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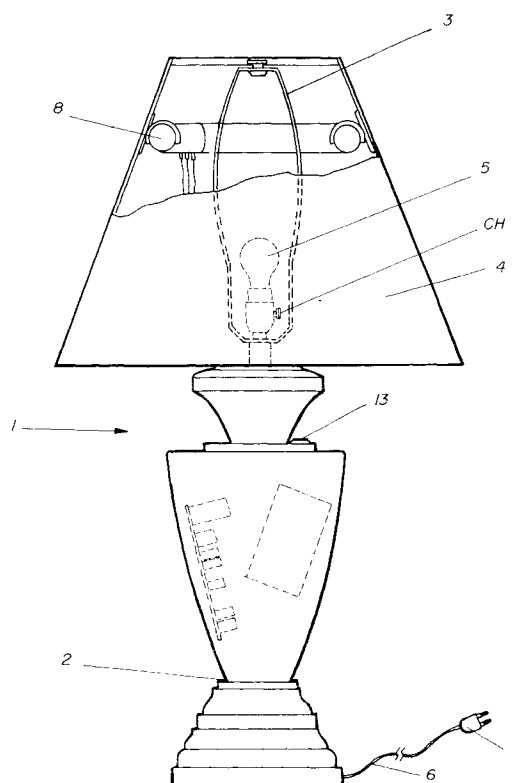
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### (54) **Lampshade having an emergency lighting system**

(57) The present invention refers to a lamp shade having an emergency lighting system wherein a second, emergency lighting device is positioned inside the shade portion of the lampshade, with a rechargeable battery supplying power to said second, emergency lighting device. An electronic circuit comprising a monitoring circuit for detecting a power failure of an external power source, an automatic switch responsive to said monitoring circuit for automatically connecting said second, emergency lighting device to said rechargeable battery when a power failure is detected, and a battery recharger to maintain said rechargeable battery with a minimum level of charge connects said rechargeable battery to said external power source.

**FIG. 1**



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## Description

### Background of the Invention

### Technical Field

The present invention refers generally to lighting systems and, more specifically, to a lampshade having an emergency lighting system particularly designed for providing light for a pre-determined period of time after a power failure occurs.

### Description of the Prior Art

Several emergency lighting systems for providing light for a period of time after a power failure are well known in the art. A common drawback in almost all these systems, however, is that they are usually built and designed for industrial and commercial use and, therefore, are bulky and costly.

Another type of emergency lighting systems for providing light for a period of time after a power failure well known in the art is commonly used in commercial buildings and in the common areas of residential buildings and, therefore, design and practicality are not relevant features in these devices.

### Summary of the Invention

Therefore, an object of the present invention is to provide a lampshade having two completely independent lighting systems, one comprising a conventional lighting device such as an incandescent light bulb powered by an external power source while the other comprises an emergency lighting device such as a low consumption fluorescent light with a few watts power.

The present invention refers to a particular type of emergency lighting system for providing light for a pre-determined period of time after a power failure has occurred, more specifically, to such a device particularly designed to be housed inside any regular lampshade housing, thereby solving the above discussed problems of design, practicality, bulkiness and cost.

Although the design and constructive features of the emergency lighting system according to the present invention may vary from one specific embodiment to another, so that it will be able to be housed inside the housing of the lampshade, basically it comprises a lampshade having an emergency lighting system, comprising:

a conventional lampshade having a base portion, a framing structure projecting upwardly from said base portion and a shade portion supported by said framing structure, with a power wiring having a plug in one end for connection with an external power source and an on/off switch provided thereon running through said base portion to supply power to a

first lighting device,  
a second, emergency lighting device positioned inside said shade portion,  
a rechargeable battery for supplying power to said second, emergency lighting device whenever a power failure occurs,  
an electronic circuit connecting said rechargeable battery to said external power source, said electronic circuit comprising a monitoring circuit for detecting a power failure of said external power source, an automatic switch responsive to said monitoring circuit for automatically connecting said second, emergency lighting device to said rechargeable battery when a power failure is detected, and a battery recharger to maintain said rechargeable battery with a minimum level of charge,  
said monitoring circuit, automatic switch and battery recharger being interconnected in such a way that the power being fed through said power wiring can be simultaneously supplied to light said first lighting device when said on/off switch is on and to said battery recharger to charge said rechargeable battery.

Under normal operating conditions, the first lighting device, preferably a conventional incandescent lamp, operates normally according to the on/off position of said switch, while said battery recharger is also being supplied with power to maintain rechargeable battery with a minimum level of charge.

Whenever said monitoring circuit detects a power failure in said external power source, the automatic switch is automatically started to switch on said battery, turning on said second, emergency lighting device with the charge from said rechargeable battery. This condition is maintained until the power failure situation is reverted.

The lampshade according to the present invention is suitable for use in several different environments - domestic, commercial or industrial. An important example where it can be used is in children's rooms or in rooms where old people or sick people live, where it is important that the room be constantly illuminated. The emergency lighting system according to the present invention can keep such an environment duly illuminated for a considerable period of time should a power failure occur.

### Brief Description of the Drawings

The foregoing and other additional objects and advantages of the present invention will be better understood by reference to the following detailed description, accompanied by schematic illustrations of the presently preferred embodiment of the invention, as shown in the attached drawings, in which :

Figure 1 is a schematic representation of a side view of a lampshade incorporating the emergency lighting system according to the present invention;

and

Figure 2 is a perspective view showing the several elements forming the emergency lighting system.

#### Detailed Description of the Preferred Embodiment

With specific reference now to the drawings, where like reference numbers refers to like elements in all Figures, a lampshade having an emergency lighting system according to the present invention is shown as comprising a conventional lampshade 1 having a base portion 2, a framing structure 3 projecting upwardly from said base portion 2 and a shade portion 4 supported by said framing structure 3.

A power wiring or cable 6 having a plug 7 in one end for connecting with an external power source (not shown) and an on/off switch (CH) provided thereon runs through said base portion 2 to supply power to a first lighting device 5 such as a conventional AC, 110/220 volts, incandescent light bulb.

Such features are common to any type of lampshade, of course with the inclusion of constructive variants, but the basic operation concept is the same.

A second, emergency lighting device 8, such as a low consumption fluorescent light is positioned inside said shade portion 4, hanging from or supported by said framing structure 3.

A rechargeable battery 9 for supplying power to said second, emergency lighting device 8 whenever a power failure occurs, is also positioned within said lampshade 1, with an electronic circuit 10 connecting said rechargeable battery 9 to said external power source.

The electronic circuit 10 comprises a monitoring circuit 12 for detecting a power failure of said external power source, an automatic switch 13 responsive to said monitoring circuit 12 for automatically connecting said second, emergency lighting device 8 to said rechargeable battery 9 when a power failure is detected, and a battery recharger 11 to maintain said rechargeable battery with a minimum level of charge.

Said monitoring circuit 12, automatic switch 13 and battery recharger 11 are interconnected in such a way on said electronic circuit 10 that the power being fed through said power wiring 6 can be simultaneously supplied to light said first lighting device 5 when said on/off switch CH is on and to said battery recharger 11 to charge said rechargeable battery 9.

Said electronic circuit 10 additionally includes a on/off push-button 14 for testing the second, emergency lighting device 8.

The operation of the lampshade having an emergency lighting system according to the present invention is extremely simple and will be described in greater details hereinafter.

Whenever the monitoring circuit 12 on the electronic circuit 10 detects a power failure from the external power source, such as a lack of electric current in the power wiring 6, this detection is immediately passed on

as an output to the automatic switch 13, which automatically connects said second, emergency lighting device 8 to said rechargeable battery 9, therefore turning it on.

When the power failure is over, the automatic switch 13 returns to its normal operational position, turning off said second, emergency lighting device 8 and restoring the operational capability of the first lighting device 5.

At the same time, the configuration of the electronic circuit provides for the recharging circuit 11 to start recharging the rechargeable battery 9, to bring it back to a normal level of charge.

The assembly defined by the circuit 10 and rechargeable battery 9 having the above configuration can be assembled or positioned within the base 2, with only the testing switch 14 being exposed, as illustrated in Figure 1.

Also, with this configuration, after the plug 7 in the free end of the power wiring 6 is inserted into any socket the power passing through the wire 6 also keeps the battery 9 duly charged and it is automatically activated when there is a power failure, independently of the condition on or off of the first lighting device 5.

With such a configuration, the user is provided with the benefit of a suitable emergency lighting system illumination which, besides starting operating automatically, does not require any manual handling. Also, a system that is also automatically switched off when the power failure is over. Another automatic feature is the maintenance of the battery charge because while the regular electric current is being fed said battery is kept with its full charge, and said charge is enough for keeping the emergency lighting system light activated for a very long period of time when a power failure occurs.

Having thus provided a general discussion, described the requirements of a lampshade having an emergency lighting system and illustrated the invention with an specific example of the best mode of making and using it, it will be evident to those skilled in the art that the invention provides an effective solution to a difficult problem. It is therefore to be understood that the claims are not to be limited to a slavish duplication of the invention and no undue restrictions are to be imposed by reason of the specific embodiments illustrated and discussed.

#### Claims

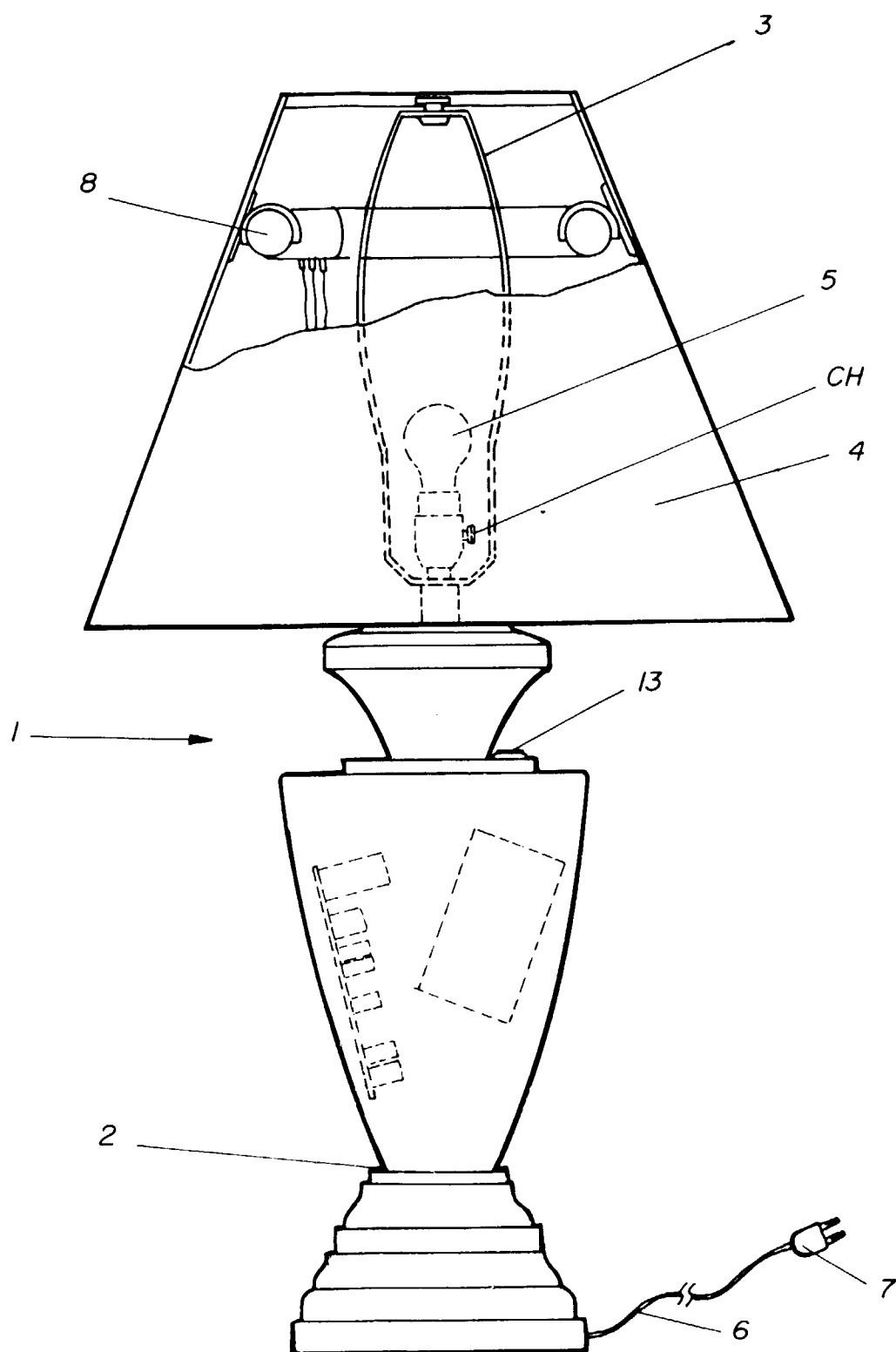
1. A lampshade having an emergency lighting system, comprising:

a conventional lampshade having a base portion, a framing structure projecting upwardly from said base portion and a shade portion supported by said framing structure, with a power wiring having a plug in one end for connection with an external power source and an on/off switch provided thereon running through said

base portion to supply power to a first lighting device,  
a second, emergency lighting device positioned inside said shade portion,  
a rechargeable battery for supplying power to said second, emergency lighting device whenever a power failure occurs,  
an electronic circuit connecting said rechargeable battery to said external power source, said electronic circuit comprising a monitoring circuit for detecting a power failure of said external power source, an automatic switch responsive to said monitoring circuit for automatically connecting said second, emergency lighting device to said rechargeable battery when a power failure is detected, and a battery recharger to maintain said rechargeable battery with a minimum level of charge,  
said monitoring circuit, automatic switch and battery recharger being interconnected in such a way that the power being fed through said power wiring can be simultaneously supplied to light said first lighting device when said on/off switch is on and to said battery recharger to charge said rechargeable battery.

2. A lampshade having an emergency lighting system according to claim 1, wherein said electronic circuit additionally includes an on/off push-button for testing said second, emergency lighting device.
3. A lampshade having an emergency lighting system according to claim 1, wherein said first lighting device is a conventional AC, 110/220 volts, incandescent light bulb.
4. A lampshade having an emergency lighting system according to claim 1, wherein said second, emergency light is a low consumption fluorescent light.

**FIG. 1**



**FIG. 2**

