A. B. GATES.

LAMP.

APPLICATION FILED NOV. 10, 1914.

1,137,204.

Patented Apr. 27, 1915.

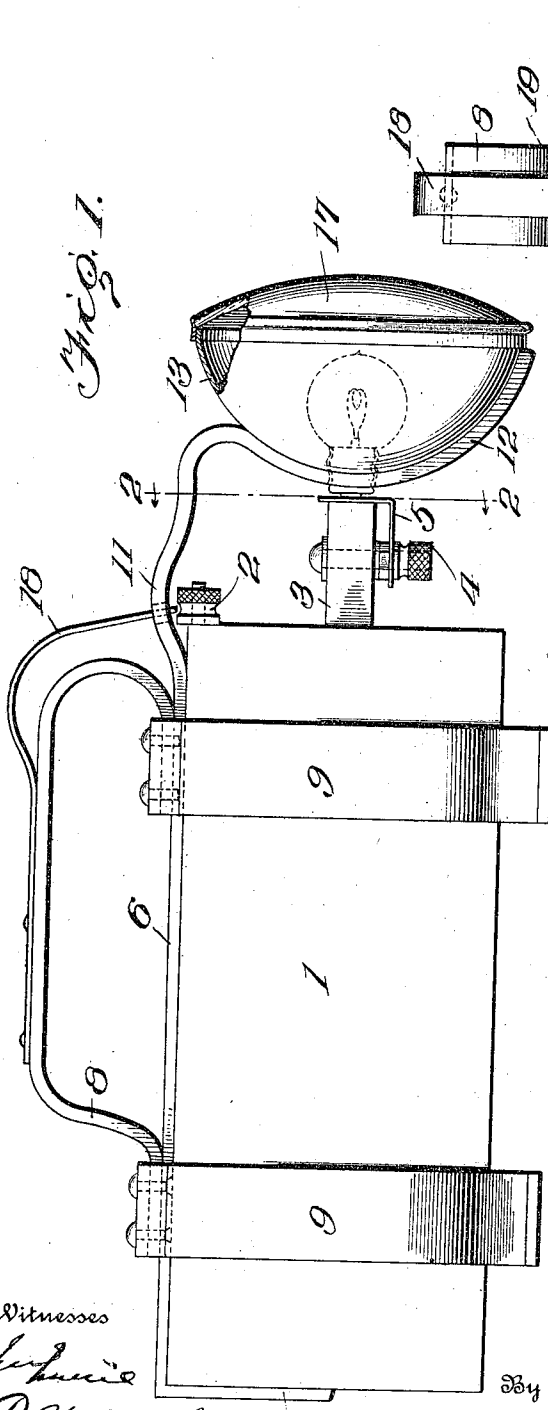


Fig. 1.

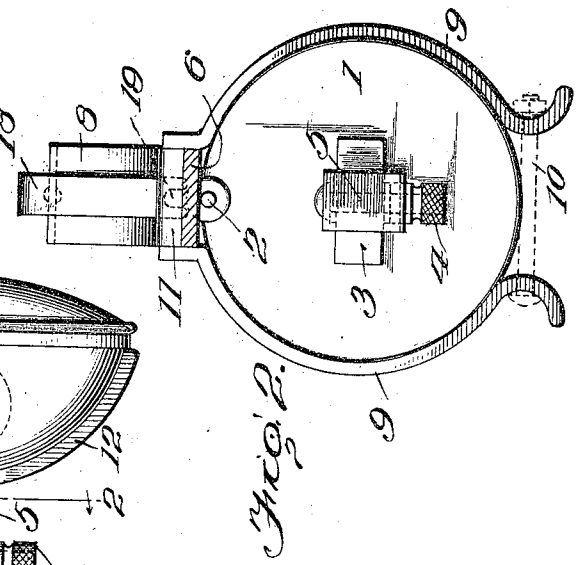


Fig. 2.

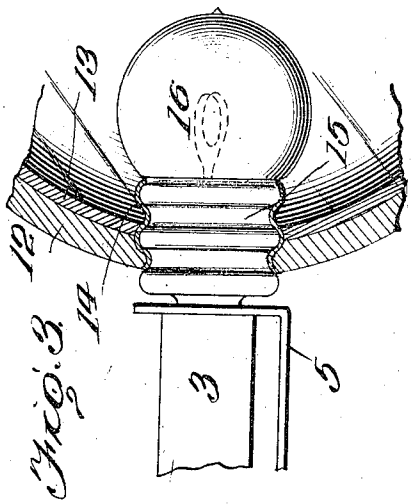


Fig. 3.

Witnesses

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LAMP.

1,137,204. Specification of Letters Patent. Patented Apr. 27, 1915.

Application filed November 10, 1914. Serial No. 871,324.

To all whom it may concern:

Be it known that I, ARCHIE B. GATES, a subject of the King of Great Britain, residing at Peterborough, Province of Ontario, Canada, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

This invention relates to lamps and has special reference to portable electric lamps designed to be carried in the hand and lighted or extinguished by a pressure of the thumb.

The primary object of my invention is to provide a lamp of simple and inexpensive construction which may be fitted to an ordinary dry cell.

A secondary object of the invention is to provide a novel means for supporting the lamp bulb and for controlling the circuit.

Other incidental objects will appear as the description of the invention proceeds.

The invention is fully illustrated in the accompanying drawing and consists in certain novel features which will be particularly pointed out in the claims following the detailed description.

In the drawings, Figure 1 is a side elevation of a lamp embodying my improvements with a portion of the reflector broken away and in section. Fig. 2 is a transverse section on the line 2—2 of Fig. 1. Fig. 3 is an enlarged detail longitudinal section.

In the drawings, the reference numeral 1 indicates an ordinary dry cell battery equipped with a binding post or nut 2 intimately connected with the zinc element of the cell so as to form an electric terminal. The carbon of the cell is projected beyond the end of the battery, as shown at 3, and to provide a perfect contact with the carbon, I mount in the end of the same a binding-post 4 which carries a terminal 5 in the form of an L-shaped metallic plate having one arm securely clamped on the binding post and the other arm fitting over and lying against the extremity of the carbon projection 3. I also provide a holder consisting of a bar or metallic strap 6 adapted to extend along the battery cell 1 and having one extremity turned down, as at 7, to fit against the bottom or rear end of the cell. A handle or loop 8 of similar material is rigidly secured to this bar 6 and projects laterally therefrom so that the device may be conveniently carried by the user. Secured to the bar 6, preferably at the points of junction of said bar with the ends of the handle 8, are holding members 9 which are preferably in the form of resilient jaws adapted to fit closely around the cell, as shown most clearly in Fig. 2, the ends of said jaws being projected somewhat from the cell and curved outwardly so as to facilitate the attachment of the jaws to the cell. When the device is made of heavy material, the resiliency of these jaws or clamping members will be sufficient to retain the cell in the holder but if lighter material is employed a clamping bolt, indicated in dotted lines at 10, may be inserted through the outturned extremities of the jaws so as to securely clamp the jaws around the cell as will be readily understood. The forward or upper end of the bar 6 is extended beyond the adjacent end of the cell and is deflected or bent slightly away from the cell, as shown at 11, so as to clear the binding post or terminal 2 and beyond said deflected or curved portion 11 the said extended end of the bar is carried downwardly and curved so as to form a seat 12 for the reflector which passes close to the terminal 5. The reflector 13 is sweated or otherwise rigidly secured upon and to the seat 12 and the reflector and said seat are provided with registering openings in which is fitted a metallic shell 14 which receives the socket 15 of an electric bulb 16. A lens 17 is carried by the outer end or edge of the reflector 13 so as to protect the bulb 16 and also divert the rays emanating from the lamp and projected from the reflector, as will be readily understood. The shell 14 should be somewhat shorter than the socket 15 so that when the lamp is turned home in the shell, as shown most clearly in Fig. 3, the inner terminal of the socket will bear directly against the terminal 5 and form a part of the electric circuit. The metallic outer portion of the lamp socket will form electrical contact with the shell 14 in the usual manner and the course of the current will be through the said shell and the bar 12 to the battery.

In order to provide a connection between the seat 12 and the battery and to permit the circuit to be broken or closed at will, I secure upon the handle 8 a leaf spring 18 which has its free end bent downwardly beyond the handle and extended through a slot or opening in the bent or curved portion 11 of the main member of the holder. As shown in Fig. 1, the extremity of this leaf

spring will lie close to the binding post 2 so that a slight pressure upon the bend of the spring will force its extremity against the said post whereupon the circuit will be completed and the lamp will be lighted. To permit a more perfect contact between the said spring and the binding post or terminal, I form a notch 19 in the end of the spring which is adapted to engage the grooved portion of the nut or to fit around the screw or bolt of said terminal. If it be desired to have the lamp permanently lighted, the nut may be loosened sufficiently to permit the end of the spring to fit around the bolt or screw and the nut then turned home so as to secure the spring permanently in engagement with the post.

It will be readily understood from the foregoing description taken in connection with the accompanying drawing that I have provided an exceedingly simple structure whereby any ordinary dry cell may be utilized to supply current to a small electric lamp and that the complete device may be manufactured at a very slight cost. The device is light so that it may be easily carried and the circuit closing and breaking spring 18 may be easily manipulated by the thumb of the hand in which the device is held. The reflector will be supported directly in front of the terminal 5 but out of contact with the same and when a lamp has been burnt out it may be removed and a new lamp substituted very easily and in a very short period of time. The outturned extremities of the jaws 9 constitute feet for supporting the device when it is not in use. The lens may be of any preferred style and the particular form of the reflector is immaterial.

Having thus described the invention, what is claimed as new is:—

1. A device for the purpose set forth comprising a bar adapted to extend along a cell and having one end projecting beyond and across the cell to form a lamp support in proximity to one terminal of the cell, clamping jaws projecting laterally from said bar to engage around the cell, and a circuit closer co-acting with the lamp support to make or break a circuit through the other terminal of the cell.

2. A device for the purpose set forth comprising a bar having one end bent laterally to extend under an electric cell and its other end projected beyond said cell and extended across the same to form a lamp support, jaws secured to said bar and adapted to engage and hold the cell, a terminal secured upon one member of the cell adjacent the lamp support, and a circuit closing member coacting with the lamp support to make or break a circuit through the other element of the cell.

3. A device for the purpose set forth comprising a bar adapted to extend along a cell and having one end projected beyond and across the cell to form a lamp support, clamping jaws secured to said bar and adapted to engage around the cell, a handle secured to the said bar, and a circuit closing or breaking member secured upon the said handle and adapted to engage a terminal of the cell.

4. A device for the purpose set forth comprising a bar adapted to extend along an electric cell and having one end projected beyond and across the cell, a shell rigid with the said bar and adapted to receive an electric lamp, an electric terminal secured upon one element of the cell immediately adjacent said shell and adapted to be engaged by a terminal of said lamp, and a circuit making or breaking plate adapted to form an electrical connection with the other element of the cell and coact with the said bar to complete a circuit through the lamp.

5. A device for the purpose set forth comprising a bar adapted to extend along an electric cell and having one end extended beyond and across the cell and provided with an opening adjacent a projecting element of the cell, a shell secured in said opening and adapted to receive an electric lamp and form an electrical connection therewith, the said shell being so disposed that when the lamp is secured therein it will form an electrical connection with the adjacent element of the cell, a binding post on the other element of the cell, and a leaf spring extended through the said bar and adapted to engage said binding post.

In testimony whereof I affix my signature in presence of witnesses.

ARCHIE B. GATES. [L. S.]

Witnesses:

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A. B. MCMAHON,

J. L. MUDWILL.