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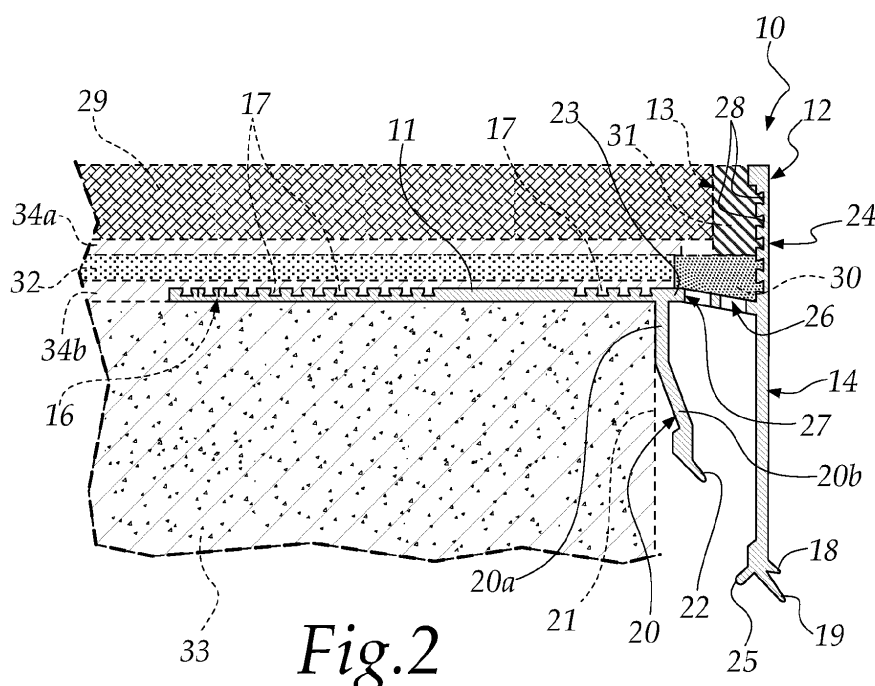
(54) PROFILE FOR TERRACES AND BALCONIES

(57) A profile (10) for terraces (21) and balconies, which comprises:

- a substantially flat wing (11) for anchoring the profile (10) to the floor of the terraces (21),
- a front portion (12) for protection of the external edge (13) of the flooring which protrudes outward with respect thereto,
- a first drip lip (14) constituted by a contoured element which extends downward and comprises, at the lower

end, at least one first protrusion (18) and at least one second protrusion (19), lower than the first, both protruding downward and outward with respect to the front portion (12).

The profile (10) comprises a second drip lip (20), which is substantially parallel to the first drip lip (14), extends downward from the wing (11) and comprises a third protrusion (22) which protrudes downward and toward the first drip lip (14).

**Fig.2****EP 4 112 841 A1**

Description

[0001] The present invention relates to a profile for terraces and balconies.

[0002] In the present description, terms describing orientation in space, such as, for example, "down", "lower", "higher", "internal" or "external", refer to the configuration for use of the profile.

[0003] Nowadays, the use is widespread of profiles for laying along the external perimeter of terraces or balconies, to protect the edges of the tiles and to ensure correct drainage of water downward.

[0004] Generally such profiles are provided with:

- a perforated wing for anchoring to the balcony, over which the tiles are laid, which ensures the fixing of the profile to the support and which has a row of openings for the drainage of any water that might seep under the tiles,
- a front portion adapted to be positioned in front of the external edge of the flooring with the interposition of sealant,
- a drip lip element, which is constituted by at least one drip edge projection that protrudes outward at the lowest point of the profile, with the purpose of slowing the water and redirecting it outward, in order to make the water drip away far from the walls, while favoring its vertical descent.

[0005] Figure 1 shows an example of such conventional profiles.

[0006] In the example, the profile is generally designated by the reference letter A, the wing with the letter B, a slotted drainage opening with C, the front portion with D and the drip edge projection with E.

[0007] Such conventional techniques have some aspects that show room for improvement.

[0008] Very often, especially when there is very heavy rainfall, a profile of the type shown in Figure 1 will not allow the effective drainage of the runoff rainwater, which tends to return toward the front of the building.

[0009] To reduce this problem, the profile should be installed so as to protrude from the building by at least one centimeter, but very often during installation on-site this does not happen.

[0010] Between the front portion D of the profile and the tiles, a sealant is interposed which tends to percolate downward, obstructing the drainage openings C.

[0011] To overcome these drawbacks, a profile is known which is described in EP 3 447 211 B1 filed by this same applicant.

[0012] This profile is provided with a double drip edge at the end of the drip lip and with a spacer, which ensure the correct drainage of the runoff rainwater: even under very heavy rainfall, therefore, the water does not tend to return toward the building.

[0013] The same profile is also coupled to a draining sponge which prevents the sealant from obstructing the

drainage openings.

[0014] This profile is also shows some room for improvement, however.

5 **[0015]** This profile in fact is not always capable of ensuring a correct outflow of the water that has seeped under the tiles.

[0016] Furthermore, in the event of deterioration of the sealant, the drainage openings might not be capable of letting all the water adequately flow away.

10 **[0017]** The aim of the present invention is to provide a profile for terraces and balconies that is capable of compensating and improving the above mentioned drawbacks, and therefore to provide a profile that makes it possible to make the water that has seeped under the tiles flow away more effectively than similar, conventional profiles.

[0018] Within this aim, an object of the invention is to provide a profile that allows a total outflow of the water in the event of deterioration of the sealant.

20 **[0019]** A further object of the present invention is to overcome the drawbacks of the background art in a manner that is alternative to any existing solutions.

[0020] Another object of the invention is to provide a profile for terraces and balconies that is highly reliable, easy to implement and at low cost.

25 **[0021]** This aim and these and other objects which will become better apparent hereinafter are achieved by a profile for terraces and balconies, which comprises:

- 30 - a substantially flat wing for anchoring said profile to the floor of said terraces,
- a front portion for protection of the external edge of the flooring and which protrudes outward with respect thereto,
- 35 - a first drip lip constituted by a contoured element which extends downward and comprises, at the lower end, at least one first protrusion and at least one second protrusion, lower than the first, both protruding downward and outward with respect to said front portion,
- 40 said profile being characterized in that it comprises a second drip lip, which is substantially parallel to said first drip lip, extends downward from said wing and comprises a third protrusion which protrudes downward and toward said first drip lip.
- 45

[0022] Further characteristics and advantages of the invention will become better apparent from the detailed description that follows of a preferred, but not exclusive, embodiment of the profile for terraces and balconies, according to the invention, which is illustrated by way of non-limiting example in the accompanying drawings, wherein:

- 55 - Figure 1 is a perspective view of conventional profile;
- Figure 2 is a cross-sectional view of an application of use of a profile for terraces and balconies, according to the invention;

- Figure 3 is a perspective view of the profile of Figure 2.

[0023] With reference to the figures, a profile for terraces and balconies, according to the invention, is generally designated by the reference numeral 10.

[0024] Such profile 10 is made of extruded aluminum.

[0025] In other embodiments, the profile 10 can be made of plastic material and/or metallic material.

[0026] The profile 10 comprises:

- a wing 11, substantially flat and perforated, for anchoring the profile to the floor,
- a front portion 12 for protection of the external edge 13 of the flooring, which is constituted by tiles 29, and protruding outward with respect thereto,
- a first drip lip 14 constituted by a contoured element that extends downward.

[0027] The wing 11, as can be seen in the perspective view in Figure 3, is provided with first openings 15 and holes 16 of diameter comprised preferably between 2 mm and 10 mm, which make it possible to mechanically affix the profile by way of nails and/or screws before laying the floor.

[0028] The wing 11 is provided, at least in some regions Z1, Z2, with dovetail longitudinal incisions 17 in order to facilitate the mechanical anchoring of the adhesive and therefore of a connecting strip, which are conventional.

[0029] The first drip lip 14 has a substantially vertical configuration and comprises, at the lower end, at least one first protrusion 18 and at least one second protrusion 19, lower than the first, both protruding downward outward with respect to the front portion 12.

[0030] In particular, the first drip lip 14 has an extension downward from the front portion 12 and coinciding with a region of the latter.

[0031] Advantageously, the second protrusion 19 protrudes further outward than the first protrusion 18.

[0032] The second protrusion 19 has an inclination with respect to a horizontal plane which is comprised between 20° and 65°.

[0033] According to a first variation, the first protrusion 18 and the second protrusion 19 consist of two cusps, as shown in Figure 2.

[0034] In a second embodiment, not shown in the figures, the first and the second protrusion consist of two tabs.

[0035] One of the peculiarities of the invention consists in that it comprises a second drip lip 20, substantially parallel to the first drip lip 14.

[0036] This second drip lip 20 is constituted by a contoured element that extends downward starting from the wing 11, in the region to be positioned at the edge of the terrace 21, and it has, starting from the wing 11:

- a first portion 20a, parallel to the terrace 21,
- a second portion 20b, with a direction of extension

that is at least partially directed toward the first drip lip 14.

[0037] The second drip lip 20 comprises, at the lower end, a third protrusion 22, which protrudes downward and toward the first drip lip 14.

[0038] The third protrusion 22 has an inclination with respect to a horizontal plane which is comprised between 20° and 65°.

[0039] Advantageously, the first drip lip 14 has a larger extension than the second drip lip 20 and in the configuration for use hides it from view.

[0040] It should be noted that the presence of such a second drip lip allows the outflow of water and residues that have seeped under the tiles 29.

[0041] In particular, the first drip lip 14 also has, at the lower end, a fourth protrusion 25, which protrudes downward and is adapted to protrude toward the edge of the terrace 21 and has an inclination with respect to a horizontal plane which is comprised between 20° and 65°.

[0042] The fourth protrusion 25 is adapted to strengthen the structure of the first drip lip 14.

[0043] The front portion 12 has a cross-section that is substantially shaped like a letter T turned through 90° which comprises a central connection 23 to the wing 11, which corresponds to the core of the T-shape, and a substantially vertical element, which corresponds to the wing of the T-shape and has an extension in the order of 10 cm and comprises:

- an upper portion 24,
- a lower portion, which coincides with the first drip lip 14.

[0044] Dovetail incisions 28 are defined on the inner side of the upper portion 24, to improve the grip with a sealant for coverings.

[0045] The central connection 23 is inclined downward, with respect to the plane of arrangement of the wing 11, and has two longitudinal rows of openings 26, 27, for draining water:

- a first row of second openings 26, which is proximate to the first drip lip 14,
- a second row of third openings 27, which is parallel to the first row, in which the third openings 27 are proximate to the second drip lip 20.

[0046] These second openings 26 and third openings 27 preferably have a length comprised between 2 mm and 40 mm, a width comprised between 1 mm and 10 mm and a distance between centers comprised between 5 cm and 20 cm.

[0047] In the embodiment illustrated in the figures, the first openings 26 do not correspond to the second openings 27; however, in further embodiments not shown in the figures, a profile according to the invention does have the first openings 26 and the second openings 27 mutu-

ally corresponding, so that they are in mutually parallel pairs.

[0048] It should be noted that the presence of two rows of openings 26, 27 also enables the profile 10 to be used in an application with a drainage device under the tiles.

[0049] In fact a profile according to the invention allows any water passing between the tiles to flow out through the second openings 27, thus preventing the first openings 26 from becoming clogged.

[0050] As shown in Figure 2, during installation of the profile 10 according to the invention, draining sponge tape 30 is conveniently used on the central connection 23 and adjacent to the inner side of the upper portion 24, and a layer of silicone sealant 31 is superimposed thereon.

[0051] The draining sponge tape 30 prevents the sealant from obstructing the first openings 26 and the second openings 27.

[0052] Advantageously, between the tiles 29 of the floor and the profile 10 a per se known draining membrane 32, can be interposed, glued to these and to the base 33 of the floor using two opposing layers 34a, 34b of per se known adhesive for tiles.

[0053] The laying and the operation of the profile, according to the invention, is evident from the foregoing description and explanation.

[0054] With such a profile according to the invention, that comprises two such drip lips 14 and 20 and two such rows of openings 26, 27, it is allowed the outflow of water:

- originating from above the tiles 29,
- that seeps through the tiles 29,
- that has seeped through deteriorated sealant 31.

[0055] In practice it has been found that the invention fully achieves the intended aim and objects by providing a profile that makes it possible to drain water that may have seeped underneath the tiles faster and more effectively than similar, conventional profiles.

[0056] Furthermore, with the invention a profile has been devised that enables a total outflow of the water in the event of deterioration of the sealant.

[0057] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims. Moreover, all the details may be substituted by other, technically equivalent elements.

[0058] In practice the materials employed, provided they are compatible with the specific use, and the contingent dimensions and shapes, may be any according to requirements and to the state of the art.

[0059] The disclosures in Italian Patent Application No. 102021000016958 from which this application claims priority are incorporated herein by reference.

[0060] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such

reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A profile (10) for terraces (21) and balconies, which comprises:

- a substantially flat wing (11) for anchoring said profile (10) to the floor of said terraces (21),
 - a front portion (12) for protection of the external edge (13) of the flooring which protrudes outward with respect thereto,
 - a first drip lip (14) constituted by a contoured element which extends downward and comprises, at the lower end, at least one first protrusion (18) and at least one second protrusion (19), lower than the first, both protruding downward and outward with respect to said front portion (12),
- said profile (10) being **characterized in that** it comprises a second drip lip (20), which is substantially parallel to said first drip lip (14), extends downward from said wing (11) and comprises a third protrusion (22) which protrudes downward and toward said first drip lip (14).

2. The profile (10) according to claim 1, **characterized in that** said second drip lip (20) is constituted by a contoured element and has, starting from said wing (11):

- a first portion (20a), adapted to be parallel to a terrace (21),
- a second portion (20b), with a direction of extension that is at least partially directed toward said first drip lip (14).

3. The profile (10) according to claim 1, **characterized in that** said first drip lip (14) has an extension downward from said front portion (12) that coincides with a region of the latter.

4. The profile (10) according to claim 1, **characterized in that** said second protrusion (19) protrudes further outward than said first protrusion (18).

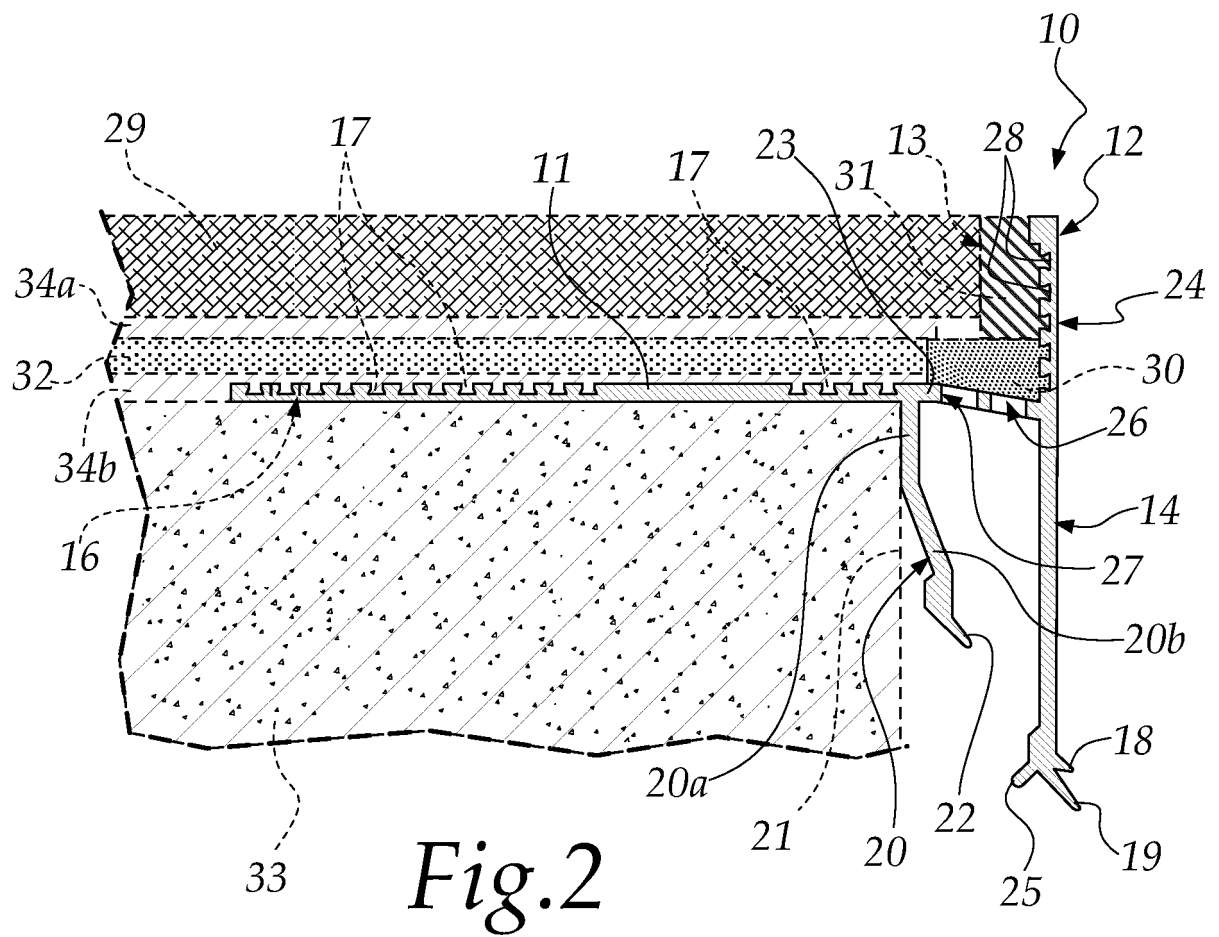
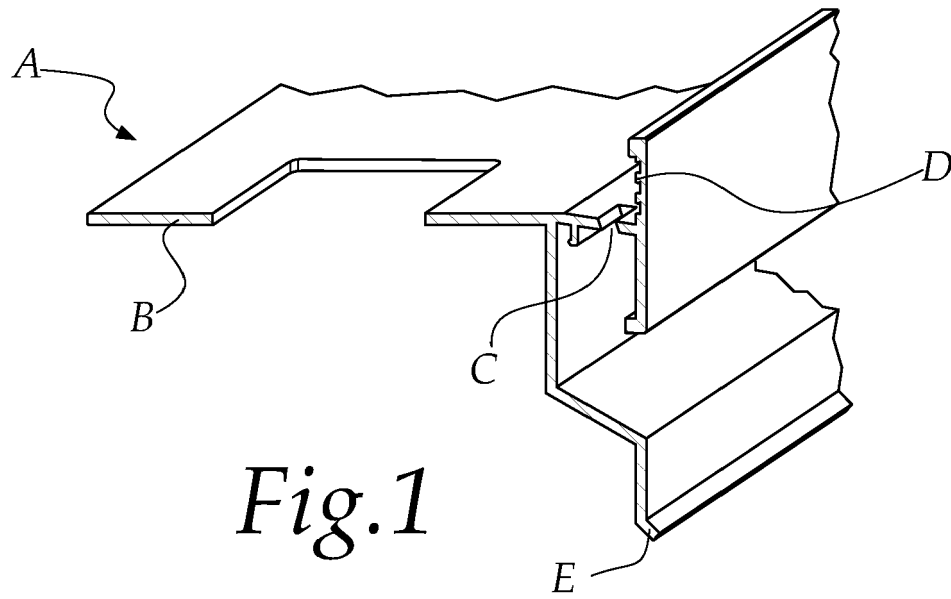
5. The profile (10) according to one or more of the preceding claims, **characterized in that** said wing (11) has:

- first openings (15),
- and/or holes (16),
- and/or longitudinal incisions (17) at least in some regions (Z1, Z2).

6. The profile (10) according to one or more of the preceding claims, **characterized in that** said second protrusion (19) and/or said third protrusion (22) have an inclination with respect to a horizontal plane that is comprised between 20° and 65°. 5
7. The profile (10) according to one or more of the preceding claims, **characterized in that** said first drip lip (14) has a larger extension than said second drip lip (20). 10
8. The profile (10) according to one or more of the preceding claims, **characterized in that** said first drip lip (14) also has, at the lower end, a fourth protrusion (25) which protrudes downward and is adapted to protrude toward the edge of said terrace (21). 15
9. The profile (10) according to one or more of the preceding claims, **characterized in that** said front portion (12) has a cross-section that is substantially shaped like a letter T turned through 90° which comprises a central connection (23) to said wing (11), which corresponds to the core of said T-shape, and a substantially vertical element, which corresponds to the wing of said T-shape and which in turn comprises: 20
- an upper portion (24),
 - a lower portion, which coincides with said first drip lip (14). 25
10. The profile (10) according to one or more of the preceding claims, **characterized in that** incisions (28) are defined on the inner side of said upper portion (24). 30
11. The profile (10) according to one or more of the preceding claims, **characterized in that** said central connection (23) is inclined downward with respect to the plane of arrangement of said wing (11) and has two longitudinal rows of openings (26, 27): 35
- a first row of second openings (26), which is proximate to said first drip lip (14),
 - a second row of third openings (27), which is parallel to the first row, said third openings (27) being proximate to said second drip lip (20). 40

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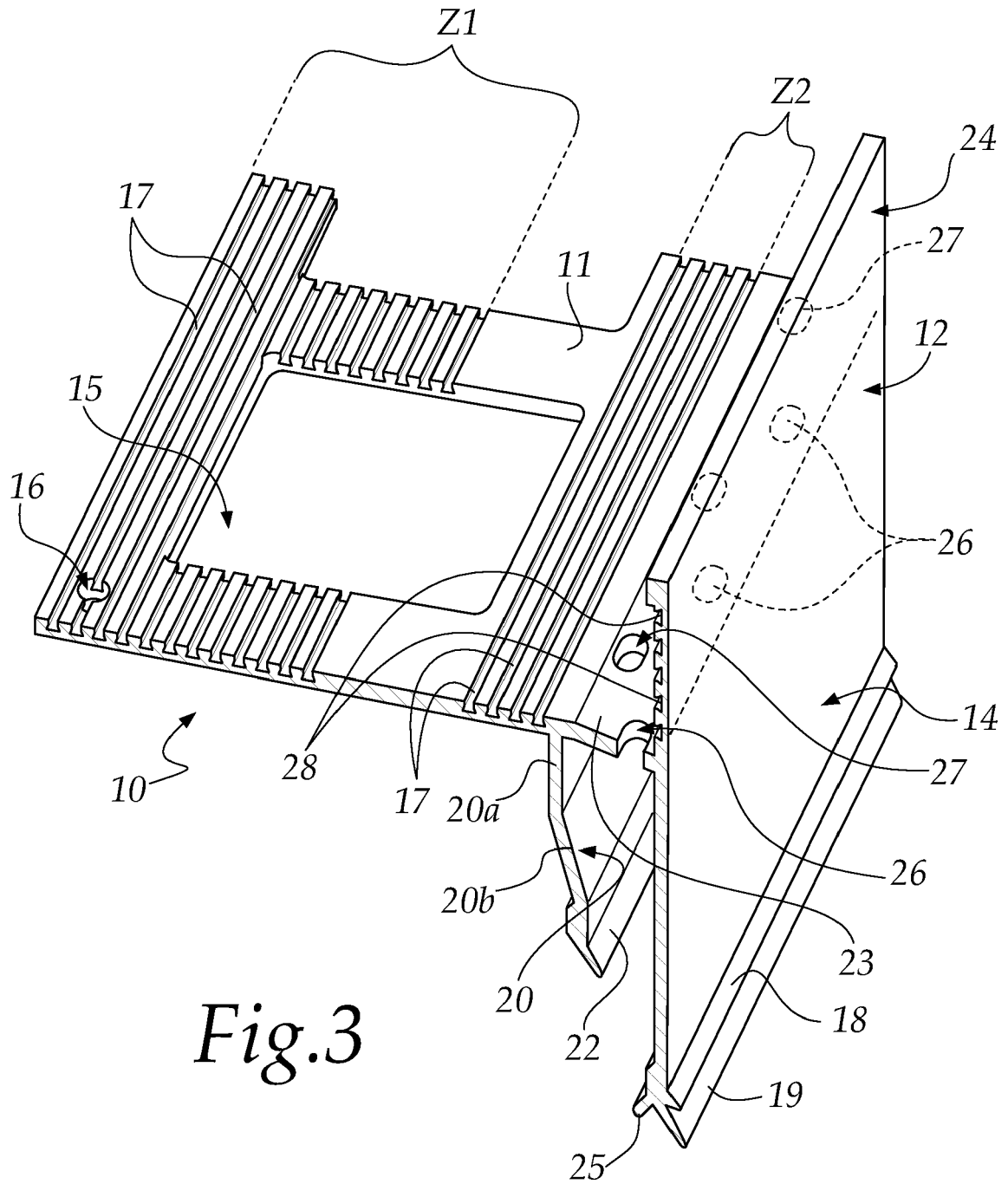


Fig.3



EUROPEAN SEARCH REPORT

Application Number

EP 22 18 1435

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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X,D	EP 3 447 211 A1 (PROGRESS PROFILES SPA [IT]) 27 February 2019 (2019-02-27) * figure 2 * -----	1-11	
			TECHNICAL FIELDS SEARCHED (IPC)
			E04F E04D
The present search report has been drawn up for all claims			

1

EPO FORM 1503 03.82 (P04C01)

Place of search Munich	Date of completion of the search 18 October 2022	Examiner Topcuoglu, Sadik Cem
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document		

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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