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(54)

Roof accessory

(57)

A roof accessory for a projection on roofs, such as dormers, oriels, lucarnes and the like, comprises a cross drain (1, 2, 4) in a transitional area between roof and projection roof The present cross drain is characterised by a pair of sub-strips (1) for mounting on rafters which are an integral part of the roof and the projection, with one on the roof rafters and the other on the projection

rafters and at a distance from the line of intersection of the rafters, a first valley gutter (2) for mounting on top of the sub-strips (1), so that an angular area between the sub-strips (1) is covered, and a second valley gutter (4) for mounting on top of the first valley gutter (2) when a roof covering has been installed on the roof and the projection.

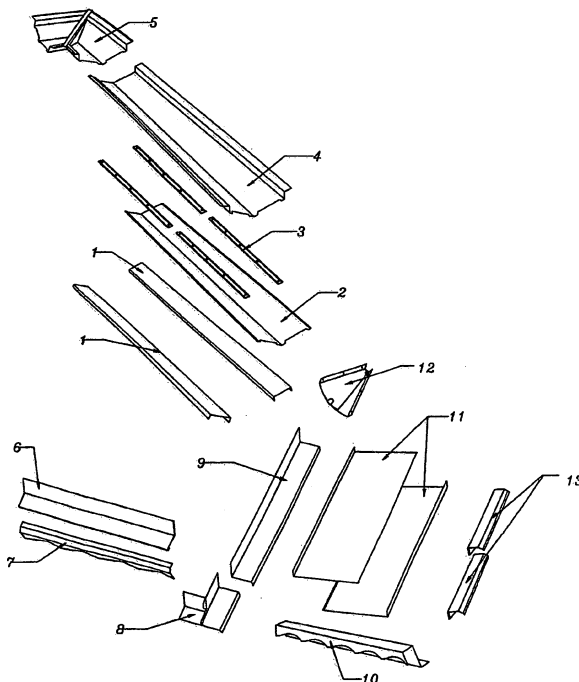


Fig. 1

Description

[0001] The present invention relates to a roof accessory for a projection on roofs, such as dormers, oriels, lucarnes and the like, comprising a cross drain in a transitional area between the roof and the projection roof.

[0002] So-called light underroofs have become increasingly popular in connection with, for example, the building of dwellings, but this type of roof has special requirements as regards the roof accessory in the vicinity of such roof projections. Similarly, different roof pitches from house to house mean that it is difficult to arrive at standardised roof accessories that can be used regardless of the roof pitch in question. The situation is further aggravated by the problems that can occur in connection with the ingress of rain, snow, melt water and the like at the projection, and which must be prevented by the roof accessory.

[0003] The main object of the present invention is therefore to provide such a roof accessory which is adapted to be usable in connection with different roof pitches, and which in an efficient manner stops undesirable ingress of moisture in connection with the projection itself, thereby avoiding damage to the structure. Similarly, it is advantageous if the roof accessory can be mounted at least partly before installation of the light underroof.

[0004] According to the present invention, this object is achieved, as disclosed in the characterising clause of claim 1, in that the cross drain is in the form of a pair of sub-strips for mounting on rafters that are an integral part of the roof and the projection, with one on the roof rafters and the other on the projection rafters and at a distance from the line of intersection of the rafters, a first valley gutter for mounting on top of the sub-strips, so that an angular area between the sub-strips is covered, and a second valley gutter for mounting on top of the first valley gutter when a roof covering has been installed on the roof and the projection.

[0005] In an especially preferred embodiment, the roof accessory may comprise a canting strip extending between the cross drains at the lower end of the projection walls, and that the canting strip is in the form of a main element for mounting against a front wall of the projection, a corner element for mounting at each corner area of the projection and a side element for mounting against each side wall of the projection. Other favourable features of the invention are set forth in the dependent claims and the description below.

[0006] The present invention will now be described in more detail with the aid of a preferred embodiment shown in the attached drawings, in which:

Fig. 1 is a perspective exploded view of the various parts that are included in one half of a roof accessory according to the invention;

Fig. 2 is a perspective view of the roof accessory when mounted, where for clarity wall cladding and

roof covering are not shown; and

Figs. 3 to 19 show the different steps during the mounting of the roof accessory.

[0007] The present roof accessory is, as already mentioned, intended for use in connection with a projection on roofs, and is shown in the drawings for use together with a covering of tiles. However, it will be understood that the tiles can be replaced by another covering, for example, metal pantiles. The drawings otherwise show that the roof accessory is mounted during new construction work, but this does not prevent the roof accessory from being as readily usable when, for example, altering or renovating an existing house. The roof accessory is especially suitable when used together with light underroofs, but the roof accessory can, without substantial modifications, be used as readily together with underroofs, for example, comprising roofing board and paper.

[0008] A central component of the roof accessory is thus the cross drain which is to be installed in a transitional area on the roof, namely where the main roof and the projection roof meet each other. As best shown in Fig. 1, each cross drain is composed of a pair of sub-strips 1, a first valley gutter 2 and a second valley gutter 4. In the present case, the sub-strips 1 and the first valley gutter 2 are mounted prior to the installation of the roof covering, whilst the second valley gutter 4 is not mounted until after the roof covering has been put in place.

[0009] The sub-strip 1 is made for mounting on rafters 14, 15 which form an integral part of the roof and the projection and is, if necessary, split into shorter lengths that are joined in a suitable waterproof manner. As can best be seen from Figs. 3 and 4, one of the lengths is placed on the roof rafters 14 and the other on the projection rafters 15, and at a distance from the line of intersection of the rafters. Along each long edge, the sub-strip 1 is also equipped with a protrusion 16 designed for placing in grooves formed on the respective roof and projection rafter 14, 15. The sub-strip 1 is fastened to the roof and projection rafters 14, 15 by screws, for example, self-drilling screws. At the top by the ridge of the projection, the sub-strips 1 can be fastened to each other, as shown in detail in Fig. 5.

[0010] The first valley gutter 2 is intended for mounting on top of the sub-strip 1, so that an angular area between the two sub-strips 1 is covered. As shown in Fig. 3, the first valley gutter 2 is angular and can, during mounting, be adapted to the roof and projection rafters 14, 15. Along each long edge, the first valley gutter 2 is provided with a protrusion 17 which, after mounting, extends upwards from the respective underlying sub-strip 1. Like the sub-strip 1, the first valley gutter can consist of several shorter pieces that are connected to each other in a waterproof manner, so that capillary forces cannot draw water into the joints between the valley gutter pieces.

[0011] For attachment of the first valley gutter 2 to the sub-strips, the cross drain comprises clamping strips 3

for mounting along each long edge of this valley gutter 2 when the underroof has been drawn up and slightly into the first valley gutter 2, as shown in Fig. 7. The clamping strips 3 fasten and seal the covering that forms the underroof against the first valley gutter 2, and are placed at a slight distance from the long edge of the first valley gutter 2, so that good drainage is achieved. There are used, for example, self-drilling screws for screwing through the valley gutter 2 and the sub-strip 1. After mounting the clamping strips 3, lathing for the tiles can be installed.

[0012] As mentioned above, the mounting of the second valley gutter 4 that is a component of the cross drain, does not take place until the roof covering has been installed on the roof and the projection. Like the first valley gutter 2, the second valley gutter 4 is angular, so as to be able to be adapted during mounting according to the slope of the roof and projection rafters 14, 15. Along each long edge, the second valley gutter 4 is also equipped with an angular protrusion 18 that is designed for placing over the adjacent edge of the roof covering.

[0013] As will be explained in more detail below, the cross drain also comprises a valley tray 11, a cornice element 12, side terminating elements 13 and mitre element 5, all designed for mounting after the installation of the roof covering.

[0014] Advantageously, the roof accessory according to the present invention may also comprise a canting strip 6, 8, 9 extending between the cross drains 1, 2, 4 at a lower edge of the projection walls. The mounting of the canting strip preferably takes place when the underroof has been put in place and the roof has been provided with laths, and before the projection walls have a suitable cladding applied thereto. The canting strip is in the form of a main element 6 for mounting against a front wall of the projection, a corner element 8 for mounting at each corner area of the projection and a side element 9 for mounting against each side wall of the projection.

[0015] As shown in Fig. 8, the main element 6 is formed having an angle which during mounting can be adapted according to the pitch of the roof rafters 14. Otherwise, the main element 6 preferably has a double sliding groove or a so-called "snap-locking" groove, so as to permit sliding mounting of a profiled strip 7 intended for sealing against the roof covering. The profiled strip 7 is sideways adjustable in relation to the roof covering. If necessary, the profiled strip 7 is made up of several pieces and is, as shown in Fig. 11, profiled in relation to the roof covering used. To obtain good sealing against all types of roof covering which are also stepped transverse to a longitudinal profile pattern, the snap-locking groove of the main element 6 may be formed so that the groove functions as a hinge together with the profiled strip 7, as shown in Fig. 12. In this case, the profiled strip is locked using a rust-proof locking screw against the roof covering, in order to prevent undesirable ingress of rain, snow and other moisture.

[0016] Both the corner element 8 and the side element

9 are angular, seen in vertical section, and the side element 9 can, if required, consist of several short pieces. The corner element 8 is moreover, as shown in Figs. 9 and 10, provided with a projecting lip 20 designed for bending in towards an upper portion of the main element 6, so that all roof pitches can be accommodated.

[0017] To form a transition between wall panel and cornice bottom, the cross drain 1, 2, 4 comprises a split valley tray 11 for mounting on the roof covering in an area at its lower end. The split valley tray 11 is sideways adjustable and can be adapted to all types of roofing. As shown in more detail in Figs. 13 and 14, sealing is provided between the lower end of the valley tray 11 and the roof covering using a profiled strip 10 that has been adapted to the dimensions of roof laths or battens. The profiled strip 10 forms a base for the valley tray 11, is brought into abutment against the profile pattern of the roof covering and screwed in place in a slot in the roof rafters 14. After the profiled strip 10 has been installed, the first part of the valley tray that is to rest against the projection wall is mounted, and then the second part, as shown in Figs. 15 and 16. To ensure a watertight connection, the valley tray parts are provided with a cooperating water channel or trap 19 along the adjacent long edges. The side terminating elements 13 that are mounted between the valley tray 11 and the roof covering, and which are shown in Fig. 18, form a lateral connection for them. By means of the illustrated type of double groove with high sliding groove, it is possible to obtain good adaptation to the stepped roofing in the form of metal pan-tiles and tiles. After installation, the side terminating elements 13 are screwed to the valley tray 11.

[0018] After the valley tray 11 has been placed on the roof covering, a cornice element 12 is mounted which is an adjustable transitional element, and which is to direct rainwater out from the cornice on the projection. As shown in Fig. 17, the element is split and articulated at its pointed end. A clip 21 is bent at an outer end so that the parts of the cornice element can be opened like a fan for accommodation of all roof pitches during mounting. At the upper long edge there is a fastening edge which can be screwed to the first lath or batten on the projection, and the opposite long edge is designed to be drawn down towards the valley tray 11 and then the clip is 21 is squeezed tight.

[0019] As will be understood from the above, the second valley gutter 4 can now be mounted on top of the first valley gutter 2, so that the roof accessory can be completed by the mounting of a mitre element 5 of the type shown in Fig. 19 over the upper end edges of the two valley gutters 4 at the ridge of the projection. The mitre element 19 is adapted for accommodating different roof pitches, i.e., from 18° to 45°, and is provided with water channels which counter capillary force. For movability in relation to the roof pitch, the two valley gutters 4 are joined by means of an upright edge on the element and a sliding groove.

Claims

1. A roof accessory for a projection on roofs, such as dormers, oriels, lucarnes and the like, comprising a cross drain (1, 2, 4) in an transitional area between roof and projection roof, **characterised in that** the cross drain is in the form of a pair of sub-strips (1) for mounting on rafters (14, 15) which are an integral part of the roof and the projection, with one on the roof rafters (14) and the other on the projection rafters (15) and at a distance from the line of intersection of the rafters, a first valley gutter (2) for mounting on top of the sub-strips (1), so that an angular area between the sub-strips (1) is covered, and a second valley gutter (4) for mounting on top of the first valley gutter (2) when a roof covering has been installed on the roof and the projection.
2. A roof accessory according to claim 1, **characterised in that** along each long edge the sub-strip (1) is made having a protrusion (16) designed for positioning in grooves on respective roof and projection rafters (14, 15).
3. A roof accessory according to any one of the preceding claims, **characterised in that** the first and the second valley gutter (2, 4) are formed having an angle which, during mounting, can be adapted according to the slope between the roof and projection rafters (14, 15).
4. A roof accessory according to claim 3, **characterised in that** along each long edge the first valley gutter (2) is formed having a protrusion (17) designed, after mounting, to extend upwards from the respective sub-strip (1).
5. A roof accessory according to claim 3, **characterised in that** along each long edge the second valley gutter (4) is formed having an angular protrusion (18) designed to be placed over the roof covering.
6. A roof accessory according to any one of the preceding claims, **characterised in that** the cross drain (1, 2, 4) comprises clamping strips (3) for mounting along each long edge of the first valley gutter (2) when an underroof has been drawn onto the first valley gutter (2).
7. A roof accessory according to any one of the preceding claims, **characterised in that** the cross drain (1, 2, 4) comprises a valley tray (11) for mounting on the roof covering in an area at the lower end of the cross drain.
8. A roof accessory according to claim 7, **characterised in that** the valley tray (11) is made of two parts, and that the parts along their adjacent long edge are equipped with a water channel or trap (19) and are sideways adjustable and adapted to all types of roof covering.
9. A roof accessory according to claim 7, **characterised in that** the valley tray (11) comprises a profiled strip (10) designed for sealing against the roof covering.
10. A roof accessory according to any one of the preceding claims, **characterised in that** the cross drain (1, 2, 4) comprises a cornice element (12) for mounting between the projection cornice and the valley tray (11).
11. A roof accessory according to claim 10, **characterised in that** the cornice element (12) is made of two parts that are adjustably connected to each other.
12. A roof accessory according to any one of the preceding claims, **characterised in that** the cross drain (1, 2, 4) comprises side terminating elements (13) for mounting between the valley tray (11) and the roof covering.
13. A roof accessory according to any one of the preceding claims, **characterised in that** the cross drain (1, 2, 4) comprises a mitre element (5) for mounting over an upper end edge of the valley gutters (4), and that the mitre element is formed to accommodate different roof pitches.
14. A roof accessory according to any one of the preceding claims, **characterised in that** the roof accessory comprises a canting strip (6, 8, 9) which extends between the cross drains (1, 2, 4) at the lower edge of the projection walls, and that the canting strip is in the form of a main element (6) for mounting against a front wall of the projection, a corner element (8) for mounting at each corner area of the projection and a side element (9) for mounting against each side wall of the projection.
15. A roof accessory according to claim 14, **characterised in that** the main element (6) is formed having an angle which, during mounting, can be adapted to the slope of the roof rafters (14).
16. A roof accessory according to claim 15, **characterised in that** the main element (6) comprises a profiled strip (7) designed for sealing against the roof covering, and that the profiled strip (7) is sideways adjustable in relation to the roof covering and slidably positioned on the main element (6).
17. A roof accessory according to claim 14, **characterised in that** the corner element (8) is formed having a projecting lip (20) designed for bending in towards

an upper portion of the main element (6).

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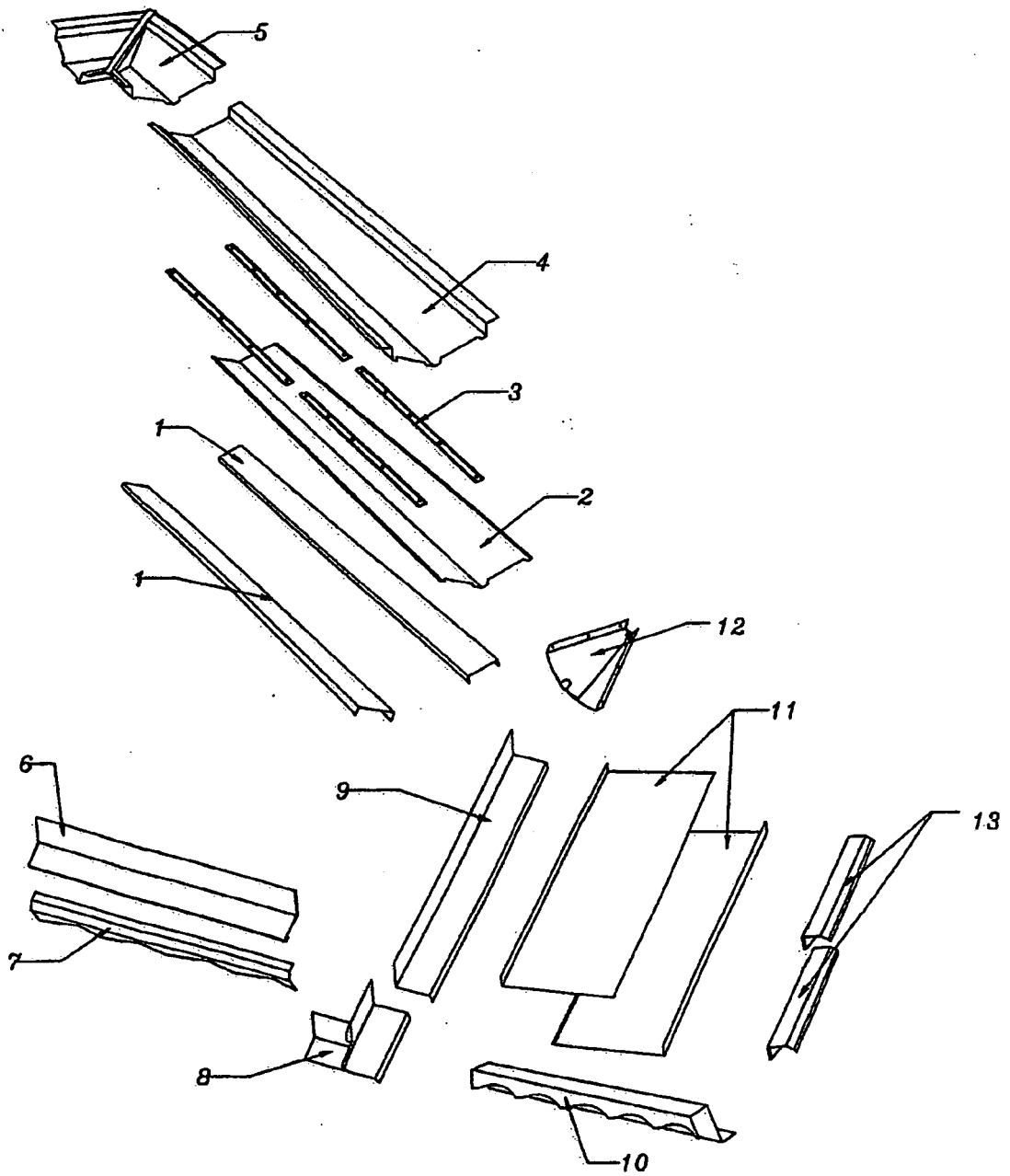


Fig. 1

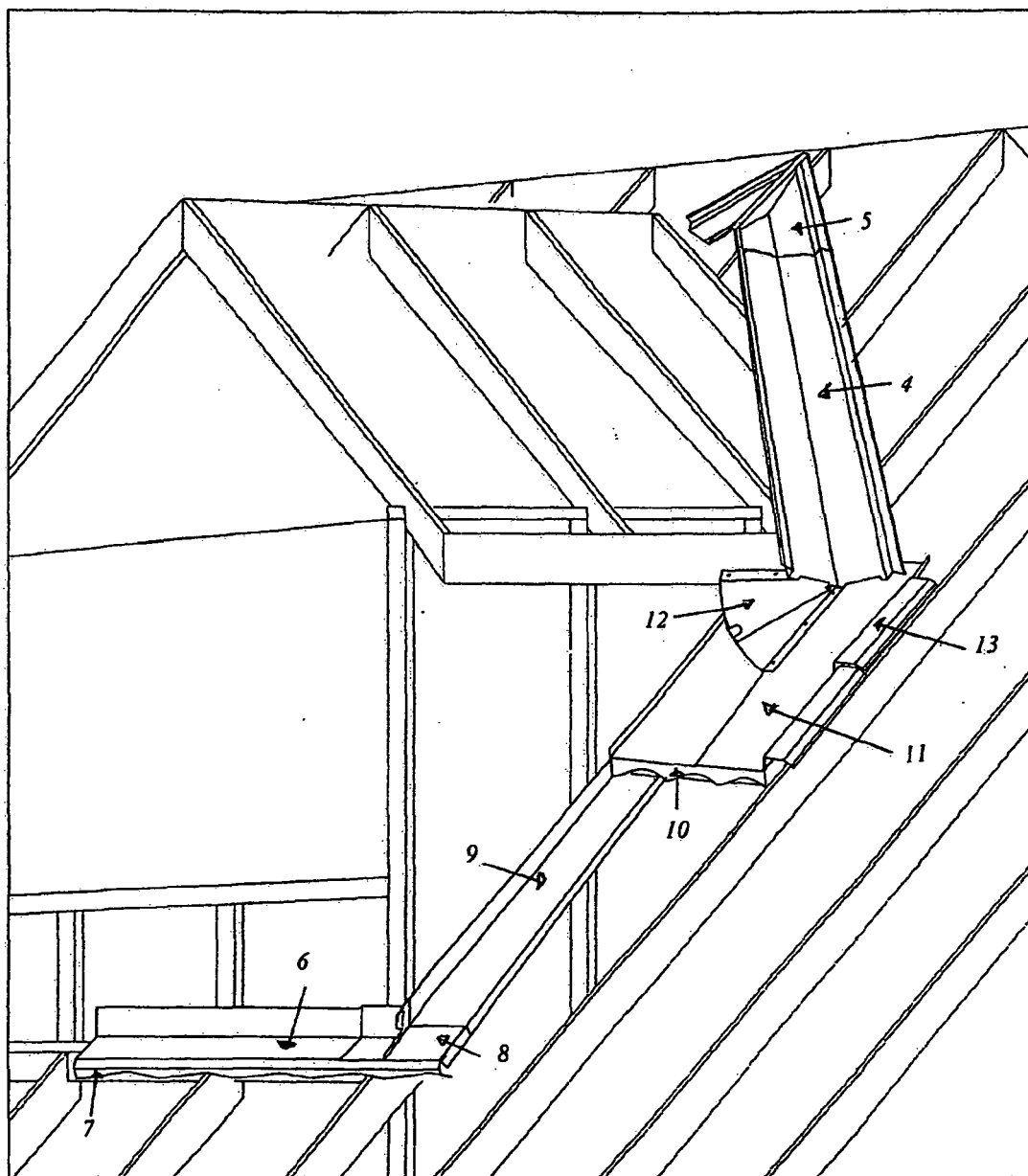


Fig. 2

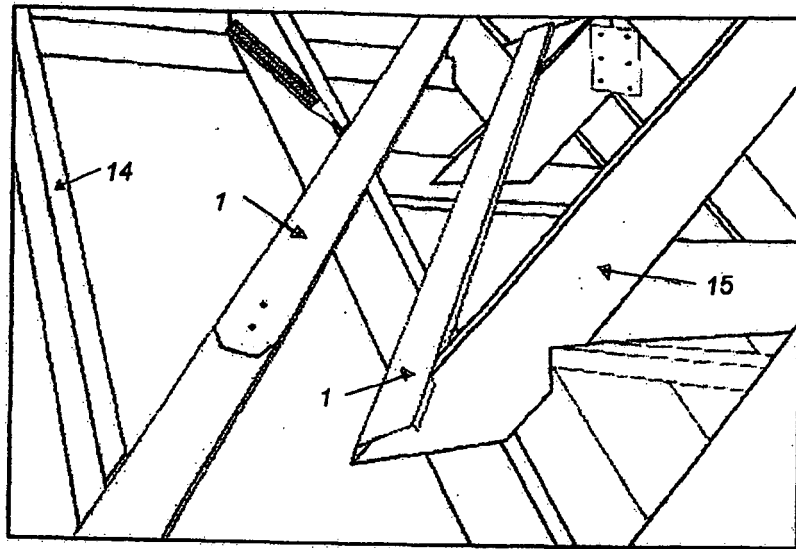


Fig. 3

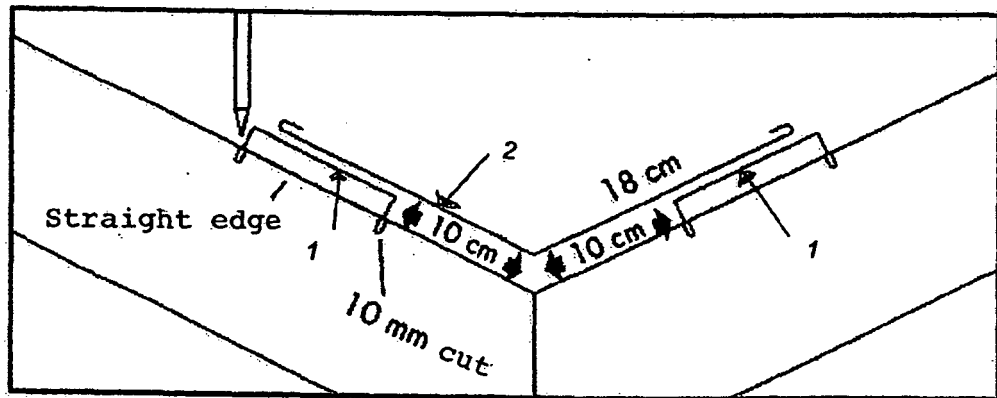


Fig. 4

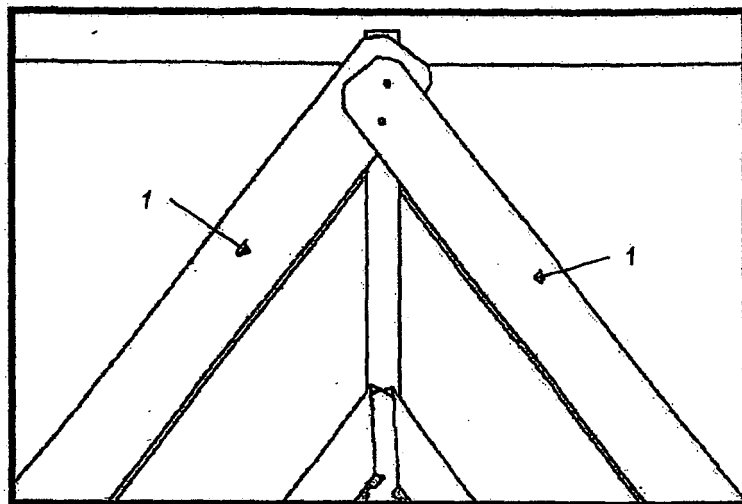


Fig. 5

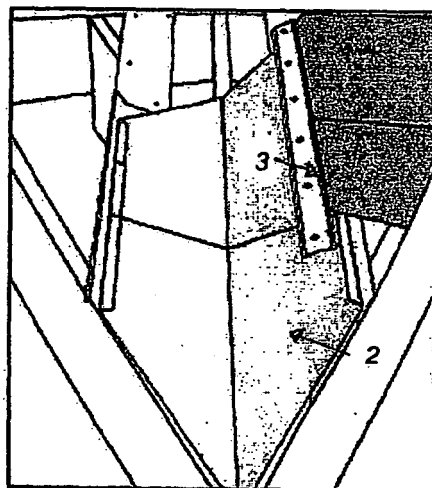


Fig. 6

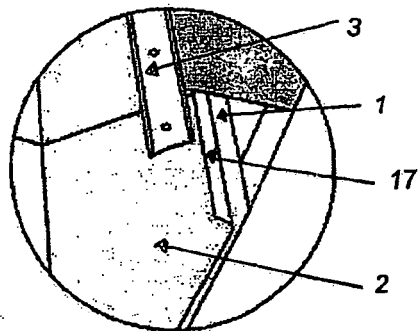


Fig. 7

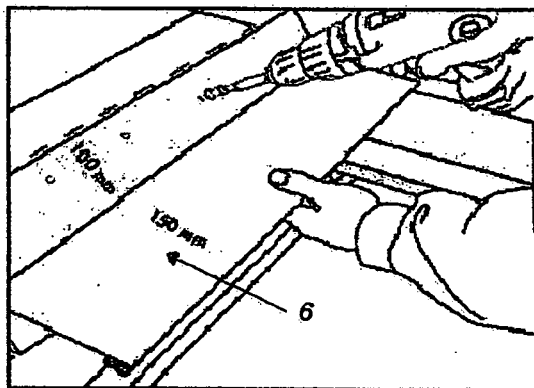


Fig. 8

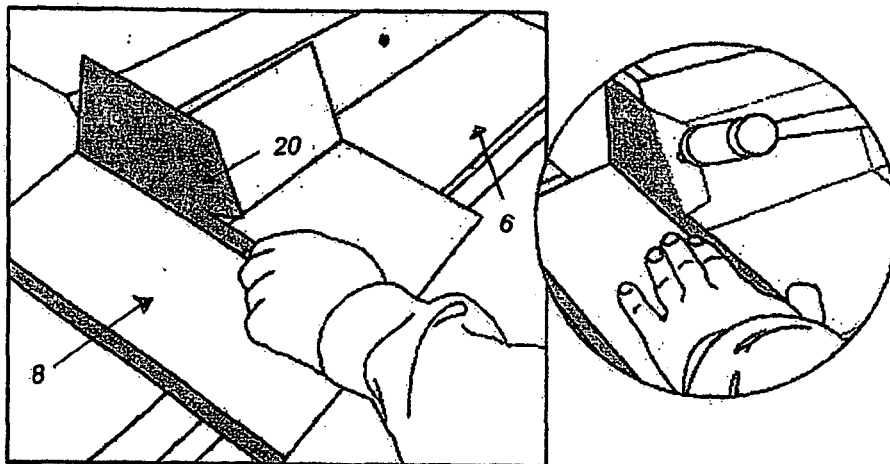


Fig. 9

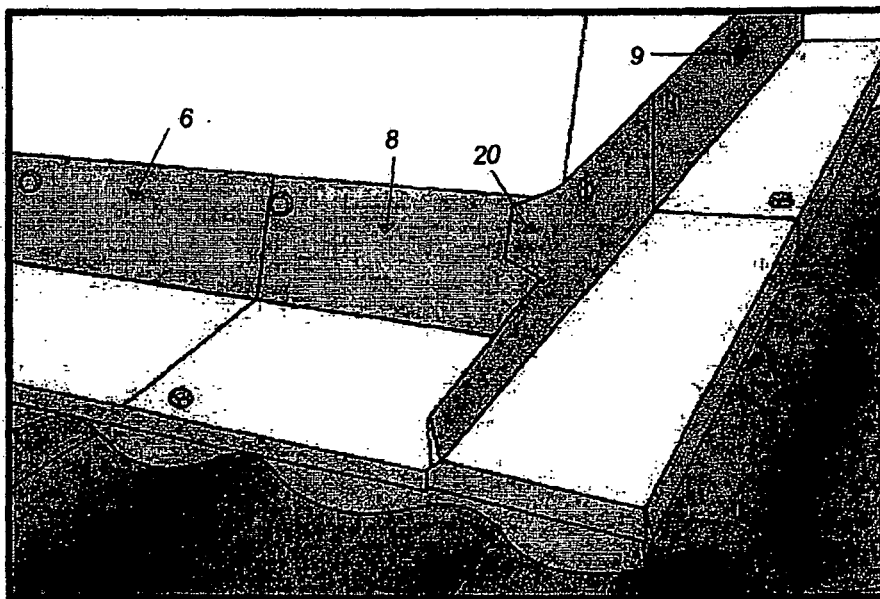


Fig. 10

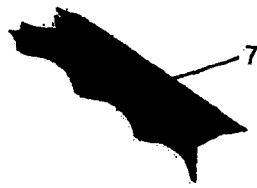


Fig. 11

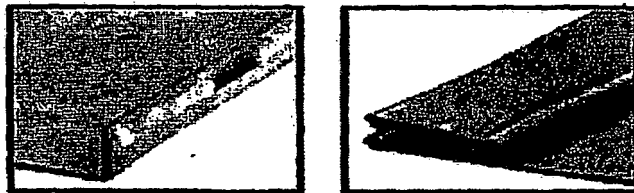


Fig. 12

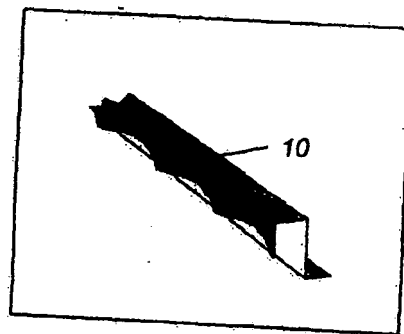


Fig. 13

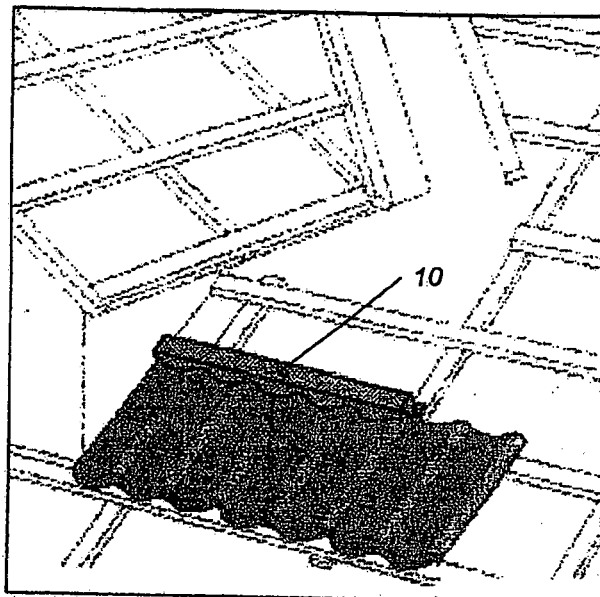


Fig. 14

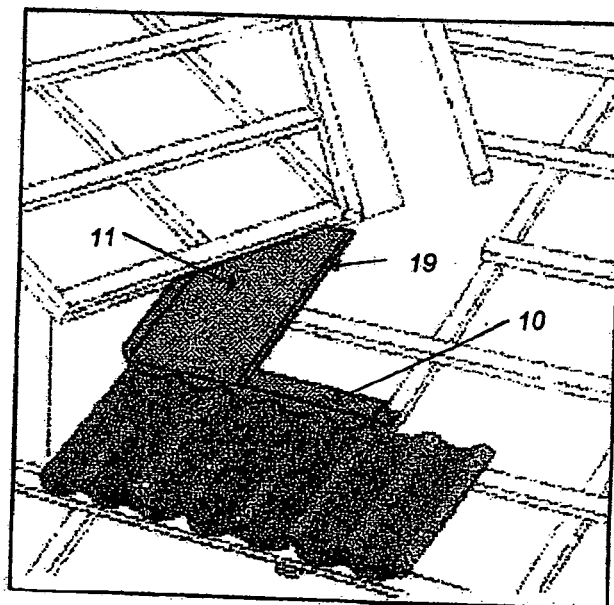


Fig. 15

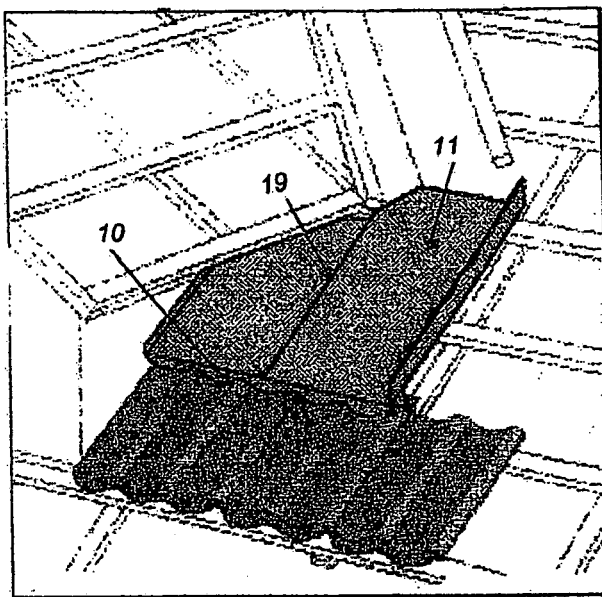


Fig. 16

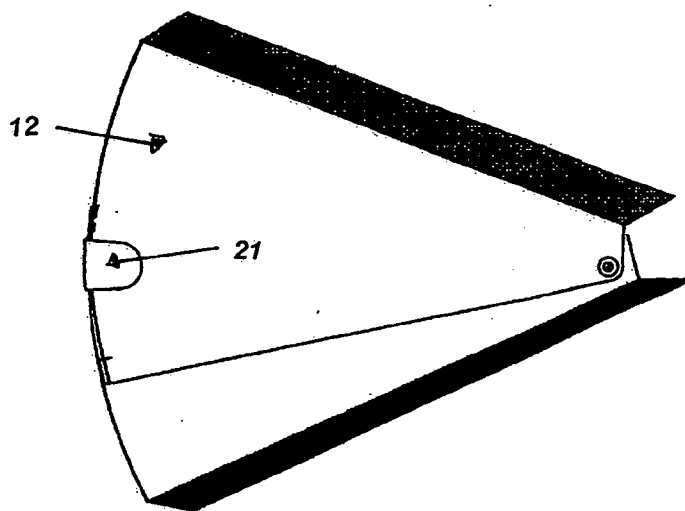


Fig. 17

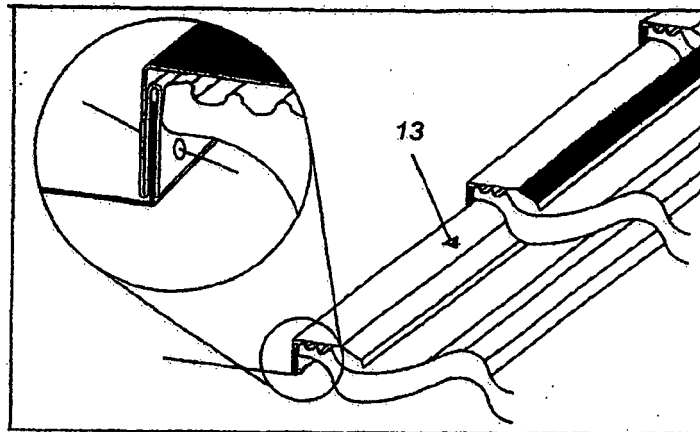


Fig. 18

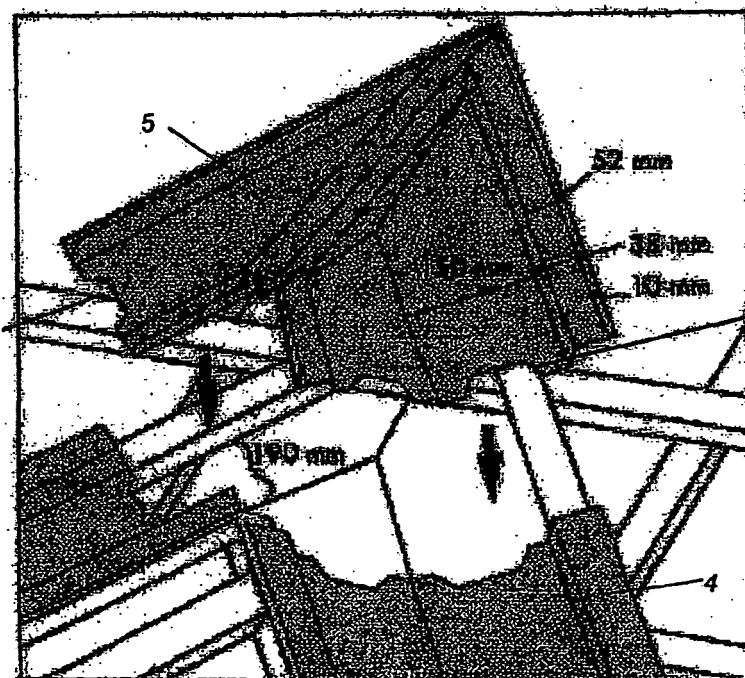


Fig. 19