(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 3 757 314 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
25.09.2024 Bulletin 2024/39

(21) Application number: **20186432.9**

(22) Date of filing: **12.12.2014**

(51) International Patent Classification (IPC):
E04G 5/00 *(2006.01)* ***A62B 35/00*** *(2006.01)*
E04G 21/32 *(2006.01)* ***E04D 13/12*** *(2006.01)*
E04G 5/14 *(2006.01)* ***E04G 3/22*** *(2006.01)*
E04G 7/28 *(2006.01)*

(52) Cooperative Patent Classification (CPC):
E04G 5/001; A62B 35/0062; A62B 35/0081; E04D 13/12; E04G 3/22; E04G 5/145; E04G 21/3295; E04G 2007/285

(54) **ASSEMBLY OF A ROOF WITH A WALKWAY**

ZUSAMMENBAU EINES DACHES MIT EINEM GEHWEG

ASSEMBLAGE D'UN TOIT AVEC UNE PASSERELLE

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

(30) Priority: **20.12.2013 GB 201322790**

(43) Date of publication of application:
30.12.2020 Bulletin 2020/53

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
14812806.9 / 3 084 101

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Description

[0001] This invention relates to an assembly of a roof with a walkway installed on said roof.

[0002] It is known to provide walkways on roofs of commercial buildings in particular. However, in order to prevent the users of such walkways - typically maintenance operatives maintaining roof-mounted equipment, rainwater drainage systems and the like - from falling from the roof, it is generally desired to provide some means for ameliorating the risk of falls.

[0003] One option is to provide a physical barrier at the edge of the roof. Whilst this is relatively simple, it can be unsightly, bulky and costly to install.

[0004] Another option is to provide a line-based fall restraint system, such as the MANSAFE (RTM) system provided by Latchways plc of Wiltshire, United Kingdom. This requires the installation of some sort of sliding anchorage for a line for a user, and is separately purchased and installed on the roof, potentially requiring a further set of mountings on the roof to those for the walkway, hence presenting more opportunity for the integrity of the roof to be violated, with the potential for water ingress or cold bridging.

[0005] EP 0 413 510 A1 discloses an assembly of a roof with a walkway installed on it.

[0006] According to
the invention, an assembly of a roof with a walkway installed on it is provided according to claim 1.

[0007] As such, by having the anchorage for the fall restraint system incorporated in the walkway, it is no longer necessary to provide a separate anchorage for such a system, and so it is only necessary to fix a single system to the roof.

[0008] The toe guard may provide a location for the anchorage. Typically, the anchorage will be a sliding anchorage, being able to slide along the extent of the toe guard.

[0009] Thus, by providing the anchorage with a location in the toe guard, a fall restraint system can be attached directly to the walkway, thus doing away with the need to provide a separate fall restraint system; only a single apparatus need be purchased and attached to a roof, with a single set of mountings. Furthermore, the toe guard can efficiently serve two purposes, as a toe guard and as a location for the anchorage.

[0010] The toe guard may comprise an elongate tube coupled to the tread. The tube may have a slot along the length of the toe guard, which may provide the location for the anchorage. The anchorage may be received in the tube through the slot, so that a captive part of the anchorage is held captive within the tube, but typically will be able to slide within the tube along the slot. Typically, the tube will be rectangular, and preferably square, in cross section.

[0011] The captive part of the anchorage may comprise a carriage having at least one, and preferably a plurality, typically two, wheels depending therefrom. This will enable the anchorage to traverse corners in either direction. The anchorage may also comprise a mounting point for the fall restraint system; this may comprise a hitch onto which a line can be connected.

[0012] As such, the tread may be substantially elongate between first and second points along a first direction, and then elongate along a second direction different to the first direction between second and third points; in such a case the toe guard may curve at the second point between running in the first and second directions. Where the first and second directions are, as they typically are for changes in direction for walkways, at right angles to each other, then the toe guard may extend around two edges of the tread, being an elongate edge along the first direction and a short edge at the transition into the second direction.

[0013] Alternatively, the anchorage may comprise a line (such as a wire or cable) running along the length of the walkway. Typically, the line would be coupled to or mounted on the toe guard. The fall restraint system could then run along the line.

[0014] There may be provided a combination comprising the assembly according to claim 1 and a fall restraint system coupled to the anchorage.

[0015] The fall restraint system may comprise a flexible line attached to the anchorage, typically at the mounting point or hitch. This line would typically be coupled to a user, potentially via a lanyard. The fall restraint system may also comprise a fall arrest system, which is arranged to gradually dissipate the kinetic energy of a falling user.

[0016] There now follows, by way of example only, description of an embodiment of the invention described with reference to the accompanying drawings, in which:

Figure 1 shows a transverse cross section through a walkway in accordance with an embodiment of the invention;

Figure 2 shows a plan view of the walkway of Figure 1;

Figure 3 shows a longitudinal cross section through the walkway of Figure 1;

Figure 4 shows a side elevation of the sliding anchorage of the walkway of Figure 1; and

Figure 5 shows an end elevation of the sliding anchorage of Figure 4.

[0017] The accompanying drawings show a walkway 1 that can be installed on a roof, where it is desired to reduce the likelihood of a user of the walkway falling and injuring themselves. The walkway 1 comprises a tread 2, which comprises a plurality of metal (typically extruded aluminium) slats 3 held between a pair of toe guards 4, 5, again typically formed of extruded aluminium. The toe guards 4, 5 run along each lateral edge along the length 6 of the walkway and each engage the slats through a socket portion 9, 10. They each provide an upstanding portion 7, 8 at the edge of the tread 2, which provides an edge to alert a user that they are approaching the edge

of the walkway 1.

[0018] For a first one of the toe guards 4, the upstanding portion 7 is provided by a tubular box section 11. This has a slot 12 therein, extending along the length 6. A sliding anchorage 13 is provided that is held captive within the box section 11, so that a carriage portion 14 is received within the tube, but a mounting portion 15 extends out of the slot. A flexible line (not shown) can then be attached to the mounting portion 15 (of the form of a hitch or bolt or similar) in order to be attached to the user as a fall restraint or fall arrest system.

[0019] The carriage portion 14 is U-shaped as shown in Figure 4 of the accompanying drawings and carries four wheels 16; two above the slot 12 and two below, with a pair of wheels 16 on each arm of the U-shape. Thus, whether the loading on the anchorage is to either side of the slot, or forwards or backwards along the length 6, at least one of the wheels will be able to roll along the inner surface of the box section 11.

[0020] Accordingly, the sliding anchorage 12 can slide along the length 6 of the first toe guard 4 as a user walks to and fro along the walkway 1. The location of the sliding anchorage is provided within the first toe guard 4, thus providing an integrally formed walkway and fall restraint system whilst making efficient use of the first toe guard 4. Thus, less material is used and fewer products need to be bought in order to provide a safe walkway on a roof. Only the mountings required to mount the walkway to the roof are required; there is no need for a separate set of mountings for the fall restraint system.

[0021] It can be seen from Figure 2 of the accompanying drawings that the first toe guard 4 can extend around a front side 20 of the walkway 1 at right angles to the length 6. Assuming that the toe guard 4 is adequately curved, the carriage and wheels arrangement of the sliding anchorage 12 described above will have no trouble in negotiating such a curve, or the curve in the opposite direction shown in order to move onto further segment 19. Thus, there is no need for the user to have to unclip and reclip themselves when the walkway changes direction.

Claims

1. Assembly of a roof with a walkway installed on said roof, said walkway (1) comprising a tread (2) for a user to walk upon,
   characterized in that the tread (2) is bounded along an elongate side by a toe guard (4, 5) having an elongate extent, said walkway (1) further comprising an anchorage (13) for a fall restraint system, in which the anchorage is a sliding anchorage (13), being able to slide along the extent of the toe guard (4 ,5) and in which the toe guard (4, 5) comprises an elongate tube (11) coupled to the tread (2), the tube (11) having a slot (12) along the length of the toe guard (4, 5) providing a location for the sliding anchorage (13).

2. The assembly of claim 1, in which the sliding anchorage (13) is received in the tube (11) through the slot (12), so that a captive part (14) of the sliding anchorage (13) is held captive within the tube (11), but will be able to slide within the tube (11) along the slot (12).

3. The assembly of claim 2, in which the captive part (14) of the sliding anchorage (13) comprises a carriage having at least one wheel (16) depending therefrom.

4. The assembly of any preceding claim in which the anchorage comprises a mounting point (15) for the fall restraint system.

5. The assembly of any preceding claim, in which the anchorage (13) comprises a line running along the length of the walkway.

6. The assembly of claim 5, in which the line (13) is coupled to or mounted on the toe guard (4, 5).

7. A combination comprising the assembly of any preceding claim and a fall restraint system coupled to the anchorage (13).

8. The combination of claim 7, in which the fall restraint system comprises a flexible line attached to the anchorage.

Patentansprüche

1. Baugruppe aus einem Dach mit einem auf dem Dach installierten Laufsteg, wobei der Laufsteg (1) eine Trittfläche (2) umfasst, auf der ein Benutzer gehen soll,
   dadurch gekennzeichnet, dass die Trittfläche (2) entlang einer länglichen Seite durch einen Fußschutz (4, 5) begrenzt ist, der eine längliche Erstreckung aufweist, wobei der Laufsteg (1) ferner eine Verankerung (13) für ein Fallschutzsystem umfasst, wobei die Verankerung eine gleitende Verankerung (13), die entlang der Erstreckung des Fußschutzes (4, 5) gleiten kann, und wobei der Fußschutz (4, 5) eine längliche Röhre (11) umfasst, die mit der Trittfläche (2) gekoppelt ist, wobei die Röhre (11) einen Schlitz (12) entlang der Länge des Fußschutzes (4, 5) aufweist, die eine Stelle für die gleitende Verankerung (13) bereitstellt.

2. Baugruppe nach Anspruch 1, wobei die gleitende Verankerung (13) in der Röhre (11) durch den Schlitz (12) hindurch aufgenommen ist, so dass ein unverlierbares Teil (14) der gleitenden Verankerung (13) im Innern der Röhre (11) unverlierbar gehalten wird, jedoch im Innern der Röhre (11) an dem Schlitz (12) entlang gleiten kann.

3. Baugruppe nach Anspruch 2, wobei das unverlierbare Teil (14) der gleitenden Verankerung einen Schlitten umfasst, der mindestens ein davon abhängendes Rad (16) aufweist.

4. Baugruppe nach einem der vorhergehenden Ansprüche, wobei die Verankerung einen Montagepunkt (15) für das Fallschutzsystem umfasst.

5. Baugruppe nach einem der vorhergehenden Ansprüche, wobei die Verankerung (13) eine Leine umfasst, die sich entlang der Länge des Laufstegs erstreckt.

6. Baugruppe nach Anspruch 5, wobei die Leine (13) mit dem Fußschutz (4, 5) gekoppelt oder daran montiert ist.

7. Kombination, umfassend die Baugruppe nach einem der vorhergehenden Ansprüche und ein mit der Verankerung (13) gekoppeltes Fallschutzsystem.

8. Kombination nach Anspruch 7, wobei das Fallschutzsystem eine an der Verankerung angebrachte flexible Leine umfasst.

Revendications

1. Assemblage d'un toit avec une passerelle installée sur ledit toit, ladite passerelle (1) comprenant une surface de marche (2) sur laquelle doit marcher un utilisateur,
caractérisé en ce que la surface de marche (2) est délimitée le long d'un côté allongé par un garde-pieds (4, 5) présentant une étendue allongée, ladite passerelle (1) comprenant en outre un ancrage (13) pour un système antichute, dans lequel l'ancrage est un ancrage coulissant (13) pouvant coulisser le long de l'étendue du garde-pieds (4, 5), et dans lequel le garde-pied (4, 5) comprend un tube allongé (11) couplé à la surface de marche (2), le tube (11) présentant une fente (12) le long de la longueur du garde-pieds (4, 5) fournissant un emplacement pour l'ancrage coulissant (13).

2. Assemblage selon la revendication 1, dans lequel l'ancrage coulissant (13) est reçu dans le tube (11) à travers la fente (12) de sorte qu'une pièce captive (14) de l'ancrage coulissant (13) est maintenue captive à l'intérieur du tube (11) mais pourra coulisser à l'intérieur du tube (11) de long de la fente (12).

3. Assemblage selon la revendication 2, dans lequel la pièce captive (14) de l'ancrage coulissant (13) comprend un chariot présentant au moins une roue (16) qui dépend de celle-ci.

4. Assemblage selon l'une quelconque des revendications précédentes, dans lequel l'ancrage comprend un point de montage (15) pour le système antichute.

5. Assemblage selon l'une quelconque des revendications précédentes, dans lequel l'ancrage (13) comprend une corde s'étendant le long de la longueur de la passerelle.

6. Assemblage selon la revendication 5, dans lequel la corde (13) est couplée à ou montée sur le garde-pieds (4, 5).

7. Combinaison comprenant l'assemblage selon l'une quelconque des revendications précédentes et un système antichute couplé à l'ancrage (13).

8. Combinaison selon la revendication 7, dans laquelle le système antichute comprend une corde flexible rattachée à l'ancrage.

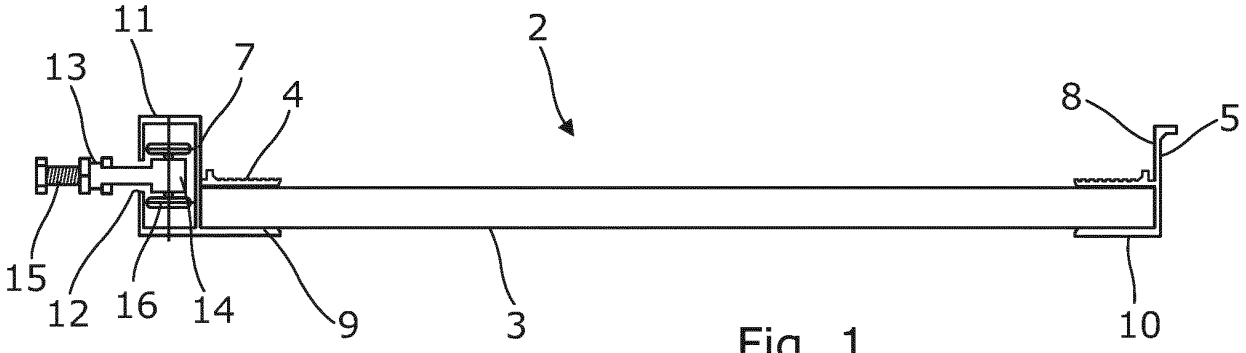

Fig. 1

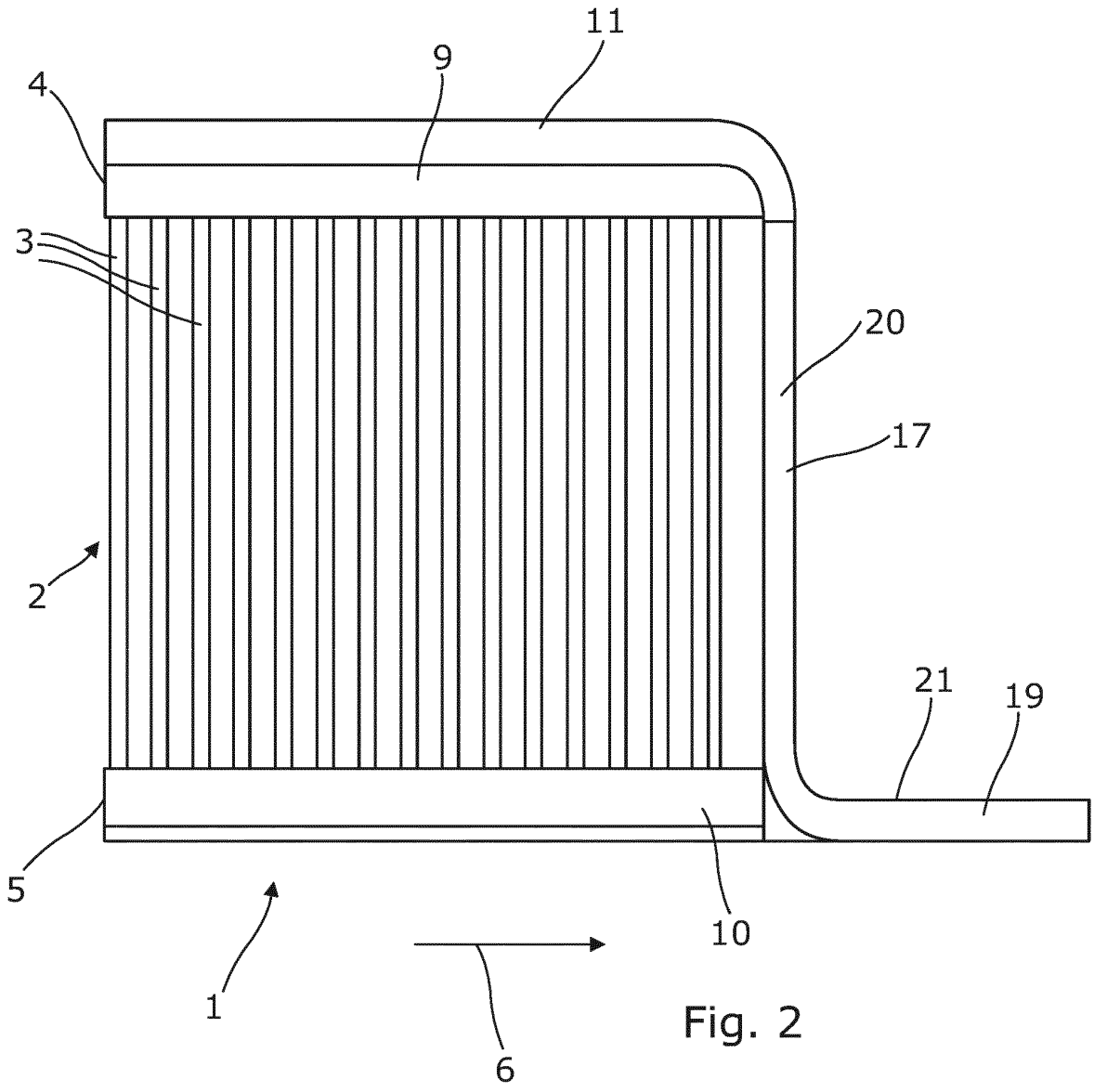

Fig. 2

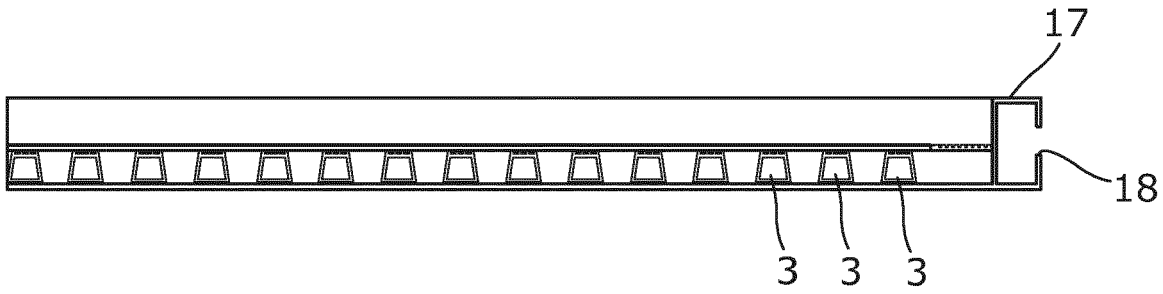

Fig. 3

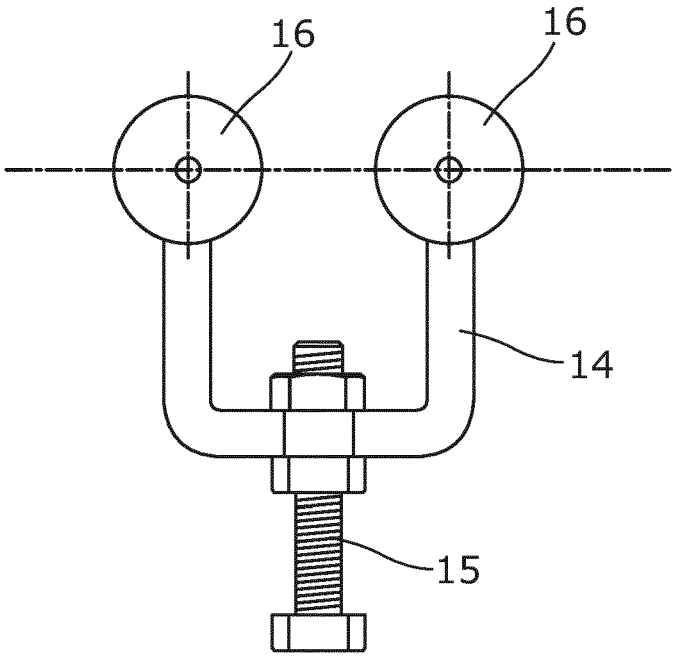

Fig. 4

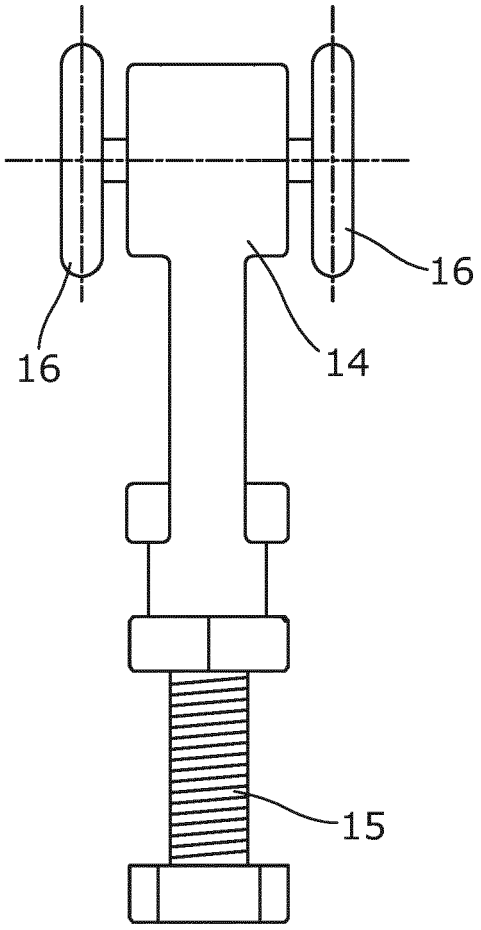

Fig. 5

REFERENCES CITED IN THE DESCRIPTION

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