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(54) **PARAPET PARTICULARLY FOR STAIRS,
TERRACES AND THE LIKE**

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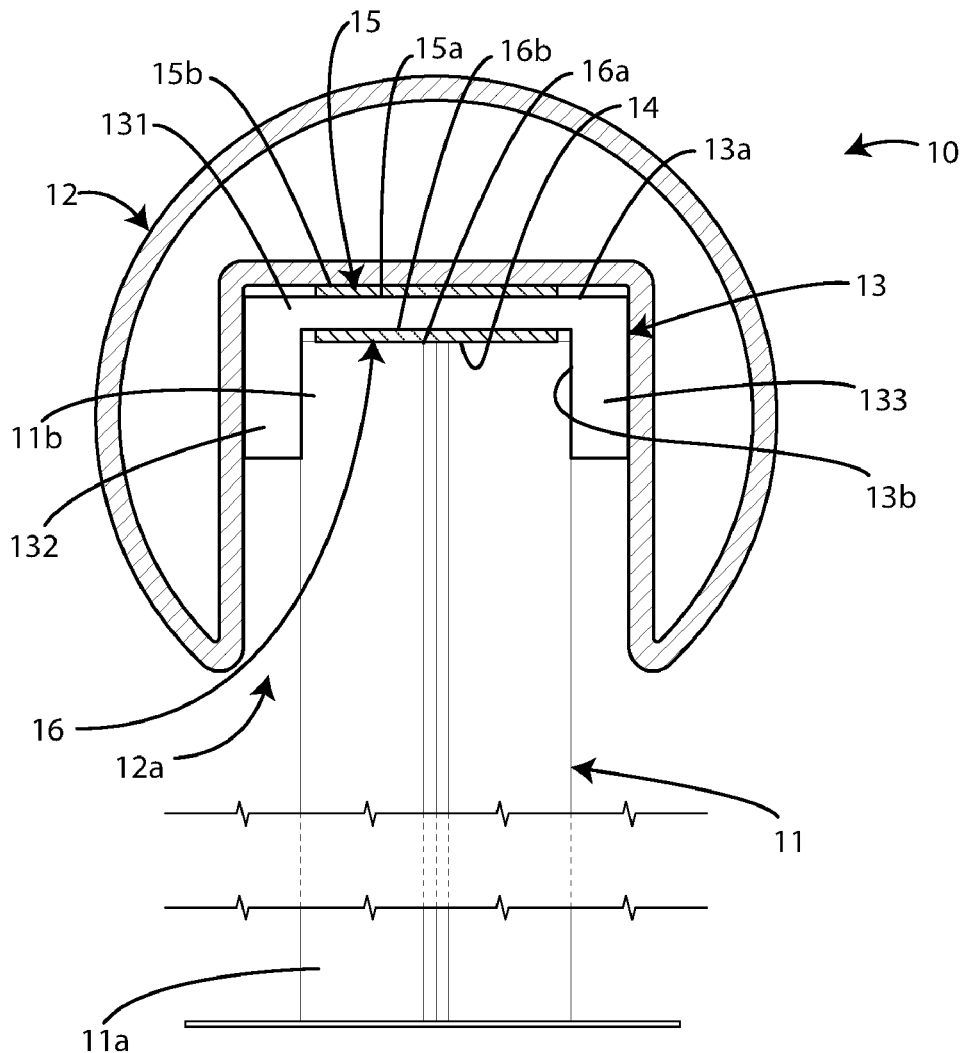
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(57) **ABSTRACT**

Parapet particularly for stairs, terraces and the like, including: a protection element having a lower extreme fixable to a walk support and an upper extreme which extends along a longitudinal direction; a handrail having a seat adapted to receive in insertion the upper extreme; at least one U-shaped fastening element and having: a spine adapted to be housed in the seat; and a compartment for housing an edge of the upper extreme. The fastening element has a length inferior to the length of the upper extreme and it is in polymeric material selected between Acrylonitrile Butadiene Styrene and an aliphatic polyamide; also it is dimensioned with respect to the seat and the edge to be coupled with an interference fit with at least one of the latter.



PARAPET PARTICULARLY FOR STAIRS, TERRACES AND THE LIKE

[0001] The present invention concerns parapet particularly for stairs, terraces and the like.

[0002] In particular, the present invention refers to a parapet consisting of glass sheets or comprising them.

[0003] Nowadays parapets with an essential design are particularly appreciated. In particular, parapets comprising a main body consisting of glass sheets to be installed in a vertical position to form a fence are known.

[0004] On the upper free edge of the slabs, a handrail is coupled which has a seat adapted to receive the edge when inserted.

[0005] To retain the handrail on the edge, a gasket, made of elastomeric, U-shaped material, is inserted into the seat.

[0006] This gasket also has protruding fins designed to increase the friction exerted by it on the edge of the panel and/or on the inner face of the handrail seat.

[0007] In detail, the gasket internally covers the surface of the seat of the handrail along the entire length of the latter and is dimensioned in such a way that, when it is coupled with the edge, it deforms elastically resulting in an interference fit.

[0008] The problem underlying the present invention is that of increasing the assembly and structural simplicity with respect to the known parapets and also improving their structural stability.

[0009] The main task of the present invention is to provide a parapet particularly for stairs, terraces and the like that provides a solution to this problem by solving the aforementioned drawbacks of the parapet described above. Within this aim, it is an object of the present invention to provide a parapet particularly for stairs, terraces and the like which allow obtaining a simpler assembly with respect to traditional parapets.

[0010] Another object of the present invention is to provide a parapet which allows to simplify assembly, obtaining a greater mutual structural holding together of the components.

[0011] Another object of the invention is to provide a parapet which does not require the use of a skilled labour for its assembly.

[0012] This task, as well as these and other objects which will become better apparent hereinafter, are achieved by a parapet particularly for stairs, terraces and the like, according to the attached claim 1.

[0013] Detailed features of the parapet particularly for stairs, terraces and the like according to the invention are reported in the dependent claims.

[0014] Further characteristics and advantages of the invention will become better apparent from the description of a preferred but not exclusive embodiment of a parapet particularly for stairs, terraces and the like according to the invention, illustrated by way of non-limiting example in the accompanying figures, in which:

[0015] FIG. 1 shows a parapet particularly for stairs, terraces and the like according to the invention in transverse section;

[0016] FIG. 2 shows a parapet particularly for stairs, terraces and the like according to the invention in side view, in section.

[0017] With particular reference to the aforementioned figures, it is generally indicated with 10 a parapet particularly for stairs, terraces and the like which, in a traditional way, comprises:

[0018] a protection element 11, which preferably consists of a safety glass sheet, having a lower extreme 11a fixable to a walk support and an upper extreme 11b which extends along a longitudinal direction A;

[0019] a handrail 12, which advantageously consists of a tube made of a metal material, having a seat 12a adapted to receive in insertion the upper extreme 11b.

[0020] In accordance with the present invention, the parapet 10 presents a particular peculiarity in that it comprises at least one U-shaped fastening element 13 having:

[0021] a spine 13a adapted to be housed in the seat 12a;

[0022] a compartment 13b for housing an edge 14 of the upper extreme 11b.

[0023] In practice, according to the present invention, it is possible to use a plurality of fastening elements 13 distributed along the edge 13 of the protection element 11, preferably at regular distances, to couple the handrail 12 to the edge 14.

[0024] The fastening element 13 has a length inferior to the length of the upper extreme 11b, measured along the longitudinal direction A, and it is made of a polymeric material selected from Acrylonitrile Butadiene Styrene, in short ABS, and an aliphatic polyamide, generally known as Nylon, preferably loaded with fibres advantageously of glass.

[0025] Moreover, the fastening element 13 is dimensioned with respect to the seat 12a of the handrail 12 and to the edge 14 of the upper extreme 11b to couple with interference with at least one of the latter.

[0026] It has been verified that the holding together of the handrail 12 to the protection element 11 is increased thanks to the use of the fixing element 13 with respect to the traditional parapets, despite the fastening element 13 connecting the handrail 12 to the protection element 11 only in a series of points and not continuously as in traditional parapets.

[0027] In a preferred but not exclusive embodiment of the present invention, the parapet 10 advantageously comprises a first blocking element 15 having a first adhesive face 15a fixed to the spine 13a and a second adhesive face 15b attached to a bottom of the seat 12a to block the first blocking element 15 to the handrail 12.

[0028] Depending on the contingent needs, the parapet 10 can comprise, alternatively or in combination with the first blocking element 15, a second blocking element 16 having a first adhesive face 16a fixed to the edge 14 and a second adhesive face 16b fixed to an inner wall 17 of the compartment 13b for to block the second fastening element 13 to the protection element 11.

[0029] The first fastening element 15 and/or the second fastening 16 preferably consist of a double-sided adhesive tape.

[0030] Advantageously, the first fastening element 15 is made with a double-sided adhesive tape selected from:

[0031] the product is known today with the code PFR-4616 of the 3M company or

[0032] the product is known today with the code VHB of the 3M company, in case a greater gripping strength is required.

[0033] If a particularly effective adherence is required, the edge **14** may preferably be covered with a primer suitable for promoting adhesion of the first adhesive face **15a** to edge **14**, advantageously said primer is a product of the 3M company known by code **94**.

[0034] Prior to application of the primer, advantageously the edge **14** and/or the compartment **13b** will be cleaned with a solvent selected from acetone and isopropyl acid preferably by means of a cloth which will be moved in a single direction.

[0035] As previously explained, advantageously the parapet **10** comprises a plurality of fastening elements **13** which preferably have a length of between 30 mm and 100 mm, and more preferably equal to 60 mm, they are also placed at mutual distance along the longitudinal direction A, advantageously included between 100 mm and 300 mm and preferably equal to 180 mm.

[0036] With particular reference to the above figures, the fastening element **13** advantageously comprises a bottom part **131** flat, and two side walls **132** and **133** which extend perpendicularly to the bottom part **131** to form a squared U-shaped profile adapted to couple with the edge **14** which is preferably squared.

1-7. (canceled)

8. Parapet particularly for stairs, terraces and the like, comprising:

- a protection element having a lower extreme fixable to a walk support and an upper extreme which extends along a longitudinal direction;
- a handrail having a seat adapted to receive an insertion said upper extreme;

further comprising at least one U-shaped fastening element and having:

- a spine adapted to be housed in said seat;
- a compartment for housing an edge of said upper extreme;
- said fastening element having a length inferior to the length of said upper extreme along said longitudinal direction and being in polymeric material selected between Acrylonitrile Butadiene Styrene and an aliphatic polyamide; said fastening element being dimensioned with respect to the seat of said handrail and the edge of said upper extreme to be coupled with an interference fit with at least one of the latter.

9. Parapet according to claim **8**, further comprising a first blocking element having a first adhesive face fixed to said spine and a second adhesive face fixed to an end of said seat to block said first blocking element to said handrail.

10. Parapet according to one of the preceding claims further comprising a second blocking element having a first adhesive face fixed to said edge and a second adhesive face fixed to an inner wall of said compartment to block said second fastening element to said protection element.

11. Parapet according to claim **3** wherein said edge is coated with a primer adapted to promote adhesion of the first adhesive face of said second blocking element to said edge.

12. Parapet according to claim **8** further comprising a plurality of said fastening element; said fastening elements having a length between 30 mm and 100 mm, and being placed at a mutual distance, along the longitudinal direction of the said upper extreme, between 100 mm and 300 mm.

13. Parapet according to claim **8** wherein said protection element consists of a safety glass plate.

14. Parapet according to claim **8** wherein said handrail consists of a tube of metallic material.

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