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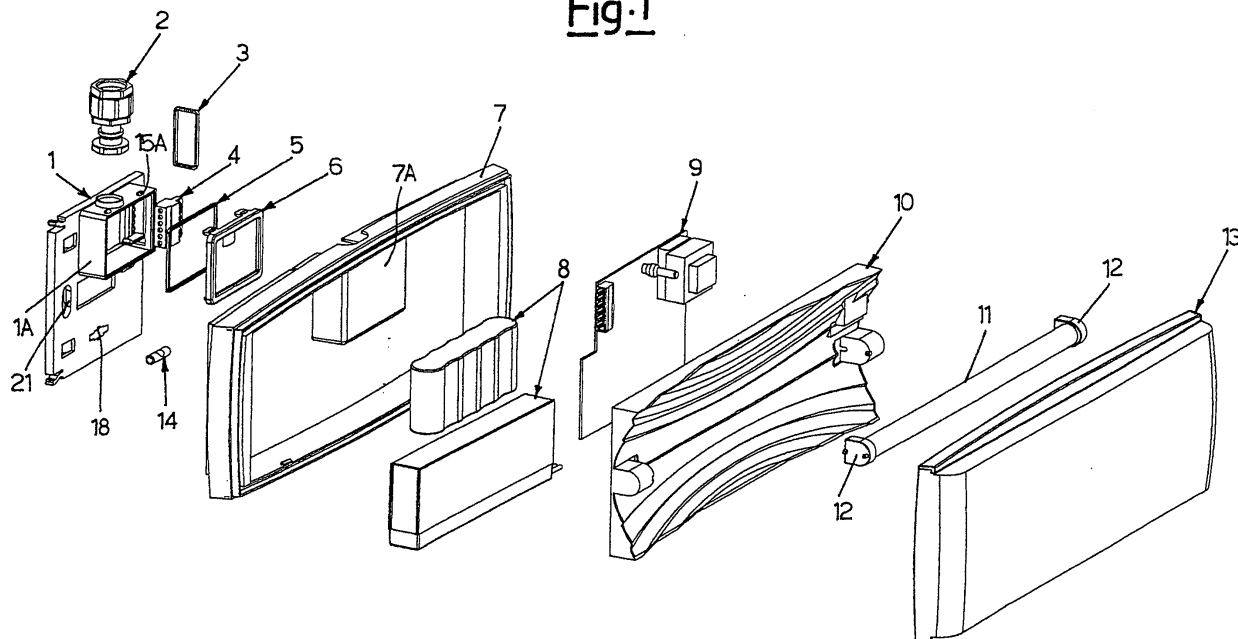
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(54) **Support for emergency lighting devices**

(57) A support for emergency lighting devices, comprising a plastic element which forms the main body (20), on which there are one or more housings (21, 22) for the fixing of a bracket (1) to a wall; said housings (21, 22) can be used as a centering mask during the drilling of the wall and their geometry allows the vertical and

horizontal shifting of the bracket (1), in order to regulate its orientation. The correct positioning of the bracket (1) is obtained thanks to the use of a levelling bubble (14), suitable for determining the exact horizontal installation position of the bracket (1) and screen (13) of the emergency lighting device.

Fig.1



Description

[0001] The present invention relates to a supporting element for emergency lighting devices.

[0002] The main problem that arises when effecting a wall installation of an emergency lighting device is respecting as much as possible the horizontal orientation of the outer casing of the product.

[0003] Considering the modest weight of an emergency lighting device and above all the increasing necessity for effecting an extremely rapid installation, two fixing points to the wall are normally and typically used.

[0004] The fixing elements generally consist of wall dowels, each of which requires, for assembly, the perforation of a hole in the wall normally using an electric drill.

[0005] As this system is evidently not particularly precise, in some cases, a "template" or drilling mask is supplied with the emergency lighting device.

[0006] Alternatively and on the basis of the geometry of the product, it is possible to use the casing itself of the product, as drilling reference.

[0007] Even if all these expedients, on the one hand, facilitate the installer in respecting the correct on-centre between the fixing elements of the device, on the other hand they can in no way help avoiding the drilling of fixing holes which are not horizontally aligned, with the unfortunate result that in most cases, the emergency lighting device is installed in a tilted position.

[0008] This problem is even more strongly felt when the installation of the emergency lighting device is effected with a supporting bracket which acts as an interface between the device itself and the wall onto which it is to be installed.

[0009] As is known, brackets are mainly used for practical purposes as, in particular, they have reduced encumbrance dimensions, a characteristic which makes it even more difficult for the installer to realize if they have been fixed in a tilted position.

[0010] Both mechanical systems and electronic devices are, on the other hand, currently present on the market, which are suitable for controlling the levelling of objects; in this specific case, however, it is necessary to use an auxiliary device, a solution which considerably reduces the practicalness of the installation and increases both the times and costs of the intervention.

[0011] Considering the requirements mentioned above, an objective of the present invention is therefore to indicate a support for emergency lighting devices which avoids the drawbacks mentioned above and which, in particular, allows a rapid and precise installation of the emergency lighting device.

[0012] A further objective of the present invention is to provide a support for emergency lighting devices which allows the installer to simply and rapidly verify the position and levelling of the casing of the above emergency lighting device, for its assembly and fixing to the wall.

[0013] Another objective of the invention is to indicate a support for emergency lighting devices which is particularly reliable, which is easy and economical to produce, without the use of complex or costly technologies and which allows a precise, rapid and economical installation of the emergency lighting device.

[0014] These and other objectives are achieved by a support for emergency lighting devices according to claim 1.

[0015] Further specific characteristics are indicated in the subsequent claims.

[0016] Additional objectives and advantages of the present invention are evident from the following description and enclosed drawings, provided for purely illustrative and non-limiting purposes, in which:

- figure 1 is an exploded perspective view of an emergency lighting device, according to the present invention;
- figure 2 is an exploded perspective view of a construction detail, on an enlarged scale, according to figure 1, according to the present invention;
- figure 3 is a front view of the construction detail of figure 2, according to the present invention;
- figures 4 and 5 represent two different construction phases of the support for emergency lighting devices, according to the present invention, during its fixing to the wall.

[0017] With particular reference to figures 1-3 mentioned above, 1 indicates a shaped wall fixing bracket, which represents a support casing for the assembly of the emergency lighting device; in particular, the bracket 1 comprises a box in relief 1A, suitable for the containment and connection of the wires, passing through the collar 19 of the box 1A and through the tube-presser 2, on the multipolar terminal board 4.

[0018] The box 1A is further completed by a side washer 3 and a hermetic or airtight lid 6, which is positioned in front of it, with the interposition of a suitable washer 5.

[0019] The hermetic lid 6 is fixed at the front of the protruding box 1A by means of two upper appendages 15 which click into relative projections 15A situated above the box 1A.

[0020] The emergency lighting device comprises a shaped casing 7, suitable for being fixed to the lid 6 of the bracket 1, which is inserted into the shaped element 7A of the casing 7, a piloting circuit, generically indicated with 9 in figure 1 and comprising an Ni-Cd or Pb 8 battery, a shaped reflector 10, a neon tube 11 (preferably with a power of 8 Watts), applied in front of the reflector 10 by means of neon-holder elements 12, and a transparent front protection screen, generically indicated with 13 in figure 1.

[0021] In particular, according to the present invention, the bracket 1 consists of a shaped plastic element 20, suitable for being fixed to a wall, which forms the

main body of said bracket 1.

[0022] At least two housings, indicated with 21 and 22 respectively in figures 2 and 3, are situated on the plastic element 20, for fixing the bracket 1 to a wall; said housings 21, 22 can be used as centering masks during the drilling of the wall with an electric drill.

[0023] Their particular geometry, moreover, allows the installer to effect a series of vertical and horizontal shifts of the bracket 1, in order to regulate its orientation.

[0024] The correct position of the bracket 1 is determined, according to the present invention, thanks to the use of a levelling bubble 14, which is inserted inside a housing 18, suitable shaped and envisaged in correspondence with a lower portion of the plastic element or casing 20 of the bracket 1.

[0025] Figures 2 and 3 provide a more detailed illustration of the elements forming the bracket 1, object of the present invention; in particular, these are identified as the main body or plastic casing 20 of the bracket 1, the hermetic lid 6 (produced according to the safety standard IP65) for the closing of the shaped box 1A fixed to the body 20 of the bracket 1 and the levelling bubble 14, inserted in the shaped housing 18 of the body 20.

[0026] In this particular case, the levelling bubble 14 preferably consists of a cylindrically-shaped hermetic ampoule made of a thermoplastic material or glass, and a yellow liquid, contained inside, present in a smaller quantity with respect to the inner volume of the ampoule, so that the resulting air bubble is free to move inside the volume of the ampoule in relation to the orientation of its body.

[0027] By using the shaped bracket 1, it is therefore possible to determine the horizontal installation position when the air bubble is situated in correspondence with the centre line of the ampoule; this position can be further revealed by the formation of a notch on the body of the ampoule which offers further help for the installer in determining the perfect horizontal alignment of the bracket 1.

[0028] The assembly of the support and relative emergency lighting device, according to the present invention, is substantially effected as follows (represented in more detail in figures 4 and 5 enclosed with the present invention).

[0029] The bracket 1 is fixed to the wall with the use of fixing elements (in particular dowels), which are assembled inside the housings 21 and 22 of the shaped body 20 of the bracket 1.

[0030] The installer can determine the perfect horizontal alignment of the bracket 1 by verifying the position of the air bubble present inside the levelling bubble 14, which, as clearly illustrated in figures 4 and 5, is preferably assembled in front of the installer, on the front surface of the body 20.

[0031] Once the bracket 1 has been fixed to the wall, the installer can connect the feeding and/or control wires, generically indicated with 16 in figure 4, coming from the collar 19 of the box 1A, on the multipolar terminal board 4.

terminal board 4.

[0032] This also simplifies the electric installation mode of the emergency lighting device, according to the invention, as it is sufficient to house the multipolar terminal board 4, to which the wires 16 are connected, inside the casing or shaped box 1A and subsequently close the hermetic lid 6, equipped with the washer 5, on the box 1A, which is directly connected to the body 20 of the bracket 1.

[0033] The installation of the emergency lighting device is completed by effecting an insertion operation of the shaped element 7A, situated above and inside the casing 7, on the protruding box 1A, according to the procedure indicated by the arrow F in figure 5.

[0034] In this way, the emergency lighting device is directly inserted onto the bracket 1 and consequently the perfect horizontal alignment of the latter also allows the transparent screen 13 of the emergency device to be fixed in a perfectly horizontal position.

[0035] The electric connection is also ensured by a series of terminals situated inside the shaped element 7A of the casing 7, which contact the relative terminals 17 of the multipolar terminal board 4, which are accessible outside the hermetic lid 6 (figure 5).

[0036] The characteristics of the support for emergency lighting devices, which is object of the present invention, appear evident from the above description, as also its advantages.

[0037] Finally, numerous other variants can obviously be applied to the support for emergency lighting devices in question, all included in the novelty principles inherent in the inventive idea. It is also evident that in the practical embodiment of the invention, the materials, forms and dimensions of the details illustrated can vary according to the requirements and can be substituted with other technically equivalent alternatives.

Claims

1. A support for emergency lighting devices, comprising a plastic element which forms the main body (20), on which there are one or more housings (21, 22) for the fixing of a bracket (1) to a wall, said housings (21, 22) being used as centering elements for regulating the orientation of said bracket (1), **characterized in that** said body (20) of the bracket (1) envisages at least one seat (18) for housing at least one levelling bubble (14), suitable for determining the exact horizontal installation position of the bracket (1) and said emergency lighting device.
2. The support according to claim 1, **characterized in that** said bracket (1) comprises at least one box element (1A), suitable for the containment and connecting of the feeding and/or control wires (16).
3. The support according to claim 2, **characterized in**

that said box element (1A) has at least one hermetic lid (6), suitable for closing said box element (1A), by the interposition of at least one washer (5).

4. The support according to claim 2, **characterized in that** said emergency lighting device includes a shaped casing (7), suitable for being fixed to said lid (6) of the bracket (1), which is inserted in a shaped element (7A) of the casing (7), a piloting circuit (9), a shaped reflector (10), a light source (11) applied in front of said reflector (10) and a transparent front protection screen (13). 5
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5. The support according to claim 1, **characterized in that** said body (20) of the bracket (1) envisages at least one housing (21, 22) for the fixing of the bracket (1) to a wall. 15
6. The support according to claim 1, **characterized in that** said levelling bubble (14) is inserted inside a shaped housing (18), situated in correspondence with a lower portion of said body (20) of the bracket (1). 20
7. The support according to claim 1, **characterized in that** said levelling bubble (14) comprises a hermetic ampoule containing a contrast liquid, present in a smaller quantity with respect to the inner volume of the ampoule, so that an air bubble is formed, which is free to move inside the volume of the ampoule in relation to the orientation of said body (20) of the bracket (1). 25
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8. The support according to claim 2, **characterized in that** said box element (1A) is suitable for containing at least one multipolar terminal board (4) for the connection of feeding and/or control wires (16). 35
9. The support according to claim 8, **characterized in that** said casing (7) comprises at least one shaped element (7A), suitable for being inserted on said box element (1A) of the bracket (1), so as to automatically effect the electric connection between a first series of terminals situated inside said shaped element (7A) of the casing (7) and a second series of terminals (17) of said multipolar terminal board (4), which are accessible outside said hermetic lid (6). 40
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Fig.1

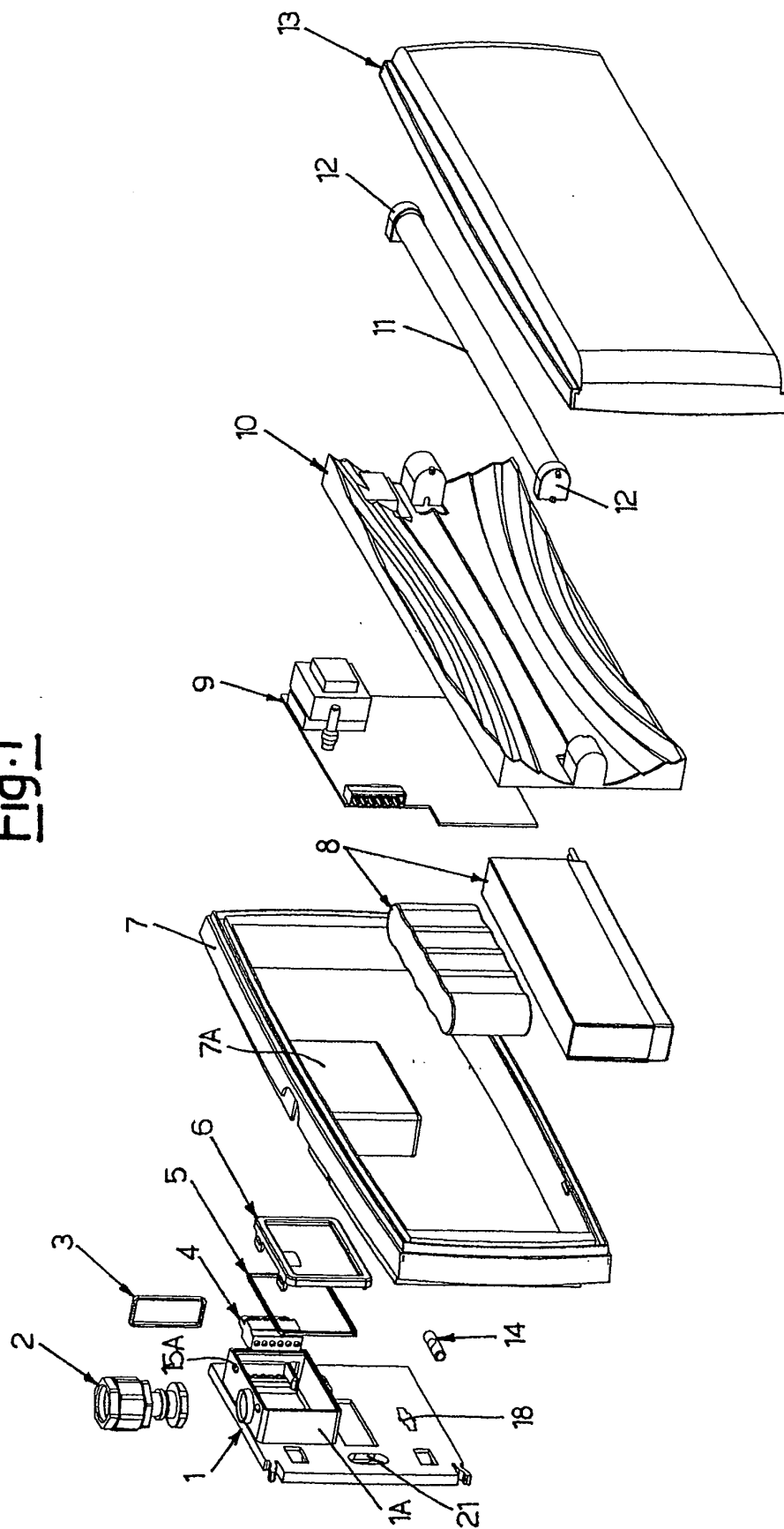


Fig. 2

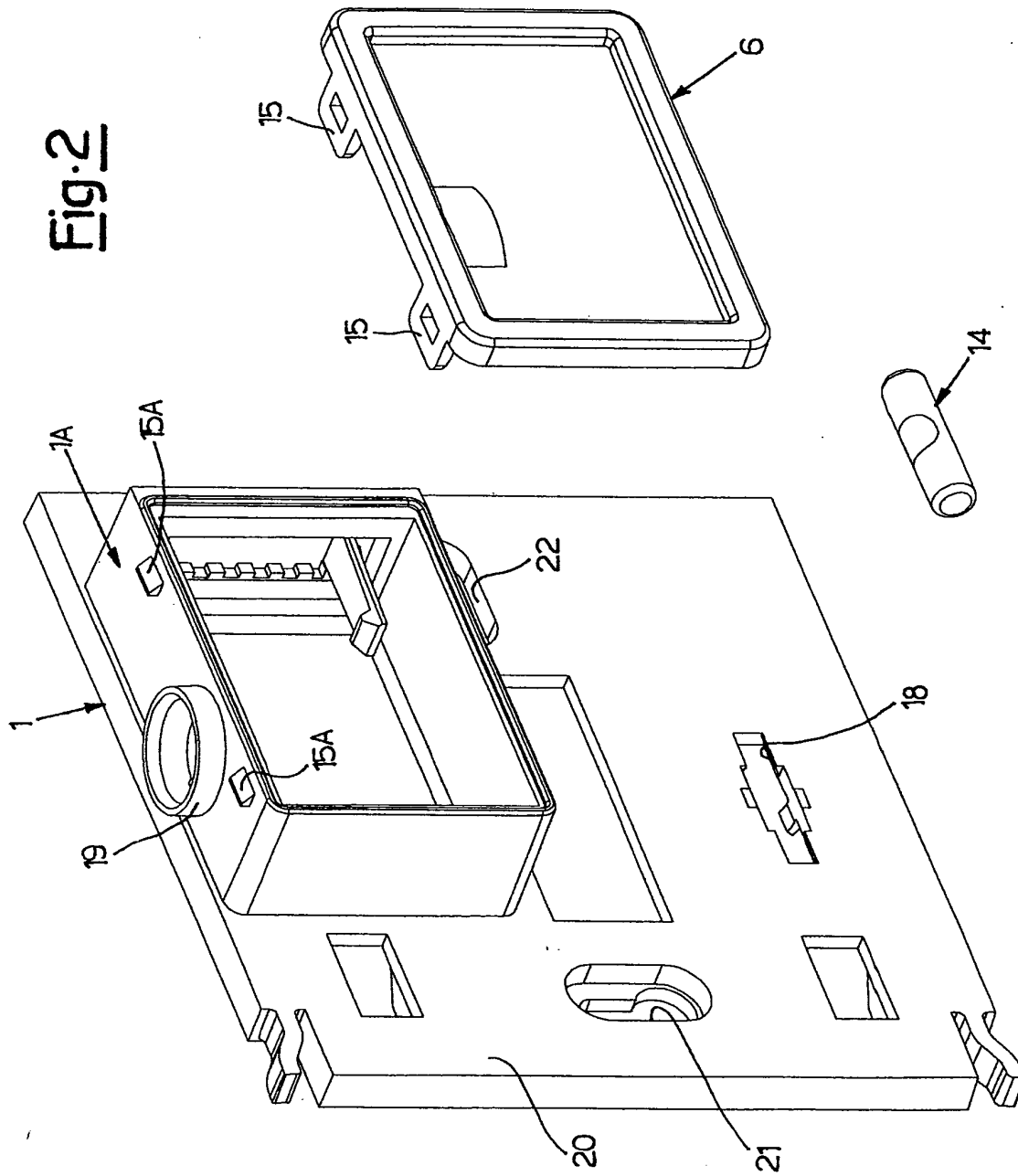


Fig.3

