

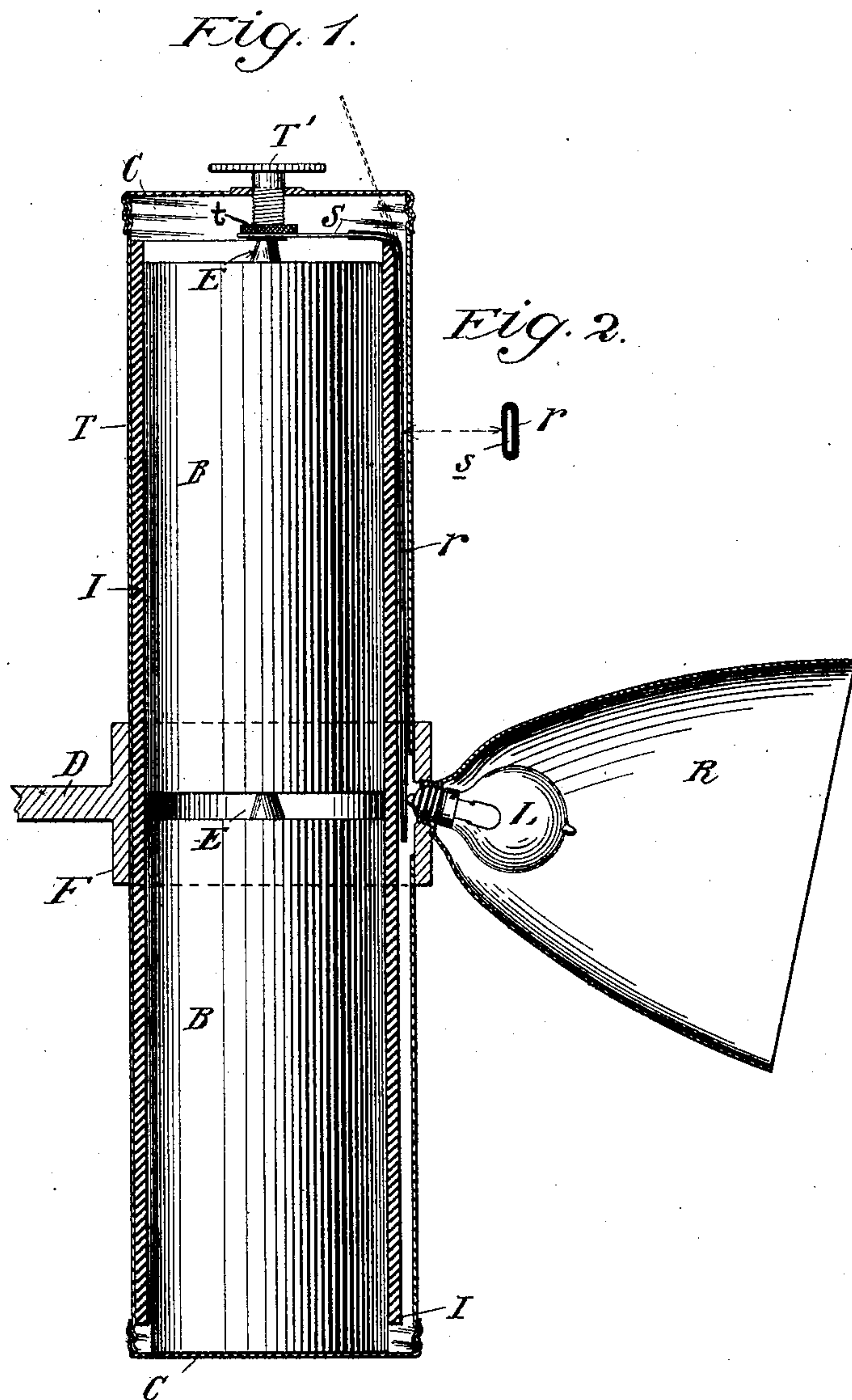
No. 614,318.

Patented Nov. 15, 1898.

O. T. BUGG, JR.
PORTABLE ELECTRIC LAMP.

(Application filed Mar. 15, 1898.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

OWEN T. BUGG, JR., OF NEW YORK, N. Y.

PORTABLE ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 614,318, dated November 15, 1898.

Application filed March 15, 1898. Serial No. 673,909. (No model.)

To all whom it may concern:

Be it known that I, OWEN T. BUGG, Jr., a citizen of the United States, residing at New York, in the county of New York and State of New York, have made a new and useful Invention in Portable Electric Lamps, of which the following is a specification.

My invention has for its object to provide a portable electric lamp which shall have a minimum weight and shall utilize a single inclosing case as a conductor between the electrodes of the battery and the terminals of the lamp carried or supported by the case.

My invention will be fully understood by referring to the accompanying drawings, in which—

Figure 1 illustrates in sectional view a full-sized portable lamp embodying my improvements, and Fig. 2 is a sectional view taken through the insulated branch conductor which connects one electrode of the inclosed battery with the inner terminal of the lamp itself.

Prior to my invention portable electric lamps had been constructed in which inclosed battery-cells were placed one upon another and two inclosing conducting-casings utilized for completing the circuit between the electrodes of the battery-cells and the terminals of the lamp itself.

My invention contemplates the utilizing of a single tubular metallic inclosing casing which acts as a support for the lamp and its reflector and also as a conductor from one electrode of the inclosed battery, while the other electrode is connected by an insulated conductor inclosed within the casing and held between it and a loosely-fitting non-conducting tube which surrounds and insulates the battery cell or cells.

Referring now to the drawings in detail for a full and clear understanding of my invention, such as will enable others skilled in the art to construct and use the same, T represents a tubular metallic casing, screw-threaded at its opposite ends, as shown, and provided with removable screw-threaded caps C C.

I represents a tubular insulating-lining of an outer diameter approximating that of the tubular casing T and an inner diameter adapted to receive one or more battery-cells hav-

ing conducting containing-cups B B, which constitute, say, the positive electrode of such cells, E E being negative electrodes thereof. The lower cup B of said cells rests normally against the inner surface of the lower removable metallic cap C, while the bottom of the upper cell rests upon the electrode E of the first-named cell.

L represents an ordinary incandescent lamp secured in the usual manner by a screw-threaded socket within a metallic ring F, which closely fits about the central portion of the tubular casing T and sustains also the reflector R, said metallic ring making electrical contact with one terminal of the lamp and with the inclosing casing.

D represents a part of a standard for securing the entire lamp to a bicycle or vehicle in the usual manner.

s represents a flat strip of metal, such as copper, surrounded throughout a major portion of its length by an insulating medium *t*, such as soft rubber, the lower end of said strip being bared, so as to constitute an electrical contact for the inner terminal of the lamp L, the upper end thereof being hinged, as shown, so that when bent down into the position shown in full lines against the upper electrode E the lamp will be in circuit with the battery, and when released on removal of the cap C it will assume the position shown in dotted lines.

T' represents a screw-threaded switch-controlling knob secured to the upper cap C, and *t* is an insulating-washer glued or otherwise secured to the lower end of said screw-threaded switch after the same is put in position.

The operation of my improved lamp is obvious, it being apparent that when the battery-cells are in the position shown and the thumb-screw T' secured in its lower position, so that the strip s bears against the electrode E, a sufficient current will flow from the battery in the direction of the arrow through the upper electrode E, strip s, inner terminal of the lamp L, outer terminal thereof, through the metallic ring F, tubular casing T, to the lower cup-electrode B of the lower cell, through the inner electrode E thereof, and by the upper cup-electrode B to the starting-point, thereby causing the lamp to glow.

Instead of inclosing the flat conducting-

strips between the insulating-tube I and the inclosing casing T it might be embedded in the body of the insulating-tube and said tube cut away at the proper point for receiving the contact-pressure of the inner terminal of the lamp L.

The details of construction might be varied in other respects and still not materially depart from the spirit of my invention, the most generic feature of which lies in the utilizing of a single conducting-casing with one or more inclosed battery-cells insulated therefrom by a tubular lining and electrical connections between said cell or cells and a lamp carried by the casing.

I am aware of United States Patent to S. M. Meyer, No. 595,327, granted December 14, 1897, for an electric igniting device, in which is shown and described a cylindrical casing inclosing two battery-cells resting one upon the other and the lower one upon a conducting spiral spring and plate wholly insulated from the lower base of the containing casing, said plate being in turn connected directly to an electrical conductor the upper end of which connects with a stationary contact at the top of the casing, and I make no claim hereinafter broad enough to include such a structure, my most generic claim being directed to a portable electric lamp having a tubular conducting-casing provided with an insulated lining and inclosing an electric battery one electrode of which is connected directly with or sustained directly by the lower end of the casing itself, while the upper end thereof is connected through a switch-controlling device connected in turn to one terminal of an electric lamp carried or supported by the conducting-casing, the other terminal of said lamp being electrically connected with the casing itself, the entire arrangement being such that the inclosing casing constitutes one conductor from one pole of the battery to and through the lamp, while the other pole of said battery is connected to a conductor electrically connected with said lamp.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A portable electric lamp having a single tubular conducting-casing and an insulating-lining therefor, in combination with one or more battery-cells electrically connected with the casing at its lower end and one terminal of an electric lamp carried also by the casing, together with an electrical conductor connecting the upper pole of the battery with the remaining terminal of the lamp, substantially as described.

2. A portable electric lamp consisting of a single tubular conducting-casing provided with removable conducting-caps at its oppo-

site ends, said conducting-casing having an insulating-lining; one or more battery-cells, one electrode of which makes electrical contact with the lower or bottom removable conducting-cap, while the other electrode thereof is connected with a conductor insulated from the exterior casing and the upper conducting-cap, in combination with an electric lamp, one terminal of which is connected directly to said conductor and the other to the conducting-casing, substantially as described.

3. A portable electric lamp consisting of a conducting or metal casing provided with removable conducting-caps at its opposite ends, a tubular insulating-lining and one or more inclosed battery-cells, one electrode of which is connected to the lower removable conducting-cap, in combination with an insulated conductor located between the casing and the interior lining, together with an electric lamp one terminal of which is connected directly to the casing and the other adapted to be connected with said conductor and a switch for connecting the before-mentioned conductor to the remaining electrode of the battery, substantially as described.

4. A portable electric lamp consisting of a single conducting-casing carrying an electric lamp, one terminal of which is in permanent electrical contact therewith; an interior non-conducting lining and one or more battery-cells; one electrode of which is connected to the conducting-casing together with an insulated conductor adapted to be connected to the remaining terminal of the lamp, and a thumb knob or switch adapted to cause the free end of said conductor to bear against the remaining terminal of the lamp, substantially as described.

5. A portable electric lamp consisting of a tubular conducting-casing T provided at its opposite ends with removable caps C C; an insulating tubular lining I inclosing one or more battery-cells, one electrode of which is in electrical contact with the casing; an electric lamp secured to and in electrical contact with the conducting-casing; an insulated conductor located between the casing and the insulated lining and adapted to connect with the remaining terminal of the lamp, the free end of said conductor being bent over the insulating-lining and held in contact with the remaining electrode of the battery by a thumb-screw T' carried by the upper removable cap C, substantially as described.

In testimony whereof I have hereunto subscribed my name this 12th day of March, 1898.

OWEN T. BUGG, JR.

Witnesses:

CHARLES J. KINTNER,
EDWARD C. ROWLAND.