

No. 680,636.

Patented Aug. 13, 1901.

H. M. BRIGHAM & S. M. MEYER.
DEVICE FOR LIGHTING LAMPS BY ELECTRICITY.

(Application filed Oct. 26, 1898.)

(No Model.)

Fig. 1.

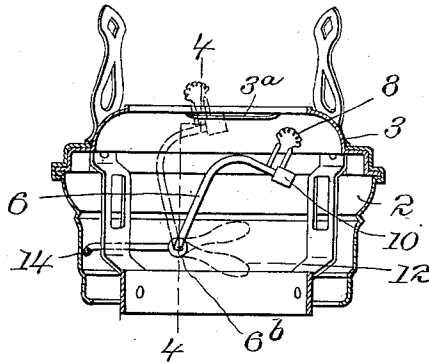


Fig. 2.

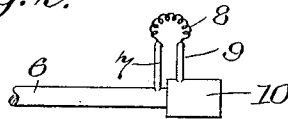
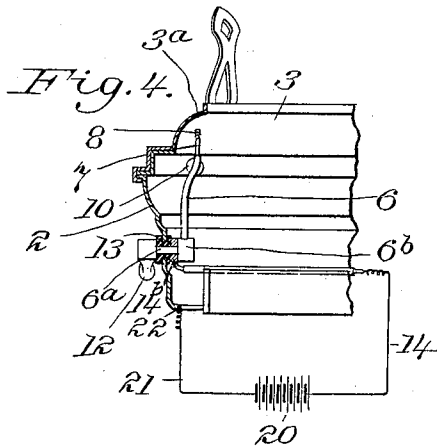
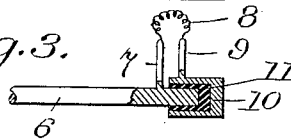


Fig. 3.



WITNESSES:

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DEVICE FOR LIGHTING LAMPS BY ELECTRICITY.

SPECIFICATION forming part of Letters Patent No. 680,636, dated August 13, 1901.

Original application filed February 5, 1898, Serial No. 669,237. Divided and this application filed October 26, 1898. Serial No. 694,603. (No model.)

To all whom it may concern:

Be it known that we, HENRY MARTYN BRIGHAM, a citizen of the United States, and SVEND MARTIN MEYER, a subject of the King of Denmark, both residents of the city and State of New York, have invented a new and useful Improvement in Devices for Lighting Lamps by Electricity, (being a division of an application, Serial No. 669,237, filed February 5, 1898,) of which the following is a specification.

The subject of our invention is a device comprising a rocking arm carrying at or near its extremity a resistance-coil of platinum wire or like resistance conducting device adapted to be rendered incandescent by a current of electricity and which by an oscillating movement is moved into proximity with the lamp-wick at one termination of its stroke, and at the same time closes the electric circuit through the resistance medium, and at the other extremity of its stroke retreats within the shell of the lamp-burner, so as to be concealed and also removed from proximity to the lamp-wick or flame and at the same time breaks the electric circuit, so as to render the battery inert.

In the accompanying drawings, Figure 1 is a vertical section of a lamp-burner, illustrating our invention and showing the lighting device in full lines in its retracted position and in dotted lines in its advanced or lighting position. Fig. 2 is an elevation, on a larger scale, of the extremity of the rocking arm and resistance-coil. Fig. 3 is a similar view, partly in longitudinal section. Fig. 4 is a vertical section on the line 4 4, Fig. 1.

2 represents the lamp-burner, and 3 the deflecting-cone thereof, which surrounds and surmounts the wick.

6 represents a tubular arm mounted in nearly vertical position within the lamp-burner and bent in nearly horizontal position at its extremity, where it carries an upwardly-projecting resistance-coil 8, which may be a wire or thin plate of platinum or other suitable metal adapted to be rendered incandescent by a current of electricity and capable of resisting destruction from the heat thereof and of the flame.

The arm 6 is insulated from the lamp-burner and has a limited rocking movement in a vertical plane, for which purpose it is mounted by a rock-shaft 6^a in an insulating-bushing 13 in the lamp-burner, as shown in Fig. 4, and has a plate 6^b in contact with a plate 14^b, which is connected by an insulated conducting-wire 14 with one pole of a battery 20 or other suitable source of electricity, the other pole of said battery being grounded by a conductor 21 in the shell of the lamp, as at 22. The purpose of the contact-plates 6^b and 14^b is to maintain electric connection between the insulated arm 6 and conductor 14, while permitting the aforesaid rocking movement of the arm 6 in a vertical plane, so that in one position the incandescent coil 18 may be withdrawn within the lamp cone or shell 3 and away from the flame or lamp-wick, as shown in full lines in Fig. 1, and in the other position the said incandescent coil may be thrown up in proximity with the lamp-wick, as shown in dotted lines. The incandescent coil 8 is mounted at its respective ends in posts 7 and 9, the first of which has direct metallic connection with the arm 6, while the post 9 is mounted upon a cap 10, mechanically fixed to the extremity of the arm 6 and electrically insulated therefrom by a suitable insulating material 11 capable of resisting heat. The movement of the arm 6 to throw up the incandescent coil carried thereby into lighting position is effected by means of an external handle 12, mounted on the insulated rock-shaft 6^a.

The construction is such that when the arm 6 is thrown up into the position shown in dotted lines in Fig. 1 the resistance-coil 8 is projected through an aperture 3^a in the cone 3 in close proximity to the lamp-wick, and at the same time the insulated cap 10, coming into contact with the metal shell or cone 3 of the burner, closes the electric circuit through the coil 8, rendering the same incandescent and igniting the wick. As soon as the handle 12 is released by the operator the arm 6, with the coil 8 mounted thereon, drops into the position shown in full lines in Fig. 1, breaking the electric circuit and retracting the coil within the cone or shell of the lamp-

burner, where it is not exposed to injury either by heat or violence.

Having thus described our invention, the following is what we claim as new therein
5 and desire to secure by Letters Patent:

1. The combination of the vibrating arm 6
mounted by an insulating-bushing 13 in the
shell of the burner, the cap 10 carried by the
vibrating arm 6 and insulated therefrom, the
10 incandescing coil 8, connected at one end
to the arm 6 and at the other to the insulated
cap 10 carried thereby, contact-plates
6^b and 14^b, one attached to the vibrating arm
6 and the other to an insulated conductor 14
15 connected with one pole of a suitable source
of electricity and a contact-surface (as the
lamp-cone 3) connected with the other pole
of the source of electricity and in position to
receive contact of the insulated cap 10 when

the coil 8 is thrown by the vibrating arm 6 20
into proximity to the lamp-wick, as explained.

2. The combination of the vibrating insulated arm 6 having an insulated metal cap 10
at one end, the incandescing coil 8 connected
at one end to the arm 6 and at the other end 25
to the insulated cap 10 carried thereby, the
lamp-cone 3 covering the vibrating arm 6 and
having an aperture 3^a through which the coil
is projected by the upward movement of the
arm, and a suitable source of electricity hav- 30
ing one pole connected to the insulated arm
6 and the other pole to the cone 3 with which
the insulated cap 10 contacts, as explained.

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Witnesses:

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