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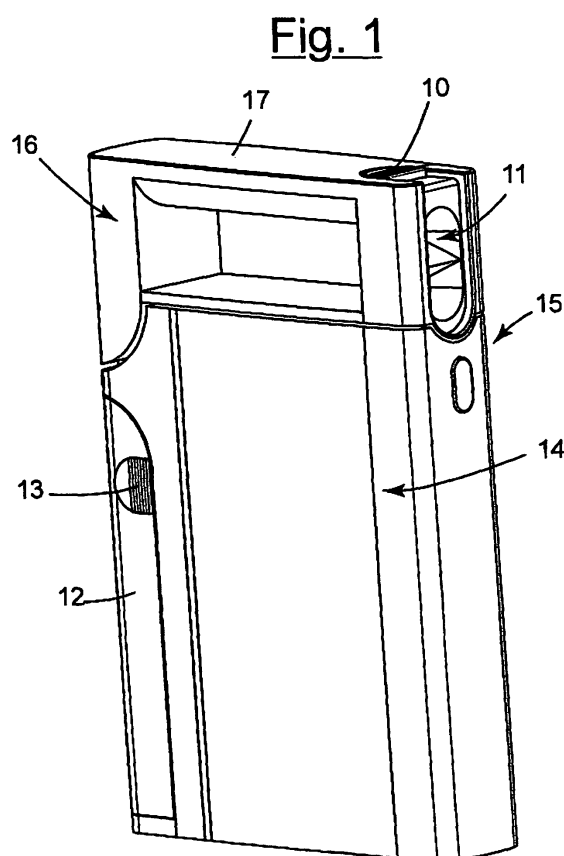
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Remarks:

The references to the drawing No. 3 are deemed to be deleted (Rule 43 EPC 1973).

(54) **Portable emergency lighting lamp with improved functionality**

(57) A portable emergency lighting lamp with improved functionality, including at least one light source (11), supplied by at least one battery, and presenting internally a space for containing a plurality of additional batteries, which can be recharged by connecting them to a power source and then extracted and used in the most dissimilar electric and/or electronic equipments. The portable emergency lighting lamp can use the rechargeable batteries contained in the internal space as further charge tank, in order to obtain an extended operating autonomy. The switching between an ordinary supply of the light source (11) of the lighting lamp (i.e. made by the specific battery) and an extraordinary supply (made by the rechargeable batteries of the container space) can be carried out manually, through a special switch, or automatically, through a specific electronic circuit connected to the charging circuit of the rechargeable batteries.



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] 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.

[0004] 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).

[0005] 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.

[0006] 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.

[0007] 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.

[0008] These and other purposes are achieved by a portable emergency lighting lamp with improved functionality, according to the attached claim 1.

[0009] Further characteristics of detail of the lighting lamp are described in the subsequent claims.

[0010] 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.

[0011] 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;

- figure 3 shows a second side view, opposed to the previous one, of the portable emergency lighting lamp of figure 1, according to the present invention.

[0012] 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.

[0013] 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.

[0014] 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.

[0015] 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.

[0016] The recharging of the aforesaid batteries occurs by connecting the supply cable above mentioned to a network socket.

[0017] 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.

[0018] 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.

[0019] 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.

[0020] 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.

[0021] 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.

[0022] 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.

[0023] 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 inventive idea, 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, including at least one light source (11), supplied by at least a first battery **characterized in that** said lamp internally presents at least one container space for housing one or more second batteries which can be recharged through the connection to a power source, so that said second rechargeable batteries can be extracted by the lighting lamp and used in case of need by the user.
2. Portable emergency lighting lamp with improved functionality as to claim 1, **characterized in that** said lighting lamp has a substantially parallelepiped structure, which defines at least one first shaped structure (16), where said light source (11) is positioned, and at least a second shaped structure (14), which internally presents said container space for housing a plurality of rechargeable batteries.
3. Portable emergency lighting lamp with improved functionality as to claim 1, **characterized in that** said light source (11) is connected to at least one on/off switch (10), which is obtained in at least a upper surface (17) of the first shaped structure (16).
4. Portable emergency lighting lamp with improved functionality as to claim 1, **characterized in that** said light source (11) includes at least one LED diode.
5. Portable emergency lighting lamp with improved functionality as to claim 1, **characterized in that** said container space is accessible from the outside through at least one door (12), obtained in the casing (15) of the lighting lamp.
6. Portable emergency lighting lamp with improved functionality as to claim 5, **characterized in that** said door (12) is connected to at least one supply cable, provided with plug and connected to an electric and/or electronic recharge circuit of the batteries contained inside said container space, said supply cable being connected to at least one network socket during the recharging of said rechargeable batteries.
7. Portable emergency lighting lamp with improved functionality as to claim 5, **characterized in that** said door (12) is connected to at least one supply cable, connected to an electric and/or electronic recharge circuit of the batteries contained within the container space, said supply cable being suitable to the connection with at least one 12 Volt DC socket, such as, for example, the lighter socket of the car.
8. Portable emergency lighting lamp with improved functionality as to claim 1, **characterized in that** said light source (11) can be supplied by at least one specific battery.
9. Portable emergency lighting lamp with improved functionality as to claim 1, **characterized in that** said light source (11) can be supplied by said rechargeable batteries, in case the supply battery of said light source (11) tends to run out.
10. Portable emergency lighting lamp with improved functionality as the claim 9, **characterized in that** said light source (11) can be supplied either by a specific battery or by said rechargeable batteries, through at least one switch device, of the manual or electronic type, connected to the charging circuit of said rechargeable batteries which are inside the lighting lamp.

Fig. 1

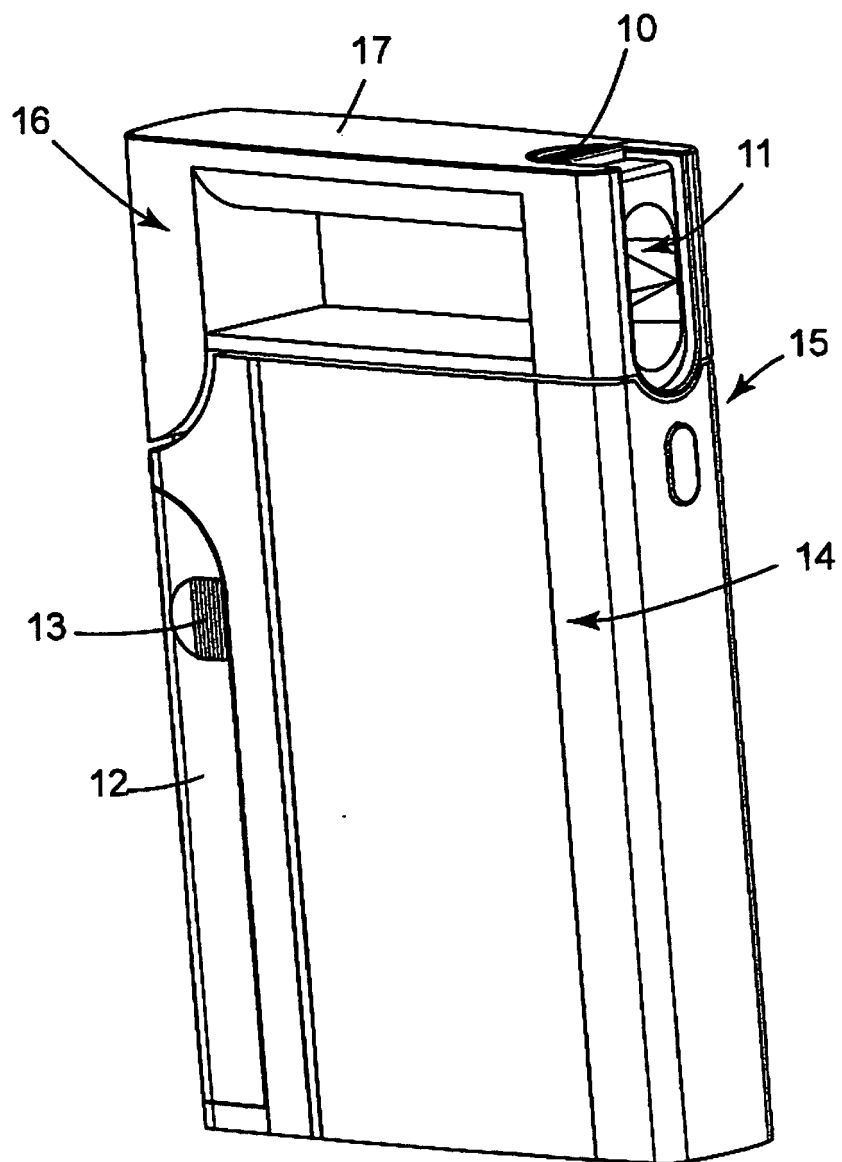


Fig. 2

