July 2, 1885. (No model.)

To all whom it may concern:

Be it known that I, DUNCAN L. McCORKINDALE, a citizen of the United States, residing in the city of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Rotary Lubricators for Journals, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in lubricators that are adapted to contain lubricating material, and to be rotated by peripheral contact with a revolving journal to be lubricated.

The general objects of my improvements are to provide means for regulating the rate of escape of the lubricating material from the lubricator to the journal as may be required by journals of different sizes or of different heating tendencies or by lubricants of different qualities or degrees of fluidity, to provide simple means for lubricating the journals of rotary lubricators, and to furnish a cheap and quickly-detachable holder for rotary journal-lubricators.

In the accompanying drawings, Figure 1 is an isometrical representation of one of my improved lubricators applied for use to a journal. Fig. 2 is an isometrical drawing of one end portion of the same lubricator, the outer porous covering being removed. Fig. 3 is an isometrical view of the other end portion of the same lubricator, showing a section thereof at the line *yy* in Figs. 4 and 5. Fig. 4 is a side elevation of the same lubricator but without a porous covering. Fig. 5 is a central longitudinal section of the same lubricator in the plane of the line *zz* in Figs. 2, 3, and 4. Fig. 6 is a central longitudinal section at the line *ww* in Fig. 7 of a lubricator that embraces a portion of this invention, and Fig. 7 is a transverse section of the same at the line *xx* in Fig. 6.

Like letters refer to similar parts in the different figures.

A is a hollow cylinder furnished with heads B B', and adapted to contain lubricating material V, Fig. 5, and having in its circumference an aperture or apertures *c* to permit the gradual escape therethrough of the lubricat-

ing material to a journal, U, Fig. 1, to be lubricated.

For regulating the rate of escape of the lubricating material from within the cylinder A through its aperture or apertures *c*, I furnish the cylinder with an adjustable cut-off, C, arranged either within the cylinder, as shown in Figs. 6 and 7, or exterior thereto, as illustrated by the other figures.

In the lubricator shown by Figs. 6 and 7 the cut-off C has perforations *d* corresponding to the perforations *c* through the casing A, and has at its ends screw-stems *e e'*, which extend and fit through suitably-arranged holes in the heads B B', and are furnished with screw-nuts *g g'*, which fit closely upon the screw-stems and are screwed tightly against the heads. By loosening one and tightening the other of the two nuts the cut-off C can be moved and adjusted lengthwise within and closely along the casing A, so as to thereby open or close the apertures *c* to any desired extent, and thereby control the rate of escape of lubricating material through those apertures.

The cut-off C in Figs. 6 and 7 may be a perforated bar, as shown in full lines, or a hollow cylinder with open ends and fitting closely as a lengthwise-movable sleeve within the casing A, as indicated by dotted lines at *h* in those figures.

In the lubricator shown by Figs. 1, 2, 3, 4, and 5 the cut-off C is in the form of a sleeve which fits closely to and can be turned and adjusted circularly upon the cylinder A, which latter has a longitudinal row of perforations, *c*, Figs. 3 and 5.

The sleeve or cut-off C in Figs. 2, 3, 4, and 5 has a series of perforations, *d*, which are arranged in circumferential rows that are at the same distances apart as the perforations *c* and in lengthwise rows which have different numbers of perforations, and in Fig. 4 are numbered 1 2 3 4 5 6 7 8 9, respectively.

In Figs. 4 and 5 the sleeve C is shown adjusted with its lengthwise row of five perforations *d* in coincidence with five of the perforations *c* in the body of the lubricator. The sleeve is adapted to be turned and adjusted so as to have any desired lengthwise row of its perforations in coincidence with the row

of perforations in the cylinder, and thereby permit more or less of the lubricating material to escape through such perforations in a given time.

5 The sleeve C in Figs. 1, 2, 3, 4, 5 can be adjusted circularly and retained in position upon the cylinder A by various means; but as an improved device for that purpose I have on one head, B, of the cylinder a row of stops or
10 notches, *i*, spaced and numbered in conformity with the lengthwise rows of perforations in the sleeves, as indicated by Figs. 1, 2, and 4, and have in proper position on the sleeve a stop or spring-catch, *j*, Fig. 2, adapted to be
15 readily engaged with and disengaged from each of the stops or notches *i* by hand.

The above-described adjustable lubricators shown by Figs. 4 and 5 and by Figs. 6 and 7 can be used to apply suitable lubricating material to suitably-shaped journals by having
20 the outer surface of the perforated sleeve C of Figs. 4 and 5 or the perforated casing A of Figs. 6 and 7 bear directly in contact with the journal to be lubricated. I, however, generally surround the perforated sleeve C of Figs.
25 2, 3, 4, 5 or the perforated casing A of Figs. 6 and 7 by porous or fibrous material K—as, for instance, a layer or layers of loosely felted or woven fibrous fabric—secured or wound
30 around the said sleeve or casing, so that such porous or fibrous covering shall absorb the liquid or semi-liquid lubricant passing outward through the perforations *c* and *d*, and
35 thereby distribute the lubricant along and around the whole circumference of the lubricator and journal to be lubricated as the lubricator is revolved by the surface contact with the journal.

In Figs. 1, 3, and 5 the porous or absorbent covering K is shown in full lines, and is indicated by dotted lines in Figs. 6 and 7.

In using the lubricator, it can be held so as to be revolved by surface contact with the upper, lower, or any other exposed side of a revolving journal by various well-known devices. As an improved means for that purpose, I make the lubricator with small conical or pointed journals *l*, and provide a holder, M, which is adapted to be hinged, pivoted, or
45 similarly secured to a fixed support, essentially as indicated at *n* in Fig. 1, and has arms *o*, formed with interior depressions or perforations, into which fit the small conical or pointed journals *l* of the lubricator, as illustrated in Fig. 6, one or each of said arms
50 being elastic so as to thereby securely hold the lubricator by its journals, and allow it to be freely revolved, and also permit the lubricator to be at once removed from and replaced in the holder upon merely springing outward one or each of the arms of the holder by hand.

To provide means for lubricating the small pointed or conical journal *l* of the lubricator, I form the latter with a perforation or passage, as at *p*, from the lubricant-chamber to the surface of the pointed or conical journal,

and have a wick, *q*, extending outward from within said chamber closely through said passage or perforation, substantially as shown
70 by Figs. 5 and 6.

In Fig. 5 the head B' is detachably secured to the cylinder A by male and female screws thereon, as at *r*, for convenience in introducing material and in placing the sleeve or cut-off C upon and removing it from the cylinder.
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In Fig. 6 the head B' is shown detachably secured to the cylinder A by screws *s*, to permit the ready insertion and removal of the cut-off C, and is furnished with a removable
80 screw-plug, *t*, to allow lubricating material to be introduced into the chamber of the lubricator.

I am aware that a cylindrical journal lubricator adapted to contain lubricating material, and to be rotated by peripheral contact with a revolving journal to be lubricated, and having its circumferential casing perforated and surrounded by a felt or porous covering, is not new.
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I claim as my invention—

1. A lubricator adapted to contain lubricating material, and to be rotated by peripheral contact with a revolving journal, and having through its circumferential casing an aperture or apertures furnished with an adjustable cut-off for regulating the escape of the lubricating material, substantially as set forth.
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2. A lubricator adapted to contain lubricating material, and to be rotated by peripheral contact with a revolving journal, and having through its circumferential casing an aperture or apertures furnished with an adjustable cut-off, and surrounded by a porous or absorbent covering, substantially as described.
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3. A lubricator adapted to contain lubricating material, and to be rotated by peripheral contact with a revolving journal, and having a circular casing and a sleeve fitting thereto with correspondingly-spaced perforations in the sleeve and casing, and the sleeve adjustable to regulate the escape of the lubricating material through said perforations, substantially as described.
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4. A rotary lubricator adapted to contain lubricating material, and having a cylindrical casing and a sleeve fitting thereto, with correspondingly-spaced perforations in the casing and sleeve, and the sleeve adjustable and surrounded by a porous covering, substantially as set forth.
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5. A rotary lubricator having a hollow cylinder, A, with heads B B' and the perforations *c*, a sleeve fitting around and adapted to be turned upon said cylinder, and having a series of perforations, *d*, spaced and graduated in numbers relatively to the perforations in the cylinder, substantially as described, the correspondingly-spaced stops *i* on the head of the cylinder, the catch *j* on the sleeve, and the porous covering K, substantially as described.
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6. A rotary lubricator having an internal chamber for the lubricating material, a pointed or conical journal *l*, and a wick, *q*, extend-
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ing outward from within said chamber closely through a perforation to the surface of said journal, substantially as shown and described.

7. The combination, with a rotary journal-lubricator having pointed or conical journals *l*, of the detachable holder *M*, having the spring-arms *o*, formed with sockets or recesses, into which fit the pointed or conical journals of the lubricator, and having pivots *n*, for securing the holder to a support, as set forth.

In testimony whereof I hereunto set my hand, in the presence of two subscribing witnesses, this 23d day of April, 1885.

DUNCAN L. McCORKINDALE.

Witnesses:

AUSTIN F. PARK,
JAMES T. GOODFELLOW.