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(54) **Device for sealing a ridge of a roof**

(57) The invention relates to a device for sealing a ridge of a roof comprising a profile wherein the profile comprises two flanges (1,2) depending from a web, forming a chamber (3).

The device is characterised in that a flange (2) is

made from a separate piece of material and in that a filler material (5) is fixed, in a position external to the chamber (3), to said flange (2).

The present also relates to a roof construction comprising such a device and a profile for use in such a device.

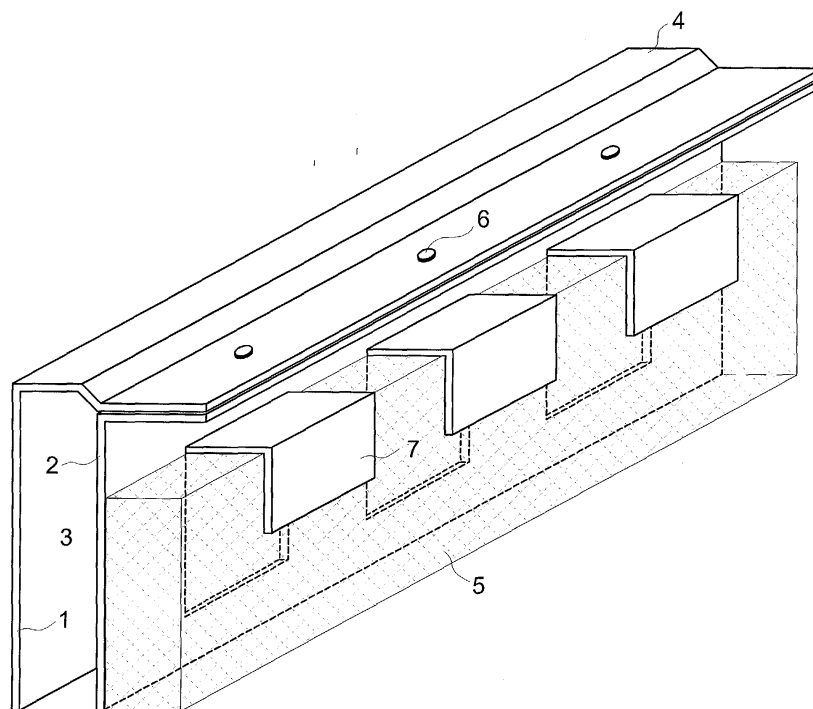


Fig. 2

Description

[0001] The present invention relates to a device, for sealing a ridge of a roof, comprising a profile wherein the profile comprises two flanges depending from a web, forming a chamber. The present also relates to a roof construction comprising such a device and a profile for use in such a device.

[0002] It is known in the art to use a profile, comprising two flanges depending from a web, forming a chamber, to seal the sides of the ridge of a roof against penetration of wind and rain etc. In the case of a roof made of sheets or panels fixed using retaining elements and standing seams, such a profile is sized to fit accurately between the standing seams. The requisite number of profiles is positioned on both sides of the ridge before a cover is placed over the ridge. Any air that is forced through into the chamber past the first flange is decompressed in the chamber and therefore the risk of it going on to penetrate the roof itself is reduced. It is also known to position separate filler material pieces on the roof on the side of the profile closest to the ridge. The filler material provides a tight seal to the panel ends and provides insulation. The profile also protects the form filler against UV radiation.

[0003] It is an object of the present invention to provide an improved device for sealing a ridge of a roof.

[0004] It is another object of the invention to provide a lower cost device for sealing a ridge of a roof.

[0005] It is yet another object of the invention to provide a device for sealing a ridge of a roof which is easier to install.

[0006] One or more of the objects of the invention are achieved by a device for sealing a ridge of a roof comprising a profile wherein the profile comprises two flanges depending from a web, forming a chamber, characterised in that a flange is made from a separate piece of material and in that a filler material is fixed, in a position external to the chamber, to said flange.

[0007] According to the invention a flange is made from a separate piece of material rather than the profile being formed from one piece of material. Only one of the flanges of the profile is externally visible once the device is installed in a roof. The device of the present invention gives the option of forming one of the flanges from 'scrap' or material with a different appearance to the rest of the roof construction without affecting the appearance of the device once installed.

[0008] In addition, in the device of the present invention filler material is fixed to a flange. This solves the problem of unskilled installers of roof assemblies, mistakenly placing the separately provided pieces of filler material in the chamber of the device rather than external to the chamber. Filling the chamber with the filler material reduces the sealing effectiveness of the ridge profile and increases the risk of leakage at or around the ridge.

[0009] The flange to which the filler material is fixed is preferably made from a lower cost material than the

other flange. The cost of the device is thereby reduced as lower cost material is used to make part of the device.

[0010] The filler material may be fixed with adhesive for secure fixing.

[0011] The flange to which the filler material is fixed preferably comprises attachment means to accurately secure the filler material.

[0012] The attachment means may comprise hooked portions, which grip the filler material providing easy assembly of the ridge profile. The hooked portions may be integral with the flange thereby reducing the risk of the hooked portions and the filler material detaching from the flange.

[0013] The flange to which the filler material is not fixed is preferably made from sheet metal, more preferably alloyed aluminium sheet to provide durability and formability.

[0014] The web and the flange to which the filler material is not fixed, preferably form a single piece for ease of assembly of the device, by reducing the number of connections required.

[0015] The flange to which the filler material is fixed is preferably attached to the web or the other flange by clinching or riveting to conveniently provide a secure and durable joint.

[0016] A further aspect of the invention relates to a roof construction comprising a device according to the invention. The roof construction provides the advantages over the prior art as set out above for a device.

[0017] Another aspect of the invention relates to a profile for use in a device according to the invention, with the accompanying advantages as set out above.

[0018] The present invention is described further by way of example with reference to the accompanying schematic figures.

[0019] Figure 1 shows a cross section through a device for sealing a ridge of a roof, according to the invention.

[0020] Figure 2 shows a perspective drawing of such a device according to the invention.

[0021] Figure 1 shows a device according to the invention comprising a web 4 and two flanges 1, 2 depending from the web. The flanges 1, 2 and the web 4 form a chamber 3. As can be seen from the figure, flange 2 is made from a separate piece of material to flange 1. Filler material 5 is fixed to flange 2. The filler material may comprise e.g. insulating foam or sponge material. In the particular embodiment shown in figure 1 the filler material 5 is attached to the flange 2 by a hooked portion 7, which is integral with flange 2. More than one hooked portion may be provided along the length of the device or a single hooked portion may extend substantially the length of the device. In the particular embodiment shown in figure 1, the flange 1 and web 4 are formed from a single piece of material. The flange 2 is attached to the web 4 by riveting or clinching 6. The web 4 and flange 1 are preferably made from sheet metal and more preferably from alloyed aluminium sheet. The web 4 and

flange 1 may be made from the same material that the other roofing elements are made from to ensure a uniform appearance. The flange 2 to which the filler material is fixed may also be made from sheet metal e.g. alloyed aluminium for formability and durability or from e.g. plastic for durability and lower costs.

[0022] Figure 2 shows the device according to the invention in perspective. As shown, the flange 2 has three hooked portions 7 that are formed out of portions of the flange 2, which hooked portions 7 keep the filler material 5 in place against the flange 2. Also shown are three rivets or clinches 6 for attaching flange 2 to web 4.

[0023] In use, the device shown in Figure 2 fits accurately between standing seams of a roof, and the filler material 5 is pressed against the sheets or panels of the roof. The device is kept in place by a cover to which the device is attached, for instance by riveting or clinching the web 4 to the cover.

[0024] It will be understood that other embodiments of the device according to the invention are possible, for instance by gluing the filler material 5 to the flange 2. The scope of the invention should be determined by the attached claims.

Claims

1. Device for sealing a ridge of a roof comprising a profile wherein the profile comprises two flanges (1,2) depending from a web, forming a chamber (3), **characterised in that** a flange (2) is made from a separate piece of material and **in that** a filler material (5) is fixed, in a position external to the chamber (3), to said flange (2).
2. Device according to claim 1, wherein the flange (2) fixed to the filler material is made from a lower cost material than the other flange (1).
3. Device according to claims 1 or 2, wherein the filler material (5) is fixed with adhesive.
4. Device according to any one of the preceding claims, wherein the flange (2) to which the filler material (5) is fixed comprises attachment means.
5. Device according to claim 4, wherein the attachment means are hooked portions (7).
6. Device according to any one of the preceding claims, wherein the flange (1) to which the filler material (5) is not fixed is made from sheet metal, preferably alloyed aluminium sheet.
7. Device according to any one of the preceding claims, wherein the web (4) and the flange (1) to which the filler material (5) is not fixed, form a single piece.
8. Device according to any one of the preceding claims, wherein the flange (2) to which the filler material (5) is fixed, is attached to the web (4) or the other flange (2) by clinching or riveting.
9. Roof construction comprising a device according to any one of claims 1 to 8.
10. Profile for use in a device according to any one of claims 1 to 8.

Amended claims in accordance with Rule 86(2) EPC.

1. Device for sealing a ridge of a roof comprising a profile wherein the profile comprises two flanges (1,2) depending from a web, forming a chamber (3), **characterised in that** a flange (2) is made from a separate piece of material and **in that** a filler material (5) is fixed, in a position external to the chamber (3), to said flange (2), and wherein the flange (2) fixed to the filler material is made from a lower cost material than the other flange (1).
2. Device according to claims 1, wherein the filler material (5) is fixed with adhesive.
3. Device according to claim 1 or 2, wherein the flange (2) to which the filler material (5) is fixed comprises attachment means.
4. Device according to claim 3, wherein the attachment means are hooked portions (7).
5. Device according to any one of the preceding claims, wherein the flange (1) to which the filler material (5) is not fixed is made from sheet metal, preferably alloyed aluminium sheet.
6. Device according to any one of the preceding claims, wherein the web (4) and the flange (1) to which the filler material (5) is not fixed, form a single piece.
7. Device according to any one of the preceding claims, wherein the flange (2) to which the filler material (5) is fixed, is attached to the web (4) or the other flange (2) by clinching or riveting.
8. Device according to any one of the preceding claims, wherein the filler material (5) comprises an insulating foam material or a sponge material.
9. Roof construction comprising a device according to any one of claims 1 to 8.

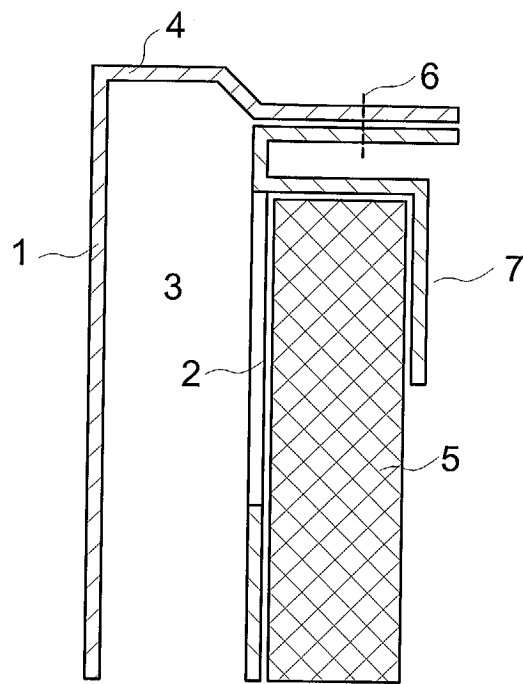


Fig. 1

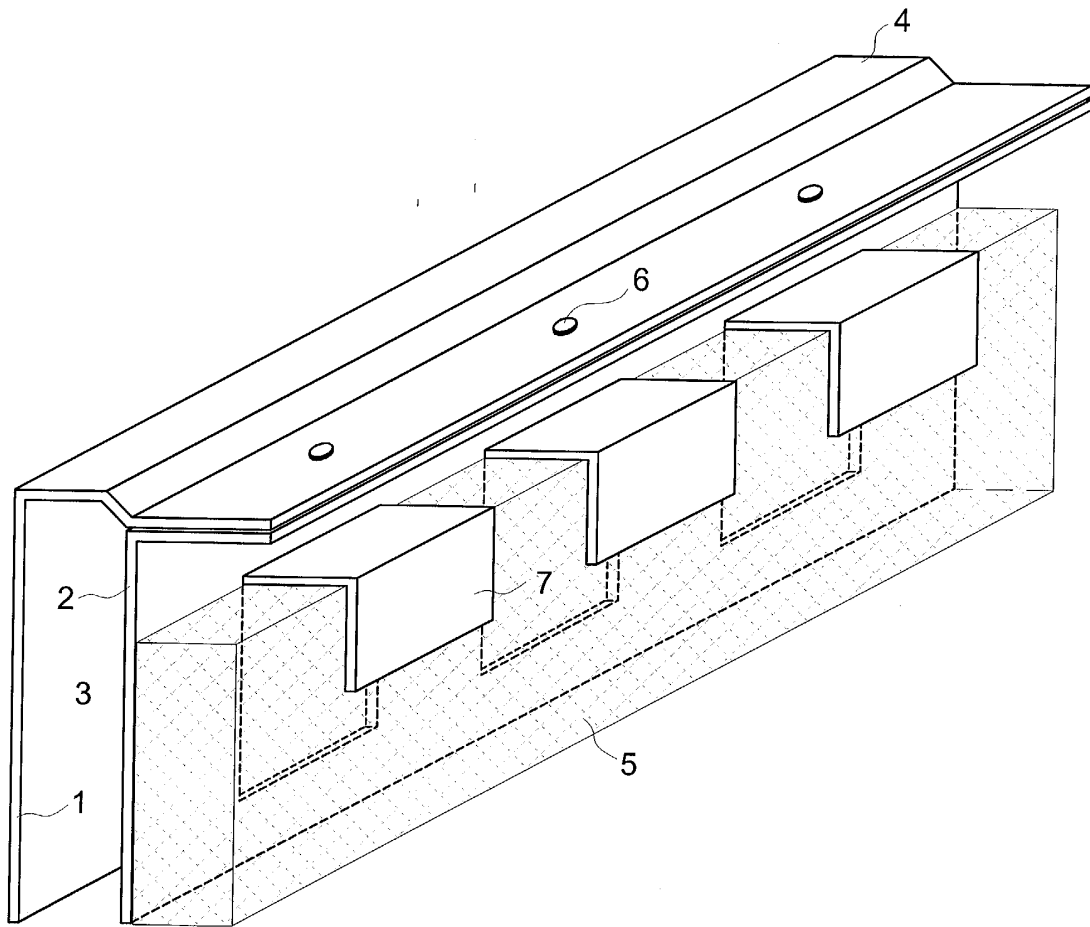


Fig. 2



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 03 07 7863

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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Y	DE 36 03 606 C (KNOCHE ALFONS) 4 June 1987 (1987-06-04) * abstract; figures 1,2,5 * * column 2, line 65 - column 3, line 4 * ---	1,3-7,9,10	
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 3 February 2004	Examiner Demeester, J
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			

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EPO FORM 1503 03/82 (P04C01)

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

EP 03 07 7863

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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