(No Model.) 2 Sheets—Sheet 1.

E. A. RIPPINGILLE.

Lamp.

No. 231,730. Patented Aug. 31, 1880.

Fig: 1.

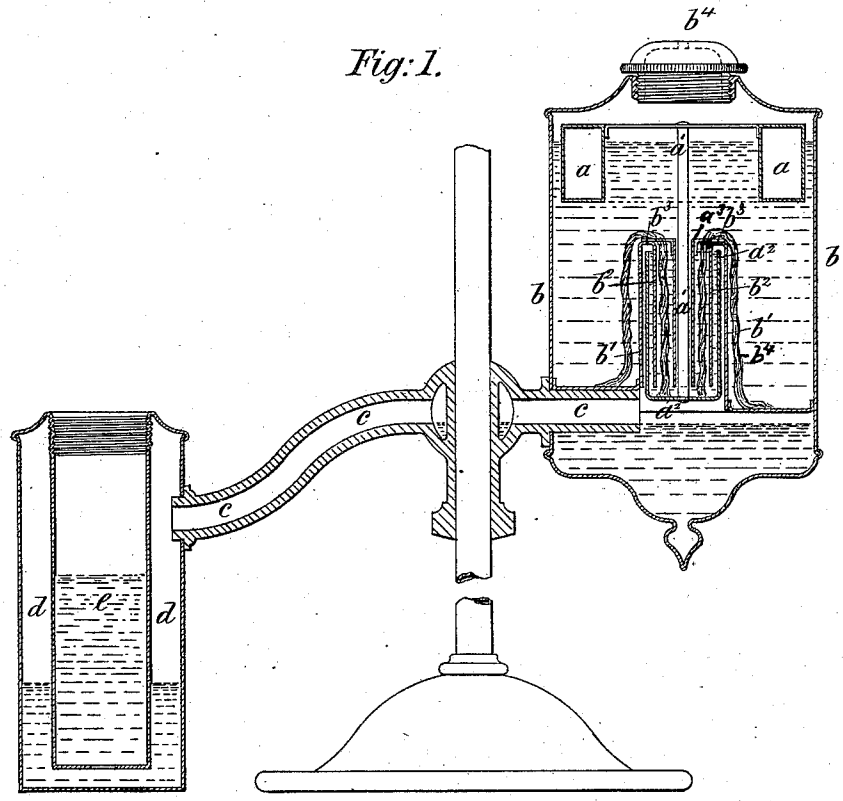
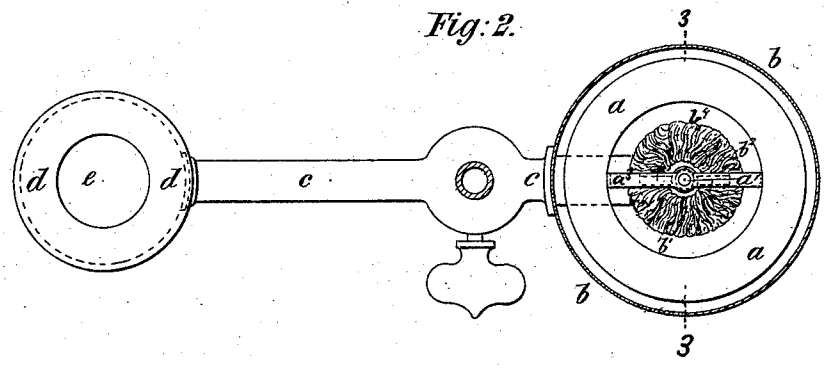


Fig: 2.



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(No Model.)

2 Sheets—Sheet 2.

E. A. RIPPINGILLE.

Lamp.

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Fig: 7

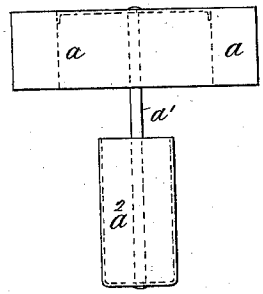


Fig: 5.

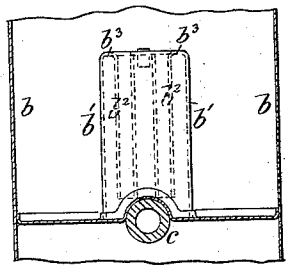


Fig: 3.

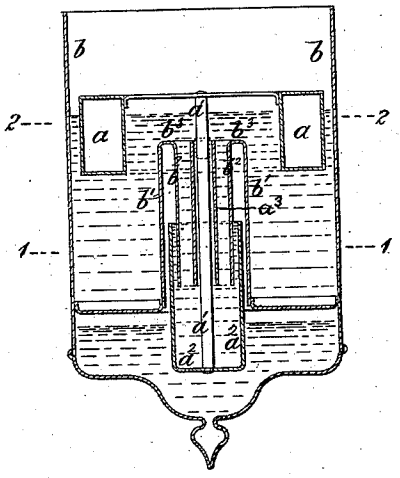


Fig: 6.

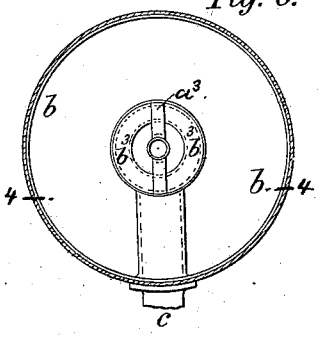
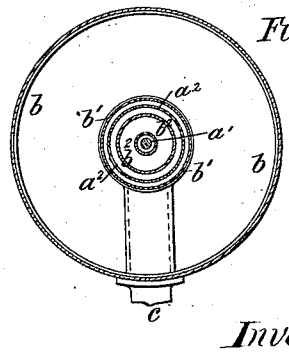


Fig: 4.



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UNITED STATES PATENT OFFICE.

EDWARD A. RIPPINGILLE, OF HOLBORN AND BIRMINGHAM, ENGLAND.

LAMP.

SPECIFICATION forming part of Letters Patent No. 231,730, dated August 31, 1880.

Application filed May 25, 1880. (No model.) Patented in England February 19, 1879.

To all whom it may concern:

Be it known that I, EDWARD ALEXANDER RIPPINGILLE, a subject of the Queen of Great Britain, residing at Holborn, in the county of Middlesex, and at Birmingham, in the county of Warwick, England, have invented certain new and useful Improvements in Reading or Student and other Lamps, (for which I have received Letters Patent in England, No. 668, dated February 19, 1879,) of which the following is a specification.

The invention has for its object improvements in reading or student and other lamps, and relates to an improved arrangement of parts whereby a regulated supply of oil is supplied to the well of the burner as required, while the necessity hitherto existing for removing the inner portion of the oil-cistern for filling the same is obviated; and in order that my said invention may be clearly understood and readily carried into effect, I will proceed, aided by the accompanying drawings, fully to describe the same.

In the drawings, Figure 1 is a vertical section, and Fig. 2 is a plan, of a reading-lamp constructed according to my invention. In Fig. 2 the cover of the oil-chamber is removed in order to show the interior thereof more clearly. Fig. 3 is a vertical section on the line 3 3, Fig. 2, and Fig. 4 is a horizontal section on the line 1 1 of Fig. 3. Fig. 5 is a vertical section on the line 4 4, Fig. 6, and Fig. 6 is a horizontal section on the line 2 2 of Fig. 3, showing the interior construction of the oil-chamber with the float and thimble removed therefrom; and Fig. 7 is an elevation of the float and thimble carried thereby.

In carrying my invention into effect I connect a float, *a*, resting on the surface of the oil in the reservoir *b*, by a central or other rod, *a'*, sliding in a tubular guide, a^3, to a cup or thimble, a^2, which works in an annular or other space between two concentric or other tubes, b' b^2, connected together hermetically at their upper ends by a continuous ring, b^3, and carried by the bottom of the oil-cistern *b*, and forming, with the cup or thimble a^2, an adjustable siphon or trap. Wicks b^4, of wire or other material, resting at one end on the bottom of the oil-cistern *b*, extend over the ring b^3, connecting the concentric tubes b' b^2 to the interior of the cup or thimble a^2, and maintain the supply of oil thereto by capillary attraction, even when the oil is low in the cistern—that is to say, below the top of the tubes b' b^2; but when the oil is above the top b^3 of such tubes b' b^2 it passes directly into such cup or thimble a^2.

The oil is conducted by a tube, *c*, to the well *d* of the burner, which well is formed around the wick-tube *e*, and is hermetically closed at the upper end, as shown, so as to cause the air contained therein to be trapped, and thereby to apply a force under the bottom of the oil-cistern *b*, by which means, as the oil is consumed and the pressure of the air in the well *d* and tube *c* is thereby reduced, a supply of oil is permitted to descend from the cistern *b* into the well *d*, as required.

The difference in level between the liquid in the wick-tube *e* and that in the annular space, *d*, surrounding it will be the same as the distance between the upper surface of the liquid in the reservoir *b* and the top of the suspended siphon-cup a^2.

When the lamp is first filled the level of the oil in the inner or wick tube, *e*, is higher than that in the annular space, *d*, surrounding it. This is due to the pressure of the air trapped under the thimble. This pressure gradually diminishes as the oil-receiver is emptied, so that when it is almost empty there would be little or no difference.

The excess of pressure of the air trapped within the supply-tube depresses the oil slightly below the lips or edges of the thimble or suspended siphon- cup, and thereby prevents the flooding of the burner.

I would here remark that this arrangement for giving a regulated supply of oil to the burner is applicable to various forms of lamps, and that the float and trap may be modified in form to suit different-shaped oil-containers, or for other reasons.

By the use of this invention the reservoir of such description of lamps may be filled while the lamp is burning through an opening in the top thereof provided with a screwed cover, b^4.

I have not shown a burner applied to the wick-tube *e*, as any suitable description of burner may be employed, as is well understood.

Having thus described the nature of my said

invention, and the mode in which I carry the same into effect, I would have it understood that what I claim is—

1. In a reservoir-lamp, the automatically-adjustable trap formed by cup a^2 and inverted cup b' b^2 b^3, the former being supported by a float, a, in the reservoir, and the latter communicating with said reservoir and with a trapped space beneath it, for the purpose set forth.

2. The combination of the float a, cup or thimble a^2, connected therewith, tubes b' b^2, carried by the bottom of reservoir b and connected together by the ring b^3, and the wicks b^4, with the tube c, well d, and wick-tube e, substantially as and for the purpose set forth.

ED. ALEXR. RIPPINGILLE.

Witnesses:

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