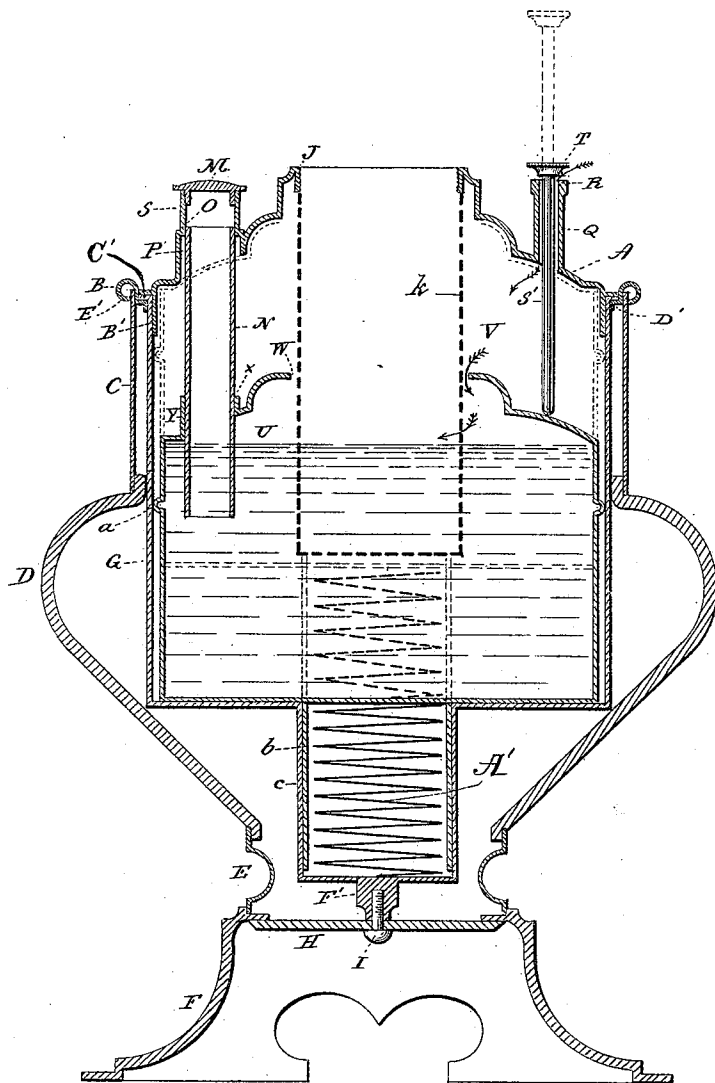


(No Model.)

R. T. BARTON.
LAMP.

No. 428,367.

Patented May 20, 1890.



Witnesses
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RICHARD T. BARTON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
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LAMP.

SPECIFICATION forming part of Letters Patent No. 428,367, dated May 20, 1890.

Application filed December 2, 1889. Serial No. 332,237. (No model.)

To all whom it may concern:

Be it known that I, RICHARD T. BARTON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Lamps; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and
10 which said drawing constitutes part of this specification, and represents a view in vertical central section of one form which a lamp embodying my invention may assume.

My invention relates to an improvement in
15 that class of oil-burning lamps in which the fount is counterbalanced so as to be raised as the oil is exhausted, and thus always maintain a uniform immersion of the wick in the oil, whereby the amount of oil supplied to the
20 flame is always proportioned to the draft provided to supply air thereto, the object of this invention being to provide for removing and burning any gases that may accumulate in the fount or about the wick, for indicating
25 the position of the fount at any time and therefore the amount of oil in it, and for filling the fount without removing the cover of the lamp-body.

Further objects of my invention are to improve, cheapen, and simplify the construction of lamps of the type above described.

With these ends in view my invention consists in certain details of construction and combination of parts, as will be hereinafter described, and pointed out in the claims.

As herein shown, the sectional lamp-body is composed of a removable top or cover A, a bearing-ring B, an upper band C, a porcelain shell D, a lower band E, a standard F,
40 and a lining-cup G, the said parts being held together, with the exception of the top or cover, which is removable, by means of a clamp H and a screw I, as will be further described. I would have it understood, however, that I
45 do not limit myself to the use of my improvements with a lamp-body constructed as shown and described, but hold myself at liberty to apply them to any lamp-body which may be adapted to receive them. The said cover is
50 formed higher at its center than at its edge and provided with a suitable threaded collar

J, for the attachment of the burner, which is not shown, and with a depending stationary perforated wick-containing tube K, located in line with the said collar and having its
55 lower end closed. As herein shown, the wick-containing tube is perforated throughout its length. If desired, however, only the lower end of the tube may be perforated. The said cover is also provided with a short upright tube
60 S, located upon its outer face and threaded for the attachment of the filling-cap M, and with a depending filling-tube N of smaller diameter than the cap-tube M and attached to a shoulder O, formed just below the thread
65 thereof, so as to form an annular space P between the cap-tube and the upper end of the filling-tube. The said cover is further provided with a small tube Q, having a shoulder R at its upper end, and forming a bearing for
70 a vertically-movable indicator consisting of a rod S', having a button T formed at its upper end. By preference the rod is graduated, but that is not essential. The said indicator-tube is made large enough to permit a current
75 of air to flow around the indicator and enter the fount, from which it will rise through the wick-containing tube to the burner, as will be more fully set forth later on. The said fount U is located in the chamber V,
80 formed by the lining-cup and adapted to play freely up and down therein. Its top is shaped to conform to the shape of the cover A, and provided with a central opening W to receive the wick-containing tube, and with an opening
85 X to receive the filling-tube, which plays in a short bearing-tube Y, attached to the top of the fount, and when the same is raised entering the annular space or chamber P, formed between the cap-tube and the upper
90 end of the filling-tube. The said perforated wick-containing and filling tubes are adapted in length to extend into the fount when the same is in its lowest position, so that the wick will then be immersed in the oil and the oil
95 surely carried to the fount. The extension of the filling-tube into the fount, as described, also keeps the fount from rotating in the lining-cup. By shaping the top of the fount to conform to the shape of the cover of the lamp-body economy of vertical space between the
100 flame and the oil is secured. A guiding ac-

tion between the fount and the cover is also obtained.

A bead *a*, thrown out from the side of the fount near the upper edge thereof, engages with walls of the lining-cup and guides the upper end of the fount, and prevents the same from tipping. The bottom of the fount is provided at its center with a tube *b*, made open at its lower end and adapted to enter a tube *c*, opening out of the center of the bottom of the lining-cup and closed at its lower end. These two tubes guide the lower end of the fount, and co-operate with the bead before mentioned in holding it in place. Under this construction, and particularly by means of the bead, the fount is guided in its vertical movement, but left free enough to act easily and with little friction. A spiral spring *A'*, interposed between the bottom of the fount and the closed end of the tube *c*, and inclosed by the said tubes, is provided for raising the fount as the oil is exhausted therefrom, the spring being adapted in power to be compressed to permit the fount to sink to its lowest position when full of oil, and to lift the fount at a rate exactly proportional to the rate at which the oil is exhausted from it.

The removable cover or top *A* is provided with an ordinary depending flange *B'*, which, when the cover is in place, fits into the upper end of the lining-cup, as shown. The edge of the cover rests upon the upper face of an outwardly-extending horizontal flange *C'*, formed at the upper end of the cup, and brazed to a shoulder *D'*, formed upon the inner edge of the bearing-ring *B*, the outer edge whereof is curved over to form a lip *E'*, under which the upper edge of the upper band *C* is fastened. By shaping the ring *B* as described it stiffens the lamp-body and enables very nice joints between it and the lining-cup and the upper band to be secured. A threaded stud *F'*, secured to the lower end of the closed tube *c*, receives the screw *I*, passing through the clamp *H*, which is braced against the interior of the standard and pulls against the upper face thereof through the lining-cup, the bearing-ring *B*, the band *C*, the shell *D*, and the band *E*.

As the fount is filled it slowly sinks down under the weight of the oil to the bottom of the cup, the indicator, the lower end of which rests upon the top of the fount, falling with it and indicating the filling of the fount and when to stop pouring in oil. When the fount is in its lowest position, the lower end of the wick-containing tube will be immersed for a predetermined distance in the oil. Now, when the lamp is lighted and the oil burned, the fount, being relieved of a part of its burden, will be raised by the spiral spring exactly in harmony with the exhaustion of the oil, so that the wick-containing tube, and hence the wick, will always have the same immersion in the oil, the level whereof is constant with respect to the wick-contain-

ing tube, but not to the fount. As the fount is raised so will the indicator be raised to indicate the gradual exhaustion of the oil and finally that it is all gone.

The current of air which, as before explained, passes down the indicator-tube finds its way over the top of the fount down into the interior thereof through the opening therein made for the wick-containing tube, through the perforations of which it then passes, and thence up through the burner to the flame. The draft thus established carries off any gases which may accumulate in the fount, and avoids the danger of their explosion and the annoyance of their odor when exhaled into the air. This draft also tends to keep the lamp cool and promotes the combustion of the oil and heightens the brilliancy of the flame. It may be added here that after the several parts of the lamp have been assembled they will not thereafter be disturbed in any ordinary use of the lamp.

It is apparent that in carrying out my invention some slight changes and alterations in the construction herein shown and described may be made. Thus the wick-containing tube might be attached to the burner instead of to the top or cover of the lamp, requirement being that it shall be stationary with respect to the fount. Nor is it necessarily made in the form of a perforated tube, as a container or cage adapted to confine the wick and to admit oil and air to it from the fount would act on the same principle.

I would therefore have it understood that I do not limit myself to the form of lamp represented and described herein, but hold myself at liberty to make such variations therefrom as fairly fall within the spirit and scope of my invention.

I claim—

1. In an oil-burning lamp, the combination of a removable cover or top having a filling-tube depending from it, a vertically-movable fount into which the tube extends in every position of the fount, and means for lifting the fount conformably with the exhaustion of oil therefrom, substantially as described.

2. In an oil-burning lamp, the combination, with a removable cover or cap, of an indicator mounted thereon, a vertically-movable fount with which the indicator rises and falls, and means for raising the fount conformably with the exhaustion of oil from the fount, substantially as described.

3. In an oil-burning lamp, the combination, with a removable top or cover, of a cap-tube located upon the outer face thereof and adapted to receive a filling-cap, a filling-tube depending from the lower face of the top or cover in line with the said cap-tube, a vertically-movable fount into which the filling-tube extends in every position of the fount, and means for raising the fount conformably with the exhaustion of oil from it, substantially as described.

4. In an oil-burning lamp, the combination,

with a cover or top, of an upright tube secured thereto, an indicator composed of a rod having a button at its upper end mounted in the said tube, a vertically-movable fount engaged by the lower end of the rod, and means for raising the fount conformably with the exhaustion of oil therefrom, substantially as described.

5 5. In an oil-burning lamp, the combination, with a vertically-movable fount, of a stationary wick-containing tube or cage adapted to admit air into its interior from the fount, an air-passage for admitting a current of air into the fount, and means for raising the fount conformably with the exhaustion of oil therefrom, substantially as described.

10 6. In an oil-burning lamp, the combination, with a vertically-movable fount provided near its upper edge with an outwardly-projecting bead, of a lining-cup with which the said bead engages to guide the fount, and means for raising the fount conformably with the exhaustion of oil therefrom, substantially as described.

15 7. In an oil-burning lamp, the combination, with a lining-cup having a tube opening out

of its bottom, of a vertically-movable fount having a tube depending from its bottom and entering the tube of the lining-cup, and means for raising the fount conformably with the exhaustion of oil therefrom.

30 8. In a lamp, the combination, with a bearing-ring shaped to form a depressed shoulder upon its inner edge and a curved elevated lip upon its outer edge, of a lining-cup having an outwardly-projecting flange formed upon its upper edge and resting upon the said shoulder of the ring, which is brazed to it, a band having its upper edge inserted under the curved lip of the ring, the said lip being closed down upon its outer face, and a removable cover, the edge whereof normally rests upon the upper face of the said flange and below the upper edge of the curved lip, which forms a bead-like ornament, substantially as set forth.

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Witnesses:

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