

H. K. SANDELL.
LUBRICANT DEVICE.
APPLICATION FILED JAN. 25, 1912.

1,024,150.

Patented Apr. 23, 1912.

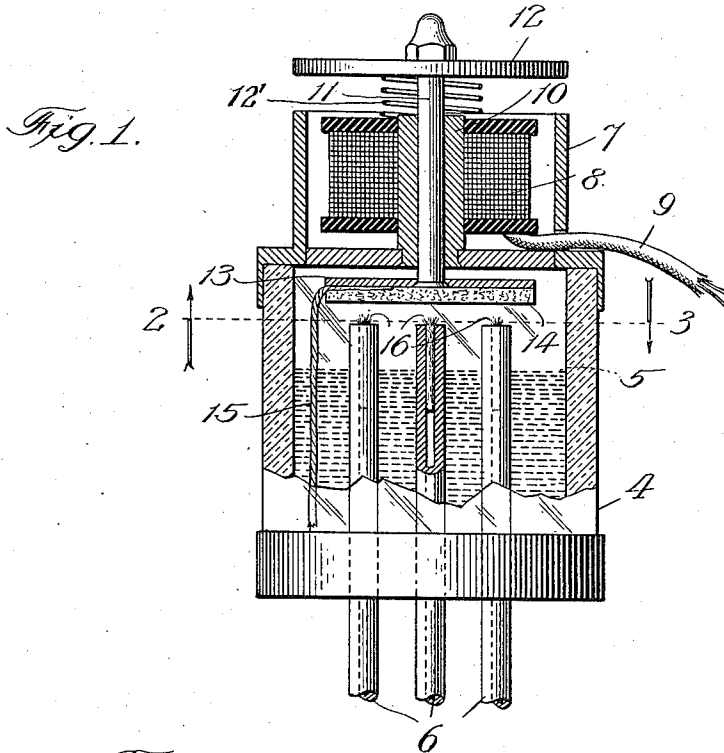


Fig. 2.

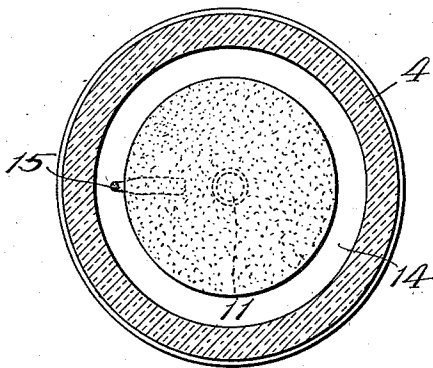
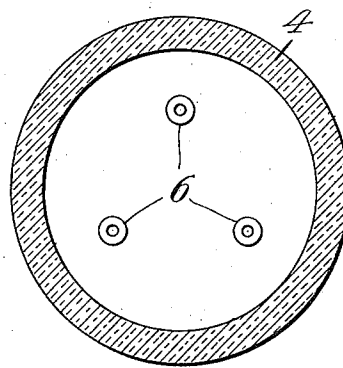


Fig. 3.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

HENRY K. SANDELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO MILLS NOVELTY COMPANY,
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LUBRICANT DEVICE.

1,024,150.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY K. SANDELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Lubricant Devices, of which the following is a specification.

My invention relates to an improvement in the class of devices for automatically oiling machinery, in which the feed of the lubricant from the oil-cup is controlled by an electromagnet in a normally open electric circuit closed periodically for energizing the electromagnet to operate the controlling means; and my improvement involves the use, in the connection referred to, of known means for conveying the oil from the cup to the distributing tube or tubes, leading to the machinery to be lubricated, through the medium of a wick or like device, suspended to hang in the cup from the inlet-end of each tube for conducting the oil into the latter by capillary attraction.

The object of my invention is to provide a construction of lubricant device operating on the two principles thus outlined, which shall adapt it for lubricating automatically delicate mechanism, such as that employed to operate the electric self-playing violin of Letters Patent No. 807,871, granted to me December 19, 1905, requiring comparatively little lubrication to keep it in smoothly running condition and to prevent gumming it with the oil.

In the accompanying drawing, Figure 1 is a broken view of my improved lubricant-device in vertical sectional elevation; Fig. 2 is a section on line 2, Fig. 1, and Fig. 3 is a section on line 3, Fig. 1.

The oil-cup 4 shown is of an ordinary kind with the oil-level of its contents indicated by the dotted line 5 in Fig. 1. Distributing or discharging tubes 6, of which three are represented, though any number thereof desired may be employed, depend through the bottom of the cup from above the highest permissible oil-level therein. A sleeve-like shield 7 rises from the top of the cup and houses an electromagnet 8 in an electric circuit, the wires of which, contained in a cable 9, are suitably connected with the electromagnet. The center 10 of the electromagnet-spool contains a vertical bore in which works the reciprocating stem 11 carrying on its outer end a spring-raised armature 12.

The spring is shown at 12' in Fig. 1. The stem carries on the lower end within the cup a head 13, preferably of disk-shape, having a pad 14 of absorbent material, such as felt, on its under face with a strip 15 of wick-material, or the like, depending from it into the oil in the cup. In the upper end of each tube is suspended a wick 16 to protrude beyond that end preferably in the frayed condition represented to expand it for supporting the wick in place and better adapt it to take oil.

By capillary conduction the wick 15 keeps the pad 14 saturated with oil from the supply thereof in the cup. With each closure of the electric circuit, which may be automatically caused at suitable predetermined intervals by electric contacts operated through the medium of the traveling music-sheet of the aforesaid instrument, the electromagnet is energized to attract the armature and thereby depress the saturated pad 14 against the protruding ends of the wicks 16 and thus wet them with the oil which runs down them into the tubes for the desired distribution in small quantity.

I realize that considerable variation is possible in the details of construction and combination of parts thus specifically shown and described, and I do not intend by illustrating a single specific or preferred form to limit my invention thereto; my intention being in the following claims to claim protection upon all the novelty there may be in the device as broadly as the state of the art will permit.

What I claim as new and desire to secure by Letters Patent is—

1. An electro-automatic lubricant device comprising, in combination, an oil-cup provided with a discharge-tube for the oil having its receiving end above the oil-level in the cup, an electromagnet on the cup, a reciprocating armature, a pad of absorbent material connected with the armature to be reciprocated in the cup relative to said tube-end, and a wick depending in the cup from said pad.

2. An electro-automatic lubricant device comprising, in combination, an oil-cup provided with a discharge-tube for the oil having its receiving end above the oil-level in the cup, a wick extending into the tube at said end, an electromagnet on the cup, a reciprocating armature, a pad of absorbent

material carried by the armature to be reciprocated in the cup relative to said wick, and a wick depending in the cup from said pad.

- 5 3. An electro-automatic lubricant device comprising, in combination, an oil-cup provided with a discharge-tube for the oil having its receiving end above the oil-level in the cup, a wick extending into the tube at
10 said end, a shield rising from the top of

the cup, an electromagnet surmounting the cup in said shield, a spring-raised armature having a stem extending through the electromagnet-spool into the cup, a pad-covered head on the inner end of said stem, and a wick depending in the cup from said pad.

HENRY K. SANDELL.

In presence of—

L. HEISLAR,

R. SCHAEFER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
