No. 733,766. PATENTED JULY 14, 1903.

M. SUTHERLAND & E. MARCUSON.

COMBINED PORTABLE ELECTRIC LAMP AND BATTERY.

APPLICATION FILED APR. 11, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 2.

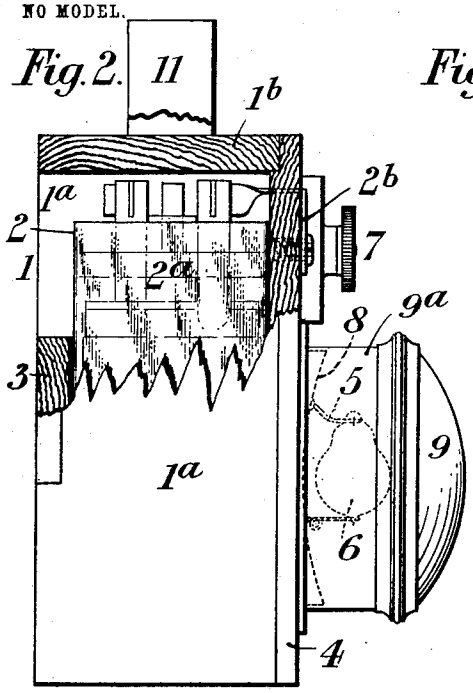


Fig. 1.

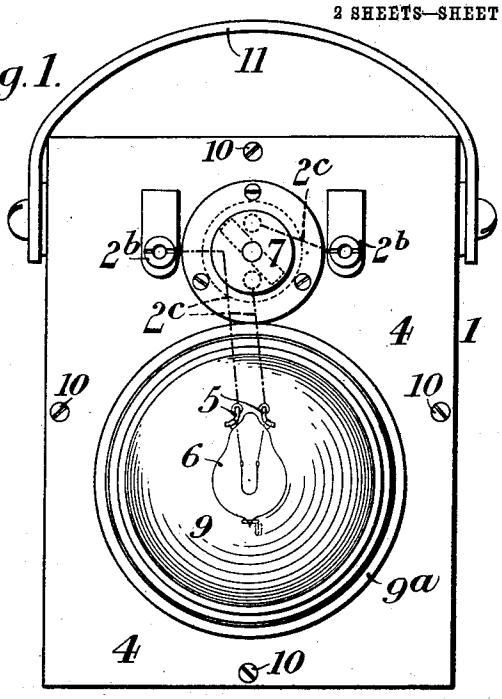


Fig. 4.

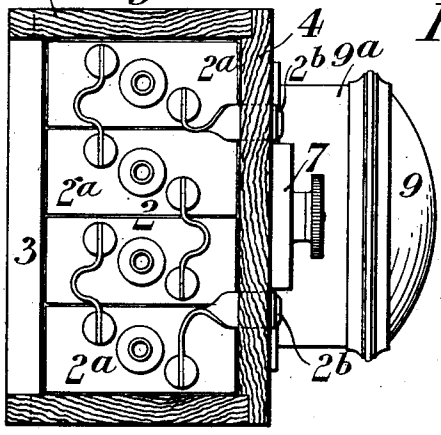


Fig. 3.

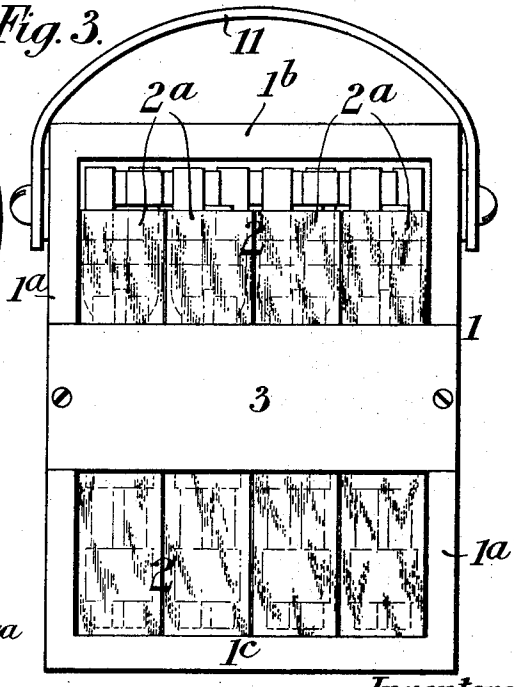


Fig. 6.

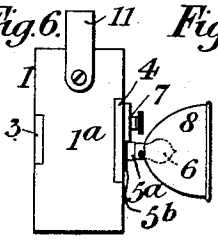
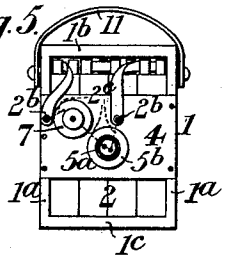


Fig. 5.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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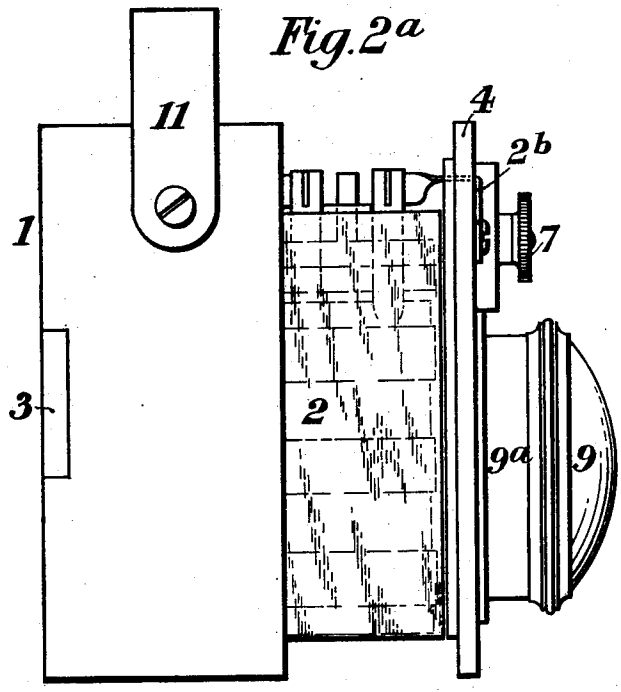
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COMBINED PORTABLE ELECTRIC LAMP AND BATTERY.

APPLICATION FILED APR. 11, 1902.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2a



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No. 733,766. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

MALCOLM SUTHERLAND AND ELIAS MARCUSON, OF LONDON, ENGLAND.

COMBINED PORTABLE ELECTRIC LAMP AND BATTERY.

SPECIFICATION forming part of Letters Patent No. 733,766, dated July 14, 1903.

Application filed April 11, 1902. Serial No. 102,468. (No model.)

To all whom it may concern:

Be it known that we, MALCOLM SUTHERLAND and ELIAS MARCUSON, of 61 Chandos street, Strand, London, England, have invented certain new and useful Improvements in a Combined Portable Electric Lamp and Battery; and we do hereby 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.

This invention has for its object to provide a combined portable electric lamp and battery, which shall be very readily accessible for inspection and repairs and readily taken apart and put together again.

In the accompanying drawings, which are to be taken as part of this specification and read therewith, Figure 1 is a front elevation of one form of the improved device; Fig. 2, a side elevation of the device shown partly broken away; Fig. 2^a, a side elevation of the device, showing the battery partly removed from the case; Fig. 3, a rear elevation of Fig. 1; Fig. 4, a sectional plan of the same device; and Figs. 5, and 6, drawn to a scale smaller than that to which the other figures are drawn, are respectively a front and a side elevation of another form of the device, Fig. 6 showing a lamp and reflector which are omitted from Fig. 5.

Similar numerals refer to similar parts throughout the several views.

In carrying out our invention in the manner represented in Figs. 1, 2, 3, and 4 we provide a case 1, consisting of two vertical sides 1^a 1^a, a top 1^b, and a bottom 1^c, all of which are permanently secured together, so that irrespective of any pieces which may be fixed to the back or front the said case will possess the strength and rigidity necessary to enable it to support the weight of the battery 2 contained within it.

The battery 2 may be of the primary type, though, as will be obvious, a secondary or storage battery by reason of its greater relative compactness is more suitable for the purposes of the present invention. Such being the case, we have represented a secondary or storage battery in the device shown in the drawings.

The battery 2, consisting of any desired number of cells 2^a 2^a, is adapted to fit nicely between the two side walls 1^a 1^a and the top 1^b and bottom 1^c, and to prevent it from shifting to any appreciable extent in the only other possible directions—viz., backward and forward—a batten 3 is secured to the back of the case 1, and a front 4, hereinafter called the "case-front," is secured to the front of the said case. The batten 3 is preferably sufficiently narrow to leave the greater part of the battery exposed, as shown most clearly in Fig. 3, and the case-front 4 is preferably, though, as hereinafter described, not necessarily, of the same size as the case 1, so as to close it in entirely at that part, as shown in Figs. 1, 2, and 4. On the case-front is provided a lamp-holder 5 of any suitable construction for supporting a lamp 6 and a switch 7 for turning the lamp on and off; also, if desired, a reflector 8, a lens 9, and lens-mount 9^a, all as shown in Figs. 1, 2, and 4.

The case-front 4 is secured to the case 1 by any suitable fastening devices which are capable of being readily disengaged. Four screws 10 10 are shown in Fig. 1 as a convenient means of obtaining this result. The two battery-terminals 2^b 2^b are secured to the case-front 4, and, as represented in dot-and-dash lines in Fig. 1, all the necessary electrical connections 2^c 2^c between the said terminals 2^b 2^b, switch 7, and lamp 6 are also provided on the case-front 4. By this arrangement it is possible after the screws 10 10 have been withdrawn to remove the case-front 4 from the case, as shown in Fig. 2^a, together with the battery 2 and all the electric fittings connected with the battery, without in the least disturbing any of the electrical connections. The battery 2 being thus rendered accessible at all parts and its working condition remaining undisturbed every facility is afforded for testing the circuit and locating any "fault" which may be suspected to exist therein.

When a secondary or storage battery is used, we prefer to form the containing-cells 2^a 2^a thereof of transparent material, such as transparent celluloid, so as to enable the battery elements to be visible through them, as indicated in Figs. 2 and 3.

Instead of the case-front 4, as shown in

Figs. 1, 2, and 4, being of the same size as and closing in the whole of the front of the case 1 it may, as shown in Figs. 5 and 6, be of less size, so as to leave the upper and lower portions of the battery 2 exposed. In this arrangement the battery-terminals 2^b 2^b are secured to the case-front 4, the same as in the previous example; but instead of passing through holes in the case-front, as in that example, they pass over the upper edge thereof, as represented in Fig. 5. As this modification provides less accommodation for the fixing thereon of the electrical fittings the latter are of a correspondingly-reduced size. Thus, for example, the lamp-holder 5^a is of the ordinary socket form and is secured to the case-front by a flange 5^b, as shown in Fig. 5.

As the object of only partially closing in the back or front of the case is to leave portions of the battery always exposed and accessible it is advantageous to provide for this exposure and accessibility at both back and front, as in the device shown in Figs. 5 and 6; but either the back or front may be completely closed in, while the front or back opposite to such closure is only partially closed.

To render the before-described devices conveniently portable, each is provided with a leather or other handle 11, which is secured to the sides 1^a 1^a of the case 1.

When the battery is of the secondary type, the charging thereof may be effected by first turning off or opening the switch 7, in which position it is shown in Fig. 1, and then connecting the terminals of the charging-circuit with the two battery-terminals 2^b 2^b.

We claim—

1. The combination with an electric battery, a case therefor, and a suspension-handle for the case, of a case-front removable from the case, fastenings for securing the case-front to the case, battery-terminals, a lamp-holder, switch, lens-case and reflector, and electric conductors connecting the lamp-holder and switch with the battery-terminals, the said battery-terminals, lamp-holder, switch, lens-case, reflector and conductors all being secured to the case-front, a lamp in the lamp-holder and a lens in the lens-case substantially as set forth.

2. The combination with an electric battery, and a case therefor, of a case-front removable from the case, fastenings for securing the case-front to the case, battery-terminals, a lamp-holder and switch, and electric conductors connecting the lamp-holder and switch with the battery-terminals, the said battery-terminals, lamp-holder, switch and conductors all being secured to the case-front and removable with it from the case substantially as set forth.

3. The combination with an electric battery and a case therefor, of a case-front removable from the case, fastenings for securing the case-front to the case, battery-terminals and a lamp-holder, and electric conductors connecting the lamp-holder with the battery-terminals, the said battery-terminals, lamp-holder and conductors all being secured to the case-front and removable with it from the case substantially as set forth.

4. The combination with an electric battery and a case therefor, of a case-front removable from the case, fastenings for securing the case-front to the case, battery-terminals and a switch, and electric conductors connecting the switch with the battery-terminals, the said battery-terminals, switch and conductors all being secured to the case-front and removable with it from the case substantially as set forth.

5. The combination with an electric battery and a case therefor and from which case the battery is removable, of a case-front attached to the battery and removable with the battery from the case, fastenings for securing the case-front to the case, and battery-terminals secured to the case-front and removable with it and the battery from the case substantially as set forth.

In testimony whereof we hereto affix our signatures in the presence of two witnesses.

MALCOLM SUTHERLAND.
ELIAS MARCUSON.

Witnesses:
WALTER J. SKERTEN,
HENRY HART.