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(54) Portable emergency lighting lamp with improved functionality

Tragbare Notbeleuchtungslampe mit verbesserten Funktionen

Lampe portable d'éclairage d'urgence dotée d'une fonctionnalité améliorée

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Description

[0001] This invention relates, in general, to a portable emergency lighting lamp with improved functionality.

[0002] In particular, the invention refers to the possibility of combining the functionality of a portable emergency lighting lamp with those of a battery charger.

[0003] Document US 2007/0030673 A1 describes a portable lamp according to the preamble of claim 1 of the attached claims.

[0004] The requirement to always have at disposal one or more sources of supply (batteries) sufficiently charged is growing and growing, so that they can be used instantly in case of need in the most dissimilar electric and electronic equipments, which pervade the every day life of any user by now.

[0005] It is also felt the need to have at disposal a portable light source and, thus, battery supplied, which has a high operating autonomy, both in active mode of lighting and at rest (so that, when needed, the light source itself is operating in any case).

[0006] As part of the requirements mentioned above, an aim of the present invention is, therefore, to design a portable emergency lighting lamp with improved functionality, which is able to combine the functions of a portable emergency lighting lamp with those of a battery charger, in order to offer to the user a product which can be used both as batteries portable lamp, in emergency conditions, and as device for charging additional batteries which can be extracted in case of need and used in the most disparate electric and/or electronic equipments.

[0007] Another purpose of the present invention is to realize a portable emergency lighting lamp with improved functionality, which further presents a compact structure, an immediate switching on and high energy savings, as well as which is highly secure and reliable.

[0008] Another purpose of the invention is to provide a portable emergency lighting lamp with improved functionality, at substantially contained costs, by virtue of the benefits achieved.

[0009] These and other purposes are achieved by a portable emergency lighting lamp with improved functionality, according to the attached claim 1.

[0010] Further characteristics of detail of the lighting lamp are described in the subsequent claims.

[0011] Advantageously, the idea at the basis of the present invention is to combine the functionality of a portable emergency lighting lamp with a battery charger.

[0012] Further aims and advantages of the present invention will become more apparent from the description which follows, referred to an illustrative but not limiting preferred embodiment, of the portable emergency lighting lamp with improved functionality, according to the invention, and from the attached drawings, where:

- figure 1 shows a perspective view of the portable emergency lighting lamp with improved functionality, according to the present invention;

- figure 2 shows a first side view of the portable emergency lighting lamp of figure 1, according to the present invention.

[0013] Referring to the cited figures, the portable emergency lighting lamp object of the present invention has a substantially parallelepiped structure, with smoothed lateral edges, which defines a shaped top portion 16, containing at least one light source 11 and the relative on/off switch 10, and a shaped bottom portion 14, containing inside a space for the insertion of rechargeable batteries.

[0014] The switch 10 of the light source 11 is obtained on the upper surface 17 of the shaped portion 16, the light source 11 consisting, in a preferred but not limiting embodiment, of at least one LED diode.

[0015] The portable emergency lighting lamp is also provided with a side door 12, having the relative imprint 13 for the facilitated opening of the same by a user, whose opening gives access to a container space, inside the shaped bottom portion 14 of the casing 15 of the portable lighting lamp, suitable to accommodate a plurality of rechargeable batteries of AA or AAA type (typically in the number of four), which can be extracted by the user and used in case of need in various electric and/or electronic equipments.

[0016] In particular, to the side door 12 is connected a supply cable, provided with plug (not shown in the attached figures), which is connected to an electric and/or electronic recharge circuit of the batteries contained in the space inside the portion 14.

[0017] The recharging of the aforesaid batteries occurs by connecting the supply cable above mentioned to a network socket.

[0018] Alternatively to this, the recharging can occur not only through the connection to the network, but also through a connection with 12 Volt DC socket, such as, for example, the lighter socket of the car; in such a case, of course, the recharging circuit of the batteries will be properly implemented and dimensioned.

[0019] The emergency lighting lamp is provided with at least one additional battery to assure the functioning of the light source 11, even in the absence of the batteries contained in the recharge space inside the portion 14 of the casing 15.

[0020] According to another advantageous aspect of the invention, the portable emergency lighting lamp described above can use the rechargeable batteries contained in the space inside the portion 14 of the casing 15 as additional charge tank for the functioning of the light source 11.

[0021] Indeed, when the battery responsible for the supply of the light source 11 tends to run out, it is possible to resort to an auxiliary supply provided by the rechargeable batteries contained in the space inside the portion 14 of casing 15, thus obtaining a high autonomy operation of the light source 11 of the portable lighting lamp 11.

[0022] In this last case, the switching from an ordinary

supply type (using the supply battery of the light source 11) to an extraordinary supply type (using, as supply for the operation of the light source 11, the plurality of rechargeable batteries contained in the space inside the portion 14 of the casing 15) can be done manually, through the use of a special switch placed on the portable lighting lamp, or automatically, through a specific electronic circuit connected to the recharging circuit inside the lighting lamp.

[0023] From the description made the characteristics of the portable emergency lighting lamp with improved functionality, object of the present invention, are clear, as clear are the advantages thereof.

[0024] Finally, it is clear that it is possible to yield feasible variations of the portable lighting lamp in question, without going out of the principles which are at the basis of the invention as defined in the attached claims, as it is possible that, in the practical implementation of the invention, materials, forms and sizes could be chosen according to the technical requirements.

Claims

1. Portable emergency lighting lamp with improved functionality, comprising a top portion (16) which contains at least one light source (11) supplied by at least one first battery and which is connected with a bottom portion (14) having an internal container space for housing a plurality of second rechargeable batteries, wherein said container space is accessible from the outside through a door (12) obtained in the casing (15) of said bottom portion (14) of the lighting lamp, so that said second rechargeable batteries can be extracted by said bottom portion (14) of the lamp and used in case of need by a user, **characterised in that** said top and bottom portions (16, 14) both have a substantially parallelepiped structure and said door (12) extends along a first lateral face of said parallelepiped bottom portion (14), said first lateral face being parallel to and opposite a second lateral face of said parallelepiped top portion (16) where said light source (11) is placed.
2. Portable emergency lighting lamp as to claim 1, **characterised in that** said light source (11) includes at least one LED diode and is connected to at least one on/off switch (10), which is obtained in a upper surface (17) of said top portion (16) of the lamp.
3. Portable emergency lighting lamp as to claim 1, **characterised in that** said door (12) is connected to a supply cable, which is provided with plug and which is connected to an electric and/or electronic recharge circuit of said second rechargeable batteries contained inside said container space, said supply cable being connected to a network socket during the recharging of said rechargeable batteries.

4. Portable emergency lighting lamp as to claim 1, **characterised in that** said door (12) is connected to a supply cable, which is connected to an electric and/or electronic recharge circuit of said second rechargeable batteries contained inside said container space, said supply cable being suitable to the connection with a 12 Volt DC socket, such as a car lighter socket.
5. Portable emergency lighting lamp as to claim 1, **characterised in that** said light source (11) can be supplied either by a specific battery or by said second rechargeable batteries, through a manual or electronic switch device, which is connected to a charging circuit of said second rechargeable batteries contained inside said container space.

Patentansprüche

1. Tragbare Notbeleuchtungslampe mit verbesserter Funktionalität, umfassend einen oberen Abschnitt (16), der zumindest eine Lichtquelle (11) umfasst, versorgt durch zumindest eine erste Batterie, und der mit einem unteren Abschnitt (14) verbunden ist, aufweisend einen inneren Aufnahmerraum zum Beherbergen einer Vielzahl zweiter wiederaufladbarer Batterien, wobei der Aufnahmerraum zugänglich ist von außen durch eine Tür (12), enthalten in dem Gehäuse (15) des unteren Abschnitts (14) der Beleuchtungslampe, so dass die zweiten wiederaufladbaren Batterien entnommen werden können mittels des unteren Abschnitts (14) der Lampe und im Bedarfsfall durch einen Anwender genutzt werden können, **dadurch gekennzeichnet, dass** die oberen und unteren Abschnitte (16, 14) beide eine im Wesentlichen parallelepipedförmige Struktur aufweisen und sich die Tür (12) entlang einer ersten lateralen Fläche des parallelepipedförmigen unteren Abschnitts (14) erstreckt, wobei die erste laterale Fläche parallel und gegenüberstehend ist in Bezug auf eine zweite laterale Fläche des parallelepipedförmigen oberen Abschnitts (16), wo die Lichtquelle (11) platziert ist.
2. Tragbare Notbeleuchtungslampe gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die Lichtquelle (11) zumindest eine LED Diode umfasst und verbunden ist mit zumindest einem Ein/AusSchalter (10), der in einer oberen Fläche (17) des oberen Abschnitts (16) der Lampe enthalten ist.
3. Tragbare Notbeleuchtungslampe gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die Tür (12) verbunden ist mit einem Versorgungskabel, versehen mit einem Anschluss und verbunden mit einem elektrischen und/oder elektronischen Wiederaufladkreis der zweiten wiederaufladbaren Batterien, enthalten

im Innern des Aufnahmerraums, wobei das Versorgungskabel verbunden ist mit einer Netzwerkbuchse während des Wiederaufladens der wiederaufladbaren Batterien.

4. Tragbare Notbeleuchtungslampe gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die Tür (12) verbunden ist mit einem Versorgungskabel, verbunden mit einem elektrischen und/oder elektronischen Wiederaufladkreis der zweiten wiederaufladbaren Batterien, enthalten im Innern des Aufnahmerraums, wobei das Versorgungskabel geeignet ist zur Verbindung mit einer 12 Volt Gleichstrom (DC) Buchse, wie beispielsweise einer Automobil-Anzünder-Buchse.
5. Tragbare Notbeleuchtungslampe gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die Lichtquelle (11) versorgt werden kann entweder durch eine spezielle Batterie oder durch die zweiten wiederaufladbaren Batterien, durch eine manuelle oder elektronische Schalteinrichtung, die verbunden ist mit einem Wiederaufladkreis der zweiten wiederaufladbaren Batterien, enthalten im Innern des Aufnahmerraums.

Revendications

1. Lampe d'éclairage d'urgence portable avec fonctions améliorées, comprenant une partie supérieure (16) qui contient au moins une source de lumière (11) alimentée par au moins une première pile et qui est connectée à une partie inférieure (14) comportant un espace de renfermement intérieur pour renfermer une pluralité de deuxièmes batteries rechargeables, ledit espace de renfermement étant accessible à partir de l'extérieur par l'intermédiaire d'une porte (12) réalisée dans le boîtier (15) de ladite partie inférieure (14) de la lampe d'éclairage, de telle sorte que lesdites deuxièmes batteries rechargeables puissent être extraites par ladite partie inférieure (14) de la lampe et utilisées en cas de besoin par un utilisateur, **caractérisée en ce que** lesdites parties supérieure et inférieure (16, 14) ont toutes deux une structure sensiblement parallélépipédique et **en ce que** ladite porte (12) s'étend le long d'une première face latérale de ladite partie inférieure parallélépipédique (14), ladite première face latérale étant parallèle et opposée à une deuxième face latérale de ladite partie supérieure parallélépipédique (16) où est disposée ladite source de lumière (11).
2. Lampe d'éclairage d'urgence portable selon la revendication 1, **caractérisée en ce que** ladite source de lumière (11) comprend au moins une diode électroluminescente et est connectée à au moins un commutateur de marche/arrêt (10), qui est réalisé dans une surface supérieure (17) de ladite partie su-

périeure (16) de la lampe.

3. Lampe d'éclairage d'urgence portable selon la revendication 1, **caractérisée en ce que** ladite porte (12) est connectée à un câble d'alimentation, qui est muni d'une prise et qui est connecté à un circuit de recharge électrique et/ou électronique desdites deuxièmes batteries rechargeables contenues à l'intérieur dudit espace de renfermement, ledit câble d'alimentation étant connecté à une prise de réseau durant la recharge desdites batteries rechargeables.
4. Lampe d'éclairage d'urgence portable selon la revendication 1, **caractérisée en ce que** ladite porte (12) est connectée à un câble d'alimentation, qui est connecté à un circuit de recharge électrique et/ou électronique desdites deuxièmes batteries rechargeables contenues à l'intérieur dudit espace de renfermement, ledit câble d'alimentation étant approprié pour la connexion à une prise de courant continu de 12 volts, telle qu'une prise d'allume-cigare automobile.
5. Lampe d'éclairage d'urgence portable selon la revendication 1, **caractérisée en ce que** ladite source de lumière (11) peut être alimentée soit par une pile spécifique soit par lesdites deuxièmes batteries rechargeables, par l'intermédiaire d'un dispositif de commutateur manuel ou électronique, qui est connecté à un circuit de charge desdites deuxièmes batteries rechargeables contenues à l'intérieur dudit espace de renfermement.

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Fig. 1

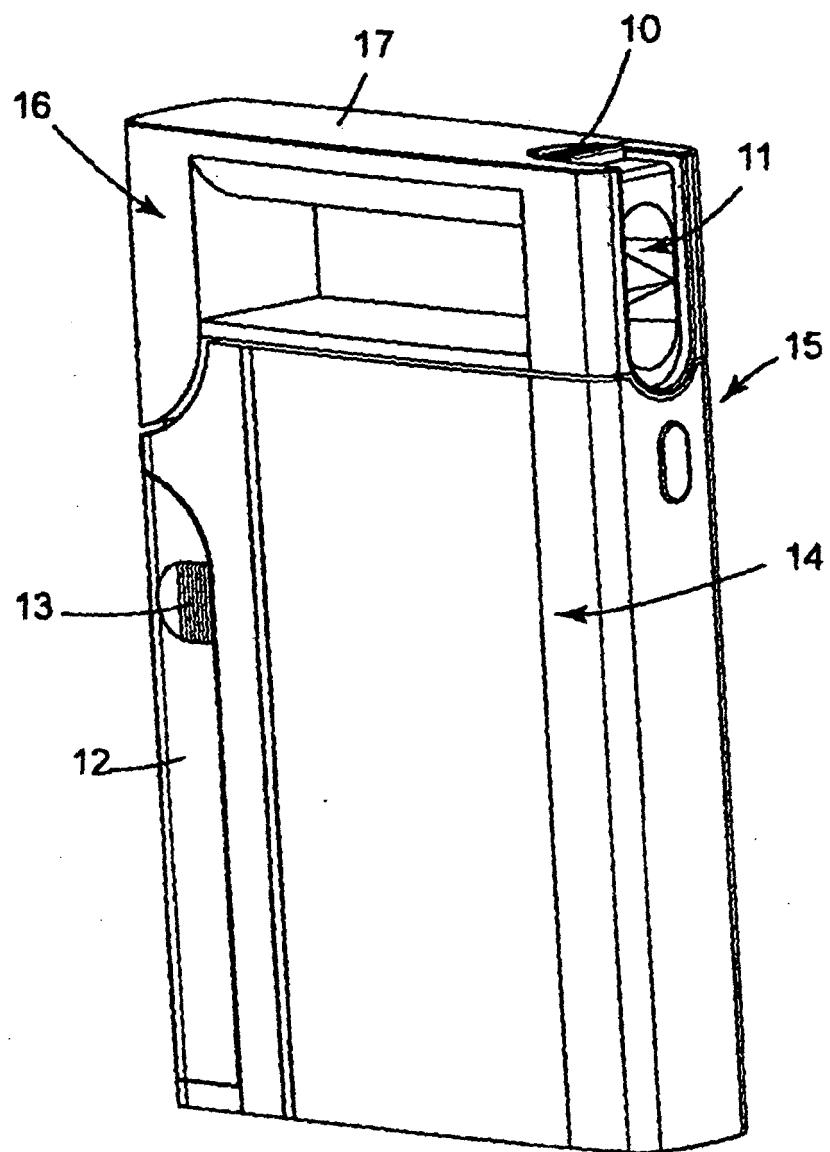
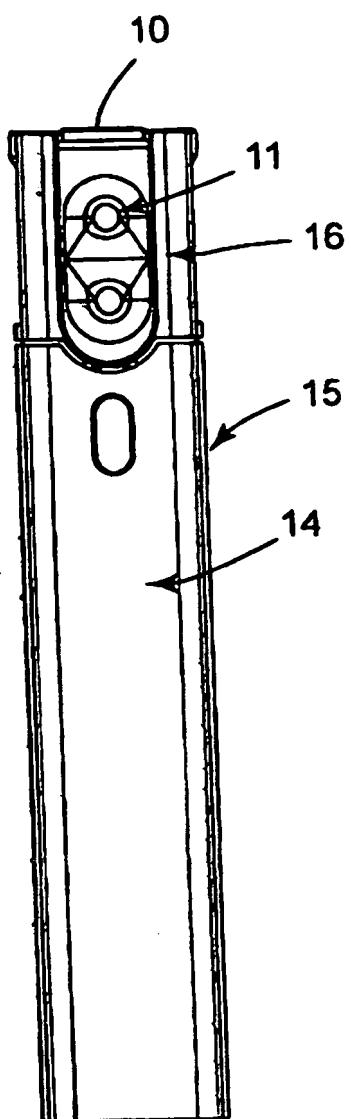


Fig. 2



REFERENCES CITED IN THE DESCRIPTION

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