

(No Model.)

2 Sheets—Sheet 1.

J. C. CHAMBERS.  
ELECTRIC LAMPLIGHTER.

No. 522,727.

Patented July 10, 1894.

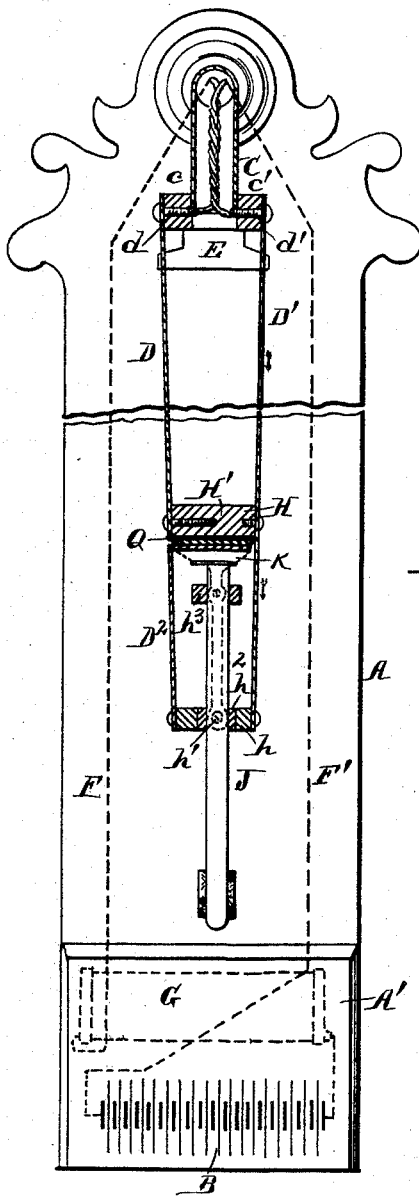


Fig. 1.

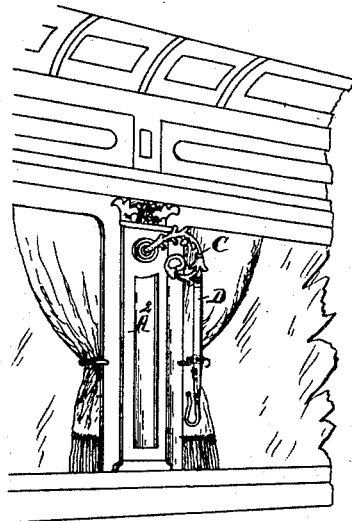


Fig. 3.

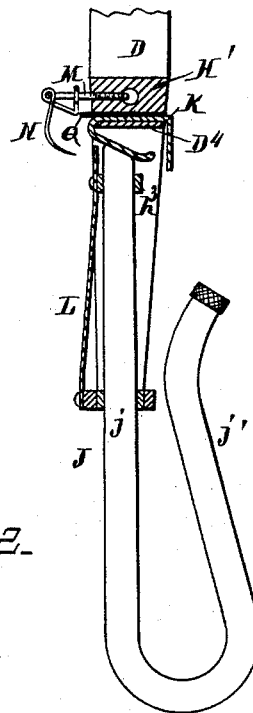


Fig. 2.

WITNESSES

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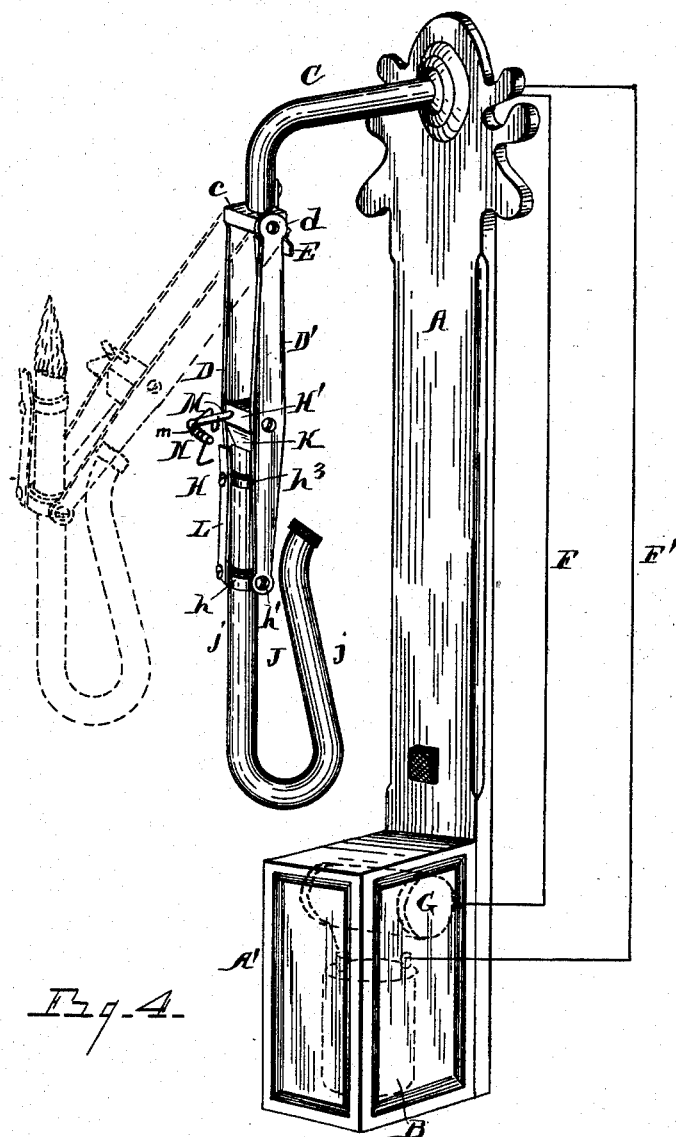
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# UNITED STATES PATENT OFFICE.

JOSEPHUS C. CHAMBERS, OF DETROIT, MICHIGAN.

## ELECTRIC LAMPLIGHTER.

SPECIFICATION forming part of Letters Patent No. 522,727, dated July 10, 1894.

Application filed February 10, 1894. Serial No. 499,818. (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, State of Michigan, have invented a certain new and useful Improvement in Electric Lamplighters; and I declare the following to be a full, clear, and exact description of the invention, 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 has for its object an improved electric lamp lighter, the same being especially adapted and designed for use as a cigar lighter, and it consists of the construction, combination and arrangement of devices and appliances hereinafter specified and claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a view in front elevation and vertical section illustrating my invention. Fig. 2 is a vertical section through the lamp hanger at right angles to that shown in Fig. 1. Fig. 3 illustrates my invention as applied to a palace or sleeping car, and Fig. 4 is a view of the same in perspective.

More particularly my invention is intended as an improvement upon a similar device to that embodied in a pending application made by Eberhard and Schimkatt, Serial No. 489,422, filed September 25, 1893.

I carry out my invention as follows:

A represents a supporting bracket provided at its base with a box or case A' inclosing a battery as indicated at B.

C is a supporting arm projecting forward from the bracket A, or any other supporting device to which the lighter is desired to be attached. From the outer end of the arm C, project hanger arms D and D', the hanger arms having a pivotal engagement at the outer extremity of the arm C, in any suitable manner. Thus, for example, an insulating block c may intervene between the upper ends of the hanger arms D and D' and the outer end of the arm C, to which block the arms D and D' are pivotally connected as shown at d. Back of the arms D and D', I prefer to locate a stop E to limit the rearward movement of the hanger arms D and D'.

Electrical conductors F and F' lead from the battery B or other source of electrical supply, preferably through an induction coil, indicated in dotted lines at G, and are preferably electrically connected with the arms D and D', as indicated in Fig. 1.

H is a lamp hanger preferably consisting of a cross bar H' with which the hanger arms D and D' are connected. This cross-bar H' is preferably made of porcelain, hard rubber, or analogous insulating material. One of the hanger arms, as the arm D, preferably terminates at the base of the cross bar H', while the other hanger arm, as the hanger arm D', projects downward beneath the cross bar H to aid in supporting a lamp J, having a swinging engagement therewith. An additional arm D<sup>2</sup> is engaged at its upper end with the cross bar H', to aid in supporting the lamp, when the arm D is terminated as above mentioned.

K is an extinguisher plate located between the upper end of the arm D<sup>2</sup> and the cross bar H'.

The lamp J is preferably constructed of two members, an elongated member j, and a curved member j', capable of receiving a wick and a suitable burning fluid, as gasoline, alcohol, &c. The member j of the lamp is pivotally supported intermediate its extremities between the lower ends of the arms D' and D<sup>2</sup>. I prefer that the lamp itself should be insulated from the hanger arms, and to this end it is pivotally supported upon an intermediate collar "h" as shown at "h'"; insulating material being engaged about the lamp member, interiorly to the collar, as shown at h<sup>2</sup>. Engaged upon the collar "h" is preferably provided a metallic or electrical conducting strip "L," leading upward adjacent to the upper end of the lamp, where it is again engaged with an additional collar h<sup>3</sup> about the lamp member j. This strip "L" forms one terminal of the electrical current, in any suitable manner. Thus the electrical circuit may be made through one of the conductors F and F' with the hanger arm D', through the collar "h" and the strip "L." The other conductor leading from the battery or other source of electrical supply, is connected with the other hanger arm, as with the arm "D," the arm D

at its lower end being electrically connected with a wire M projecting outward from the cross bar H, and supporting at its outer extremity a spring contact wire N, the lower end of the spring contact wire N, projecting adjacent to the upper end of the strip L. This contact wire as shown in Fig. 4 is wound in a coil *m* near its center and slipped on the arm *n* of the wire or post M. As above stated, one end of the wire projects downwardly into the path of movement of the contact strip L, while the other end extends toward the hanger H and is bent to form a loop *o* embracing the shank of the post M.

The operation of the device will now be understood. When the upper end of the lamp is thrown forward, relative to the hanger H, the upper end of the strip L forms electrical contact with the spring wire N, establishing an electrical circuit therethrough. As the lamp and the hanger are further separated, the one from the other, the electrical circuit is broken, adjacent to the exposed end of the lamp wick, causing a spark and igniting the lamp. When the operator is through using the lamp, it will automatically drop back into normal position, shown in Fig. 2, the upper end of the lamp resting against the extinguisher K, putting out the light, in which position the electrical circuit is broken, so that no current is running to waste when the lamp is unused, the circuit only being complete for an instant previous to igniting the lamp.

The hanger being supported on the swinging arms D and D', it will be obvious that the operator, when he wishes to ignite the lamp, may simply grasp the lamp with one hand and raise it, whereby its upper end is thrown forward relative to the hanger. The electrical contact is established and instantly broken, causing a spark and igniting the lamp. The lamp is not only self-retracting into normal position, but is also self-extinguishing.

It will be obvious that in seizing the lamp to raise it into position for lighting a cigar, the arms D and D' will swing from their pivotal connection at their upper ends with the arm C. In dropping the lamp, the arms D and D', together with the hanger H, and the lamp, will drop back into normal position, but the stop E will effectually prevent the lamp from striking against the bracket A or other analogous wall or support. Thus as shown in Fig. 3, instead of the bracket A, the arm C extends forward from one of the customary panels A<sup>2</sup> of a car. It will be seen that were the arms D and D' not prevented by the stop E from striking the panel, the panel would become seriously marred, but my improvement effectually prevents any such liability. Herein is seen a special advantage of supporting the hanger H upon the metallic arms or bars D, D', instead of having the hanger H supported upon a flexible cord or electrical conductor. The arm C is preferably made hollow to admit the conductors F, F'. From the point of their pivotal connection with the

arm C, to their lower extremities, the arms D D' are rigid.

In case the hanger arms, hanger and lamp are suspended in a car, the electrical conductors F F' may lead to the battery, or other suitable source of electrical supply located at any desired point. When so suspended in a car, the case inclosing the battery might be located under a car seat, or elsewhere as might be desired. The device in the form shown in Figs. 1 and 4, is complete in itself, and is adapted to be hung on the side of the wall of a building or room, but I do not limit myself to the employment of the bracket A, and the case A', connected therewith. The arms D and D' may be supported in any manner desired, or upon any suitable device within the scope of my invention. As so constructed, the lamp J does not need to be of electrical conducting material.

I do not limit myself to making the arms D D' a part of the electrical circuit, as, evidently the conductors F F' might be continued to the terminals L and N, directly, if desired. It will be seen that where the arm D<sup>2</sup> is employed, it is not in the electrical circuit. Should the electrical circuit be connected with said terminals outside the arms D D', the arm D might extend downward the same length as the arm D', the arm D<sup>2</sup> being in such a case, dispensed with.

To shield the wire M and to prevent its getting heated by the flame and thereby injuring the block H', I locate between the lamp and said wire, a piece of mica or other suitable material, shown at Q.

The device is obviously simple in construction and of superior utility.

What I claim as my invention is—

1. In a lamp lighter, in combination with a rigid supporting arm as C, a frame work including hanger arms and pivoted to said rigid supporting arm, a swinging lamp supported by said hanger arms and means for making and breaking electrical connection as the lamp is swung out of its normal position, substantially as described.

2. In a lamp lighter, a rigid support, a frame work pivoted to said support, a swinging lamp pivoted to said frame work, a contact device carried by the frame work, and a contact device carried by the lamp, whereby in the movement of the lamp contact is made and broken, substantially as described.

3. In a lamp lighter, a rigid support hanger arms D D', pivotally supported thereby, a hanger H, a contact device supported upon said hanger and electrically connected with one of said arms, an additional arm D<sup>2</sup> connected with the hanger, a lamp having a jointed connection with the lower extremity of the arms D' D<sup>2</sup>, and a contact strip L, said strip in electrical connection with one of the hanger arms, and said contact device in electrical connection with the other of said hanger arms, substantially as set forth.

4. In a lamp lighter, the combination of a

supporting arm C, hanger arms D D' having a jointed connection with said supporting arm, a stop to limit the swinging of said hanger arms in one direction, a swinging lamp supported by said hanger arms, and means to make and break the electrical connection adjacent to the upper end of the lamp, when the lamp is swung out of its normal position, substantially as set forth.

5 5. In a lamp lighter, a rigid support, rigid swinging hanger arms D, D', supported thereby a hanger H supported thereby, a conducting post secured to said hanger and in electrical connection with one of said hanger arms, a spring contact device carried by said post, a swinging lamp supported by said hangers, and carrying a contact device adapted to engage the contact device on said post during the swinging of the lamp substantially as described.

10 6. In a lamp lighter, the combination of the swinging hanger arms, a swinging lamp supported thereby, an insulated cross piece located between the hanger arms above the lamp, an electrical conductor having its terminal supported in said cross piece, a shield Q beneath said terminal, and an electrical conductor having its terminal adjacent to the

upper end of the lamp, substantially as set forth.

7. In a lamp lighter, in combination with the cross bar, the swinging lamp carrying a contact device, a conducting post M secured to the cross bar, and a spring contact device N loosely pivoted on said conducting post and normally in the path of movement of the contact device on the lamp, substantially as described.

8. In an electric lamp lighter the pivoted framework comprising the hanger arms D, D', the collar h, the lamp pivoted thereto and insulated therefrom, the contact strip L secured at one end to the collar h, the collar h<sup>3</sup> surrounding the lamp and to which the strip L, is secured near its upper end, a cross-bar H', secured to said hanger arms and a contact device carried by said cross-bar, adapted to engage the strip L, in the movement of 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,

OTTO B. BARNZIGER.