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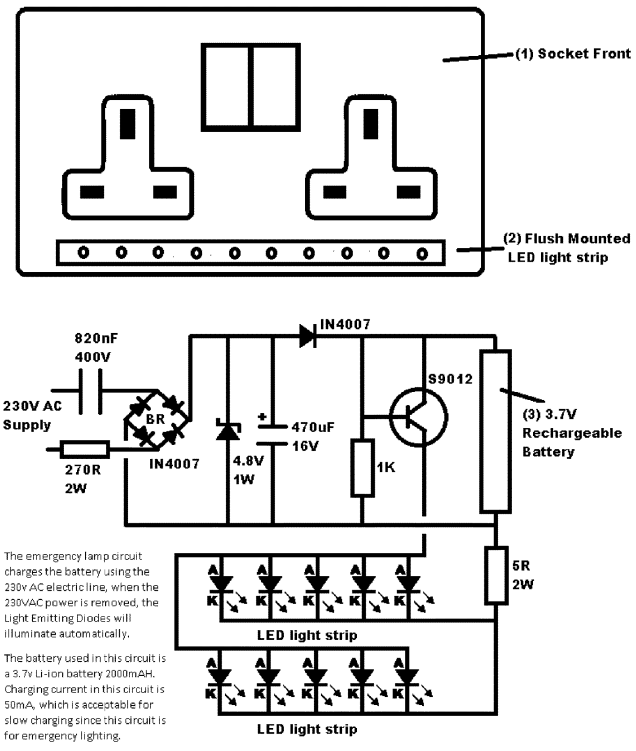
(51) INT CL:
H01R 13/717 (2006.01) ***H01R 13/10*** (2006.01)
H01R 13/66 (2006.01) ***H01R 25/00*** (2006.01)

(56) Documents Cited:
US 6805469 B1 **US 6000807 A1**
US 5473517 A **US 20130260613 A1**
US 20050135103 A1

(58) Field of Search:
INT CL **H01R**
Other: **EPODOC, WPI, Internet**

(54) Title of the Invention: **Socket with integrated emergency lighting**
Abstract Title: **Plug socket with emergency light**

(57) A mains power socket which can be either switched or un-switched and which has embedded in the bottom of the socket light emitting diodes (LED's) that illuminate when power to the socket is removed. The socket also comprises a circuit board behind the main fascia to assist the backup battery in providing illumination at times of power outages. The battery charges through circuitry using mains power when it is not required to provide electricity to the lighting, and then supplies power to the LED's when mains electricity is cut to provide emergency lighting. The internal mounted circuit board is also provided with external power from the socket's 230vac power supply input terminals. The 3.7V rechargeable battery and emergency light emitting diodes operate in electric parallel connection with the circuit board.



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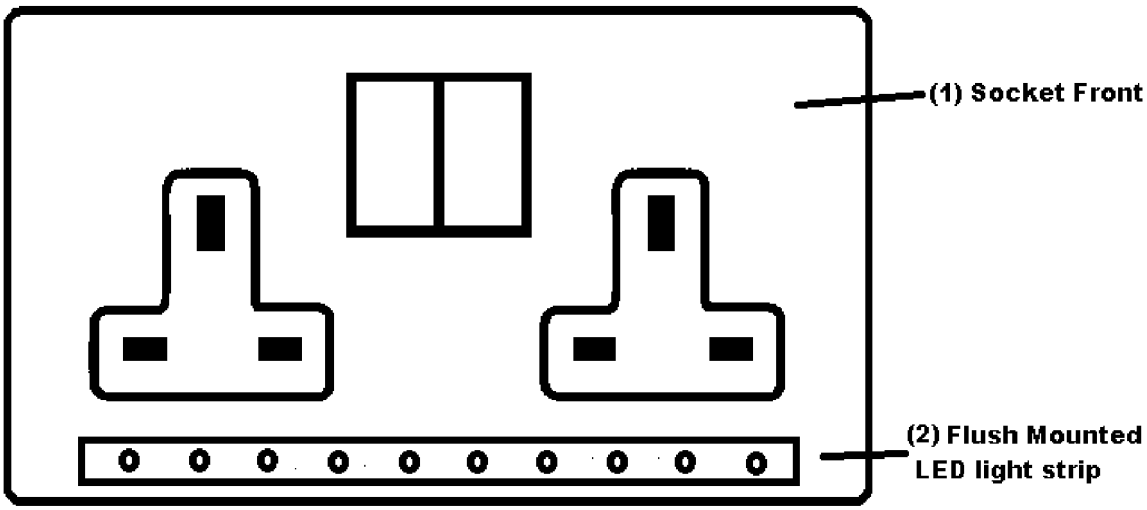

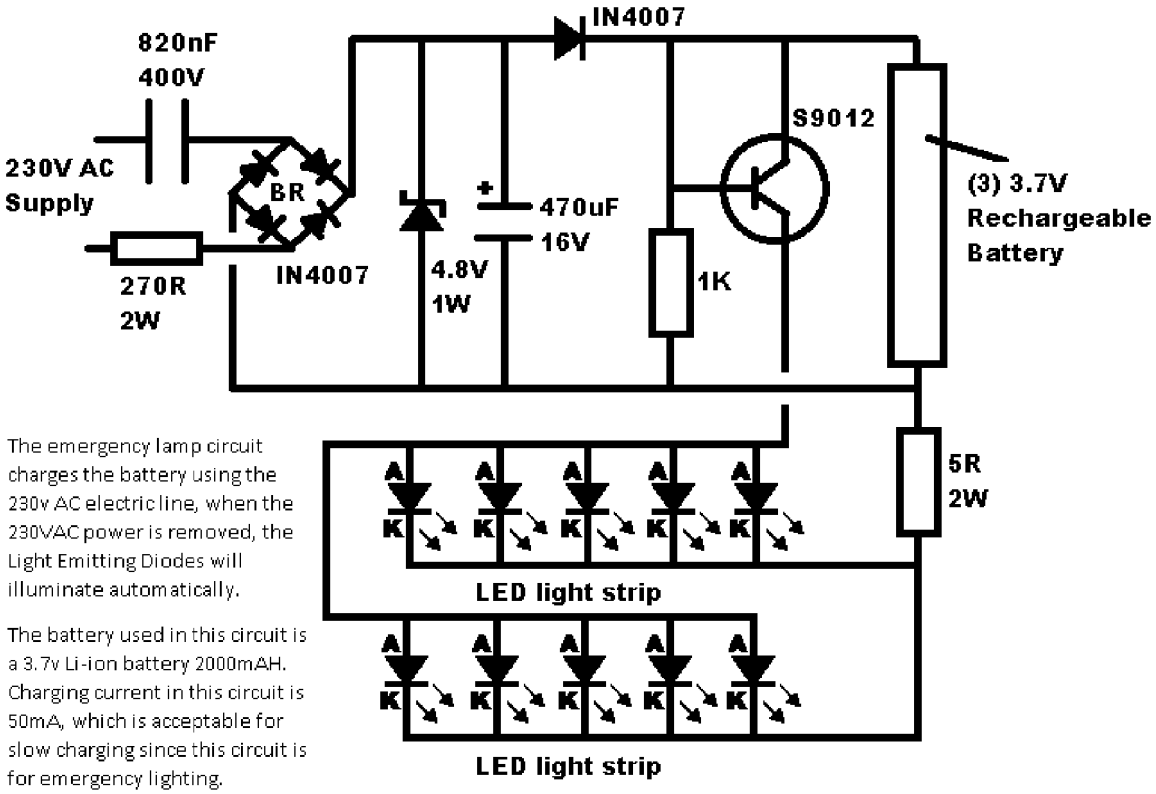

The emergency lamp circuit charges the battery using the 230v AC electric line, when the 230VAC power is removed, the Light Emitting Diodes will illuminate automatically.

The battery used in this circuit is a 3.7v Li-ion battery 2000mAH. Charging current in this circuit is 50mA, which is acceptable for slow charging since this circuit is for emergency lighting.

A power socket (1) with emergency light, comprising of a power socket front switched (1) or un switched with a circuit board behind the socket front, a rechargeable battery (3) and emergency light emitting diodes (2) embedded into the socket front. The internal mounted circuit board being provided with an external power from the sockets power supply input terminals, the rechargeable battery (3) and the emergency light emitting diodes (2) being in electric connection with the circuit board respectively; when the power line is connected to the socket, the emergency lights are in an off state, not illuminated; when the power line is disconnected from the external socket, MCB tripped or power cut, the emergency lights are in an on / lighted state. The power socket cover (1) has the function of emergency lighting as well as providing power supply to appliances, enabling the emergency lights to be powered and light up when the socket mains power supply is unexpectedly cut off.

Working voltage: 13A, 250V
Working temperature -15 to 40 C
UK 3 pin socket output: 13A, 250V
Fits any standard back box (minimum depth of 25mm)

The emergency lamp circuit charges the battery using the 230v AC electric line, when the 230VAC power is removed, the Light Emitting Diodes will illuminate automatically.

The battery used in this circuit is a 3.7v Li-ion battery 2000mAH. Charging current in this circuit is 50mA, which is acceptable for slow charging since this circuit is for emergency lighting.

Claim:

A BS1363 socket with Light Emitting Diodes, circuit board and rechargeable battery, such that when the external power is removed from the BS1363 socket the light emitting diodes illuminate for a period of time.

Intellectual Property Office

Application No:	GB1709270.1	**Examiner:**	Mr Richard Pryce
Claims searched:	1	**Date of search:**	20 July 2018

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1	US 2013/260613 A1 (CALM TECHNOLOGIES INC.) See drawings and paras 7, 18 and 38 of the description in particular referring to a wall outlet with an emergency light, encompassed in an insert shown as 200 in figure 1.
X	1	US 2005/135103 A1 (CYBERLUX CORP) See drawings and paragraph 5 describing a device for transforming an existing plug socket into an emergency light.
X	1	US 6805469 B1 (BARTON) See drawings and summary of the invention particularly lines 1-31 on page 2 of the description, referring to a switch or socket with an emergency light controlled via a backup battery and lines 55 onwards page 3 of the description referring to FIG.3 to describe the PCB.
X	1	US 5473517 A (BLACKMAN) See drawings and the description page 2 lines 10-39 right of the right column in particular, referring to a battery powered emergency light incorporated into a light switch. Fig's 2 and 4 demonstrate the components and workings of the invention.
X	1	US 6000807 A1 (ELECTROSTATIC SOLUTIONS LLP) See drawings and description page 1 line 52 to page 2 line 24, referring to a socket (Fig.5, claim 9) with battery backup which provides emergency lighting in a power outage.

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^{X} :

Worldwide search of patent documents classified in the following areas of the IPC

Intellectual Property Office

H01R

The following online and other databases have been used in the preparation of this search report

EPODOC, WPI, Internet

International Classification:

Subclass	Subgroup	Valid From
H01R	0013/717	01/01/2006
H01R	0013/10	01/01/2006
H01R	0013/66	01/01/2006
H01R	0025/00	01/01/2006