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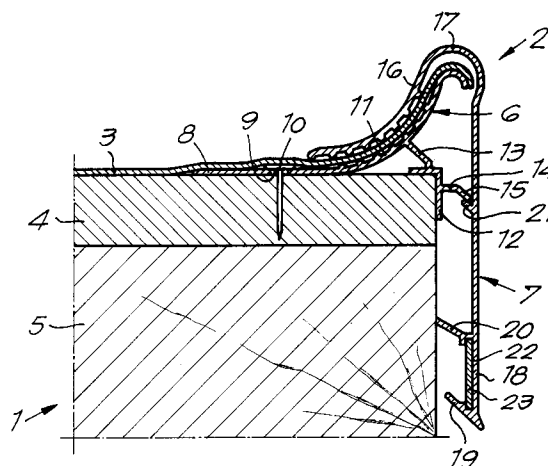
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**B-2000 Antwerpen (BE)**(54) **Flat roof and eave profile therefor.**

(57) Flat roof comprising a roof construction (1), on at least one edge thereof an eave profile (2) connected thereto and a roof covering foil (3) which is applied to the roof construction (1) and with its edge on at least part of the eave profile (2), characterized in that the eave profile (2) is composed of two profiles in between which an edge of the roof covering foil (3) is caught, namely a lower profile (6) which is connected to the roof construction (1) and an upper profile (7) which is located with one part (16, 17) over the lower profile (6) and the edge of the roof covering foil (3) and with an other part (21) is clenched over a part (15) of the lower profile (6).

**Fig.1****EP 0 658 664 A1**

The invention relates to a flat roof which contains a roof construction, on at least one edge thereof an eave profile attached thereto and a roof covering foil which is applied on the roof construction and with its edge on at least a part of the eave profile.

With flat roofs of this type, the eave profile is simple. When the roof covering foil is not applied properly on the part of the eave profile, or comes loose, water can intrude under the roof covering foil.

The invention aims at remedying this disadvantage and to provide in a flat roof with eave profile whereby the intrusion of water at the edge of the eave profile is excluded.

This aim is met according to the invention because the eave profile is composed of two profiles in between which an edge of the roof covering foil is caught, namely a lower profile which is attached to the roof construction and an upper profile which is located with one part over the lower profile and the edge of the roof covering foil, and with an other part is clenched over a part of the lower profile.

Seams in the lower profile are covered by the roof covering foil, whereas the outmost edge of this foil itself is covered by the upper profile. This upper profile can be attached to the lower profile in a very rapid way without connection means of tools, by means of clenching.

Efficiently, the part of the upper profile which is clenched is a slantingly upwards directed edge, and the part of the lower profile over which said part is clenched, is a slantingly downwards directed edge.

In a special embodiment of the invention, the lower profile comprises a flat part which is attached to the roof construction and an upwards sloping part, whereas the upper profile comprises an upwards sloping part which is located above the upwards sloping part of the lower profile, a bend and a downwards sloping part which extends upto next to the roof construction.

Thereby, the lower profile preferably comprises, under the upwards sloping part, a corner part of which one leg is almost in a direct line with the flat part of this lower profile, and of which the other leg is directed downwards next to the roof construction, while the part of the lower profile on which the upper profile is clenched, stands on the latter leg.

Efficiently, the upper side of the upwards sloping part of the lower profile and the lower side of the above-lying upwards sloping part of the upper profile are corrugated.

The invention also relates to an eave profile which is destined to be used with a roof according to one of the preceding embodiments and which is

characterized in that it is composed of a lower profile and an upper profile which can be clenched on the lower profile.

In order to better show the characteristics of the invention, a preferred embodiment of a flat roof and an eave profile therefor is described hereafter, as an example without any limitative character whatsoever, reference being made to the accompanying drawings in which:

5 figure 1 represents a cross-section of a part of a flat roof according to the invention;

10 figure 2 represents a cross-section of the lower profile of the composite eave profile of the roof of figure 1;

15 figure 3 represents a cross-section similar to that of figure 2, but of the upper profile of the roof.

20 The flat roof represented in figure 1 is composed in a usual way of a roof construction 1, an eave profile 2 attached to the edges thereof and a roof covering foil 3 which is applied on the roof construction 1 and with its edges on the eave profile 2.

25 The roof construction 1 is of a known type. As represented in figure 1 it can consist of a partition 4 which is mounted on beams 5. However, it can also consist of a plate of reinforced concrete or of brickwork.

30 Also the roof covering foil 3 is of a known type. It can be classic "roofing" on the basis of asphalt or a fleece of elastomere or rubber, in one or more layers.

35 The eave profile 2 is composed of a lower profile 6 and an upper profile 7 which is clenched on the lower profile 6.

40 The lower profile 6 comprises a flat part 8 which is provided with openings 9 through which nails 10 extend, with which this part 8 is nailed down on the roof construction 1 and an upwards sloping part 11 connecting to this part 8, which ends in an downwardly bent edge and which is corrugated at the upper side.

45 A corner part 12 located under this upwards sloping part 11 fits over the upper corner of the edge of the roof construction 1. The one leg of this corner part 12 is in a direct line with the flat part 8 and is connected to the part 11 by means of an edge 13. The other leg of the corner part 12 directed perpendicularly on the former, and is provided on the outside with a rib 14, the outer edge 15 of which is directed slantingly downwards.

50 The upper profile 7 comprises an upwards sloping part 16 which changes into a straight, downwardly directed part 18 through a bend 17. The lower side of the upwards sloping part 16 is corrugated. The edge of the roof covering foil 3 or at least the edge of its upper layer is caught in between this upwards sloping part 16 and the up-

wards sloping part 11. The bend 17 comes to lie over the bent edge at the end of the upwards sloping part 11.

The downwards directed part 18 is provided, on the side directed towards the roof, with three slantingly upwards directed edges 19, 20 and 21. The edge 19 is connected to the lower end. The edge 20 is located somewhat higher and forms together with the edge 19 a distance keeper which keeps the part 18 at a distance of the side of the roof. Between the edges 19 and 20 a notch 22 is formed for placing a connection piece 23. The upper edge 21 is a smaller edge and cooperates with the edge 15 of the lower profile 6. It is this edge 21 which, when applying the upper profile 7 over the lower profile 6, clenches over the edge 15 by elastic deformation.

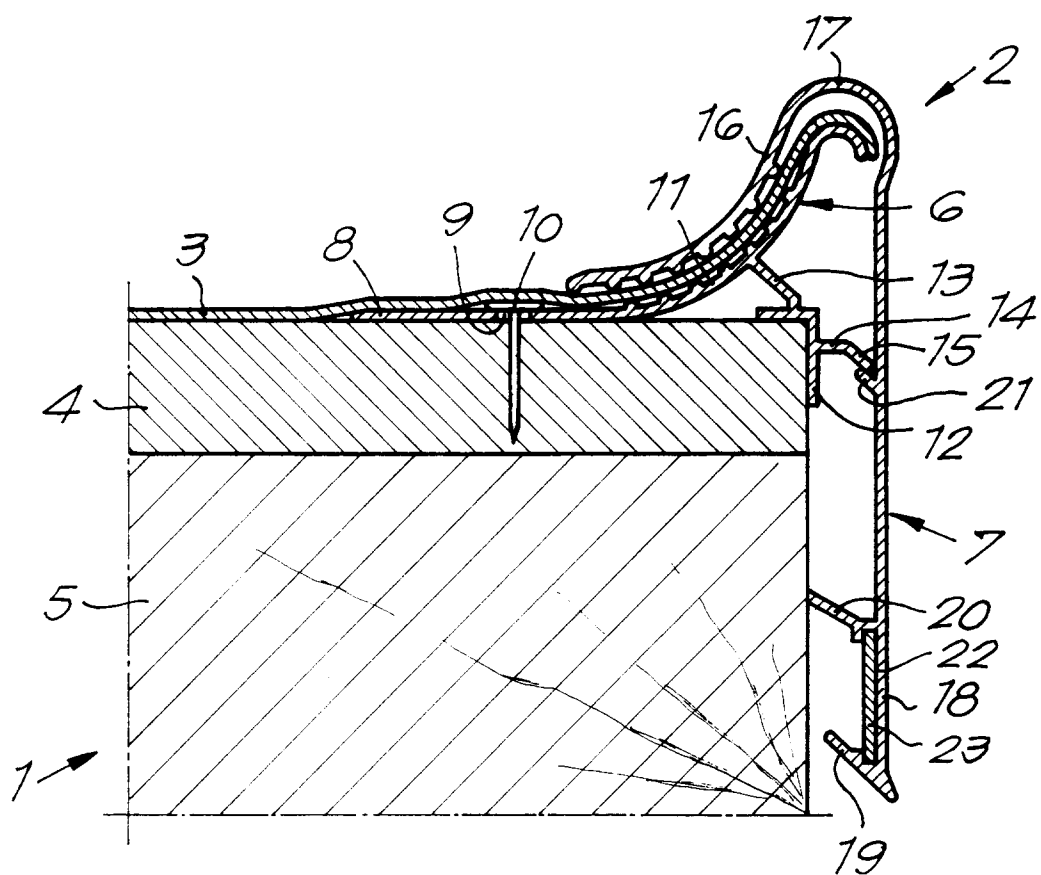
Due to this clenching, the connection of the upper profile can take place in an extremely simple and rapid way, without the necessity to use any tool. The roof covering foil 3 covers the possible seams between lengths of the lower profile 6, while the outmost edge of this roof covering foil itself is covered by the upper profile 7. In this way, the intrusion of water at the side of the eave profile 2 is excluded.

The present invention is in no way limited to the embodiment described above and represented in the drawings, but such flat roof and eave profile therefor can be realized in different variants without leaving the scope of the invention.

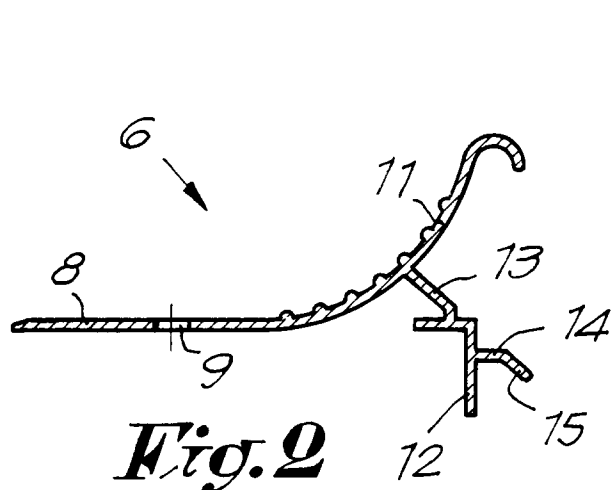
### Claims

1. Flat roof comprising a roof construction (1), on at least one edge thereof an eave profile (2) connected thereto and a roof covering foil (3) which is applied to the roof construction (1) and with its edge on at least part of the eave profile (2), characterized in that the eave profile (2) is composed of two profiles in between which an edge of the roof covering foil (3) is caught, namely a lower profile (6) which is connected to the roof construction (1) and an upper profile (7) which is located with one part (16, 17) over the lower profile (6) and the edge of the roof covering foil (3) and with an other part (21) is clenched over a part (15) of the lower profile (6).
2. Flat roof according to the preceding claim, characterized in that the part (21) of the upper profile (7) which is clenched, is an edge which is directed slantingly upwards, and the part (15) of the lower profile (6) over which said part (21) is clenched, is an edge which is directed slantingly downwards.

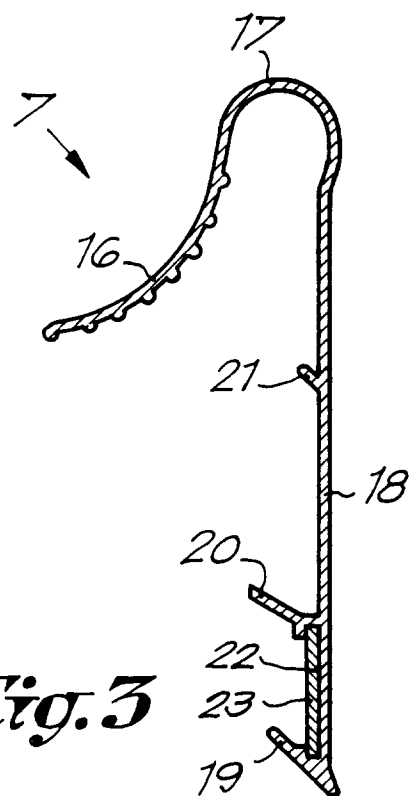
3. Flat roof according to any one of the preceding claims, characterized in that the lower profile (6) comprises a flat part (8) which is connected to the roof construction (1) and an upwards sloping part (11), while the upper profile (7) comprises an upwards sloping part (16) which is located over the upwards sloping part (11) of the lower profile (6), a bend (17) and a downwards sloping part (18) which extends upto next to the roof construction (1).
4. Flat roof according to the preceding claims, characterized in that the lower profile (6) comprises, under the upwards sloping part (11) a corner part (12), of which one leg is almost in a direct line with the flat part (8) of this lower profile (6) and of which the other leg is directed downwards next to the roof construction (1), while the part (21) of the lower profile (6) over which the upper profile (7) is clenched, stands on the latter leg.
5. Flat roof according to any one of claims 3 and 4, characterized in that the upper side of the upwards sloping part (11) of the lower profile (6) and the lower side of the above-lying upwards sloping part (16) of the upper profile (7) are corrugated.
6. Eave profile (2), characterized in that it is composed of a lower profile (6) and an upper profile (7) which can be clenched on the lower profile (6).
7. Eave profile (2) according to the preceding claim, characterized in that it comprises a lower profile (6) and an upper profile (7) which are formed as in any one of claims 2 to 5.



**Fig. 1**



**Fig. 2**



**Fig. 3**



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## EUROPEAN SEARCH REPORT

Application Number  
EP 94 20 2929

| DOCUMENTS CONSIDERED TO BE RELEVANT  |   |  |  |
|--|---|--|--|
| Category   | Citation of document with indication, where appropriate, of relevant passages                         | Relevant to claim                                    | CLASSIFICATION OF THE APPLICATION (Int.Cl.6) |
| X  | GB-A-1 347 974 (FPA PITCHMASTIC)<br>* page 1, line 64 - line 82; figures 1-4 *<br>---                 | 1,3-7  | E04D13/15                                    |
| X  | US-A-4 948 652 (KELLEHER ET AL.)<br><br>* column 3, line 65 - column 4, line 20;<br>figure 5 *<br>--- | 1,2,4,6,<br>7  |  |
| X  | US-A-4 419 850 (BUTZEN)<br>* column 4, line 37 - line 54; figures *<br>---                            | 1-3,6,7  |  |
| X<br>A   | US-A-4 037 372 (PATRY)<br><br>* column 6, line 37 - line 64; figures 1-7<br>*<br>---                  | 1,4,6,7<br>2,3                                       |  |
| A  | GB-A-983 080 (BOOTH ALUMINIUM LTD)<br>* page 2, line 13 - line 25 *<br>-----                          | 5  |  |
|  |   |  | TECHNICAL FIELDS<br>SEARCHED (Int.Cl.6)      |
|  |   |  | E04D   |
| The present search report has been drawn up for all claims   |   |  |  |
| Place of search<br>THE HAGUE   |   | Date of completion of the search<br>14 February 1995 | Examiner<br>Righetti, R                      |
| <b>CATEGORY OF CITED DOCUMENTS</b><br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br><br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding document |   |  |  |