(No Model.)

J. C. CHAMBERS.

ELECTRIC LAMP LIGHTER.

No. 492,913. Patented Mar. 7, 1893.

Fig. 5.

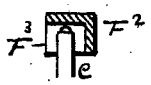


Fig. 1.

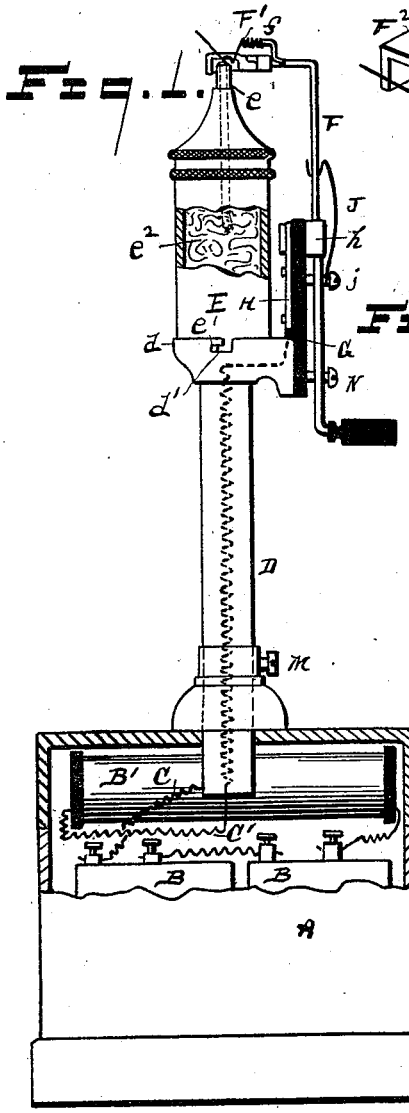


Fig. 3.

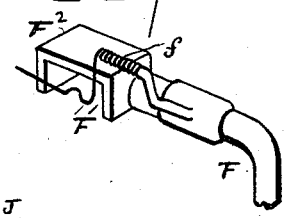


Fig. 4.

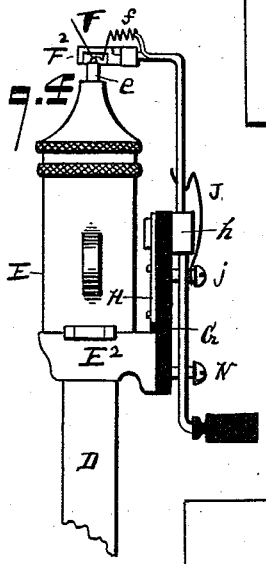
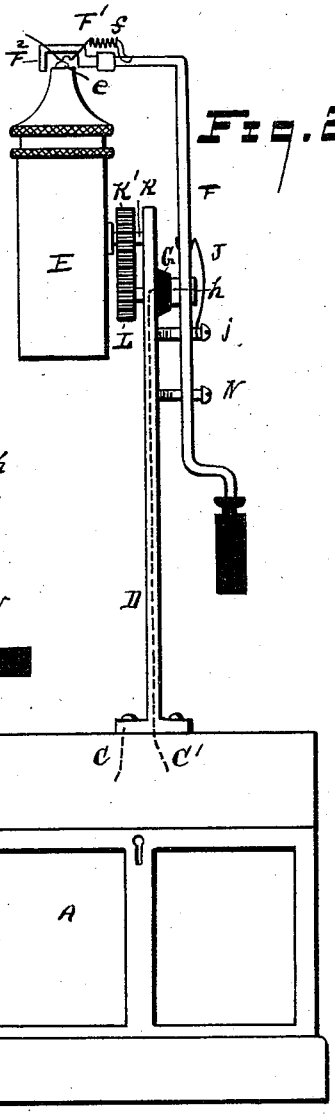


Fig. 2.



WITNESSES

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ELECTRIC LAMP-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 492,913, dated March 7, 1893.

Application filed November 21, 1892. Serial No. 452,621. (No model.)

To all whom it may concern:

Be it known that I, JOSEPHUS C. CHAMBERS, a citizen of the United States, residing at Detroit, county of Wayne, and State of Michigan, have invented a certain new and useful Improvement in Electric Lamp-Lighters; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in an electric lamp-lighter, and it consists of the devices and appliances, their construction, combination and arrangement as hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, showing parts in section. Fig. 2 is a side elevation, illustrating a modification of the invention. Fig. 3 is a detail view of the insulated cap. Fig. 4 is a partial side elevation illustrating a modification of my invention. Fig. 5 is another detail, showing the insulating cap in section adjacent to the upper end of the lamp.

The principle of my invention depends upon providing poles of an electric circuit adjacent to the end of the lamp to be lighted, the circuit being normally open, and in closing and breaking said circuit to produce an electric spark to ignite the lamp.

My invention contemplates preferably making the electric circuit through a properly constructed lamp and an adjacent arm, and in breaking said circuit by a movement of the lamp or arm, to produce an igniting spark adjacent to the lamp when it is desired to light the lamp.

To effect an economical use of electricity, and prevent an unnecessary running down of the battery, it will obviously be requisite to have the electric poles of the battery normally out of connection so that the circuit shall be open.

The object of my invention is to provide a device of this class of superior utility, which shall be simple, economical and efficient, and which may be readily operated.

I carry out my invention as follows:

A represents any suitable support.

B B is an electric battery. B′ is an induction coil connected therewith. C and C′ are the wires connected with said coil.

D denotes a standard, upon which rests a lamp E, provided with a wick tube, as at "*e*." The chamber of the lamp is constructed, preferably, of metal, one of the wires, as the wire C is electrically connected with said standard, the current, when the circuit is completed, passing through the standard and lamp and adjacent to the exposed portion of the wick. F denotes an arm which may be supported on said standard D, said arm extended into proximity to the lamp wick. The other wire, as the wire C′, is extended through said standard, and insulated therefrom, and electrically connected with the said arm.

G denotes insulating material, and H is a connecting metallic bar electrically uniting said wire C′ and the arm F, said bar being insulated from the standard D and from the lamp. The arm F may be fulcrumed upon the bar H, as at "*h*" and provided at its lower end with an operating handle. At the end adjacent to the lamp wick, the arm F is provided, preferably, with a piece of wire F′, the wire being coiled as shown at "*f*" between its outer extremity and the arm. The extremity of the arm projects normally over the wick, at which point it is also provided with an insulating cap F^2, and with an extension F^3, Fig. 5, the cap and its extension acting as an extinguisher. The lamp may have a removable engagement with the standard D′ the standard being constructed with a flanged seat "*d*" for the lamp, the flange being provided with a retaining recess as at "*d′*," the lamp being provided with a pin "*e′*" engaging said recess.

The operation of the device as now described is evident. By moving the arm F upon its fulcrum, the wire tip F′ is brought first into contact with the metal of the lamp adjacent to the wick, thereby completing the electrical circuit. As the arm F continues to be moved farther, said wire point is disconnected from the lamp producing an electric spark adjacent to the lamp wick, and igniting the lamp. J is a spring to automatically return the arm F to normal position out of electrical connection with the lamp and bringing the insulating cap and the extinguisher

into position to extinguish the lamp. By removing the spring from its bearing upon the arm it may be held out of normal position, allowing the lamp to burn freely for any length of time desired. The lamp may be thus removed from the standard and carried about if desired.

I do not limit myself to any particular material to supply combustion in the lamp, but find gasoline very suitable, and I prefer to saturate a supply of cotton, as indicated at "e^2," within the lamp, or analogous material, with the gasoline. Alcohol or other suitable material may however be used instead of gasoline.

As shown in Fig. 4, the lamp is hinged to the standard as at E^2. As so constructed the arm F may remain stationary and the lamp be moved so as to form electrical connection with the wire tip upon the arm F, and automatically light the wick. By this construction shown in said last named figure, either the arm or the lamp may be moved as may be desired to produce ignition.

In Fig. 2, the lamp instead of being directly supported upon the standard, is suspended upon the shaft K of a gear K′ meshing with a gear L, rigidly connected with the arm F. By this latter construction evidently, when the upper end of the arm is moved in one direction, the upper end of the lamp is moved in the opposite direction. In this case both the arm and lamp are movable. It will be seen, thus, that the lamp is self lighting and self extinguishing, by moving either, the arm F or the lamp. The lamp being movable, may be taken out from the support, and carried about.

The device is adapted for a wide variety of uses. It may conveniently be used as a cigar lighter, for lighting gas jets, and for other analogous purposes.

As shown in Fig. 1, the standard D is vertically adjustable in the base A, so as to raise and lower the lamp to a desired height. A set screw M may be provided to hold the standard in position. A screw "j" insulated from the standard D serves to hold the spring J in place, while an additional similarly insulated screw N serves as a stop for the arm D when automatically returned to normal position. The screws may be made of insulating material, or the standard D may be provided with insulating material.

What I claim as my invention is—

1. In an electrical lamp-lighter, the combination, with a lamp, the burner of which is formed into or provided with an electrode, an extinguisher formed into or provided with the opposite electrode, and means for establishing and breaking the electrical connection between said electrodes substantially as set forth.

2. In an electrical lamp-lighter, the combination, with a lamp, the burner of which is formed into or provided with an electrode an extinguisher movable adjacent to the burner and provided with the other electrode, and means for establishing and breaking electrical connection between said electrodes substantially as set forth.

3. In an electrical lamp-lighter, the combination, with a lamp, the burner of which is formed into or provided with an electrode, an extinguishing cap movable back and forth over said burner and provided with the other electrode at the rear whereby the movement of the cap in one direction ignites the light and the movement of it in the opposite direction extinguishes it, substantially as set forth.

4. In an electrical lamp-lighter, the combination with a lamp, the burner of which is formed into or provided with an electrode, an extinguishing cap, and an electrode, secured at the rear thereof, said last mentioned electrode comprising a wire, the portion intermediate its ends being coiled to increase its resiliency substantially as set forth.

5. In an electrical lamp-lighter, the combination, with a lamp, the burner of which is formed into or provided with an electrode, an arm pivotally secured adjacent to the lamp, one end of which is provided with an extinguisher, and an electrode, and means for automatically returning the arm to extinguish the light, substantially as set forth.

6. In an electrical lamp-lighter, the combination, with a lamp, the burner of which is formed into or provided with an electrode, an arm pivotally secured adjacent to the lamp and provided with the other electrode, and means for simultaneously moving said lamp and the arm in opposite directions whereby the two electrodes are caused to engage with each other, substantially as set forth.

7. In an electric lamp-lighter, a metallic supporting standard, a metal lamp, a metal arm insulated from the standard and lamp, and led into proximity to the lamp, an electric circuit through the arm, lamp and standard, having its poles adjacent thereto, said lamp and arm the one made movable in relation to the other, to make and break said circuit at said poles the circuit being normally open, substantially as described.

8. In an electric lamp-lighter, a lamp, a standard to support the lamp, a support for said standard, an arm led into proximity to the lamp, an electric circuit having its electrodes in proximity to the adjacent portions of the lamp and arm, said lamp and arm the one made movable in relation to the other, to close and break the circuit, said circuit being normally open, and said standard being adjustable in said support, substantially as described.

9. In an electric lamp-lighter, the combination of a lamp, a support therefor, an arm led into proximity to the lamp, an electric circuit having its electrodes at the adjacent portions of the lamp and arm, said lamp and arm the one made movable with relation to the other to close and break said circuit at said electrodes, said arm at its extremity ad-

jacent to the lamp provided with an insulated cap and extinguisher, substantially as described.

10. In an electric lamp-lighter, a lamp, a support therefor, an arm led into proximity to the lamp, provided with an extinguisher an electric circuit having its electrodes at the adjacent portions of the arm and lamp, said arm and lamp the one movable in relation to the other to close said circuit to ignite the lamp, and self retracting to extinguish the lamp, said circuit being normally open, substantially as described.

11. In an electric lamp-lighter, a lamp, a support therefor, an arm led into proximity to the lamp, provided with an extinguisher an electric battery, an electric circuit leading from said battery having its electrodes at the adjacent extremities of said lamp and arm, an induction coil in said circuit, said lamp and arm the one made movable with relation to the other, to close the circuit and ignite the lamp, and also to extinguish the same, said circuit being normally open, substantially as described.

12. In an electric lamp-lighter, the combination of a lamp, a support therefor, an arm overhanging the lamp tube, an electric circuit in electrical connection with the lamp, and with said arm, a metallic bar H connecting said arm with the circuit and insulated from the standard and lamp, said lamp and arm the one made movable with relation to the other, to close the circuit and ignite the lamp, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

JOSEPHUS C. CHAMBERS.

Witnesses:
N. S. WRIGHT,
JOHN F. MILLER.