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(54) Tile assembly

(57) The present invention relates to a tile assembly (1) for covering a façade or roof in a rainproof manner, comprising a fastening structure (2) for fastening the tile assembly (1) to the façade or the roof and comprising tiles (3) which can be arranged in a bond with offset joints (6), in which each tile (3) comprises a visible part (3a) on its lower side, comprises an invisible part (3b) on its upper side and comprises a nose (3c) for fastening the tile (3) to the fastening structure (2) which divides the invisible part (3b) of the tile (3) into, on the one hand, a mechanically loaded and watertight part (3d) and, on the other hand, a purely watertight part (3e).

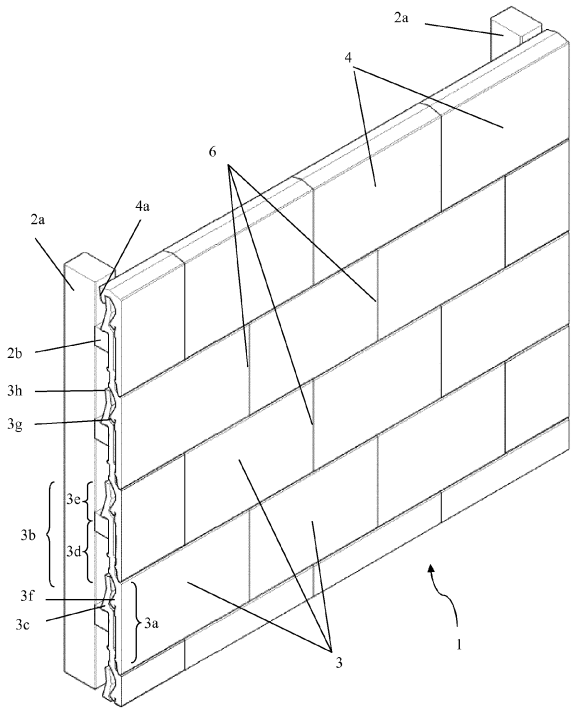

FIG. 1

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Description

[0001] Rainproof façade covering or roof covering, comprising tiles for arranging in a bond with offset joints and comprising a fastening structure for fastening the tiles, in which each tile comprises a visible part on its lower side which remains exposed in the bond, comprises an invisible part on its upper side which is overlapped in the bond by the visible parts of two overlapping tiles, and comprises a nose for fastening the tile to the fastening structure.

[0002] In the context of the present application, the expression upper side of a tile is understood to mean the part of the tile which adjoins the upper edge and the expression lower side is understood to mean the part of the tile which adjoins the lower edge. The term front side refers to that side of the tile which faces away from the façade or the roof and the term rear side refers to that side which faces the façade or the roof.

[0003] The present invention relates to rainproof façade coverings or roof coverings. Façade coverings as described and illustrated in NL 1 005 434 C and WO 86/07402 Al have no rainproof function, since rainwater can penetrate unimpeded between the tiles and as far as the façade.

[0004] With existing rainproof façade coverings or roof coverings as described and illustrated, for example, in WO 99/19579 A1, GB 2 150 194 A, GB 2 321 069 A and FR 914 243, the tiles are arranged in rows and adjoin one another laterally, and a joint is present between every two tiles. In successive rows of tiles, the joints are offset with respect to one another. In order to produce a rainproof façade covering or roof covering, successive rows of tiles partly overlap one another. The rain is able to penetrate via the lateral grooves, but is then drained off to the outside on account of the force of gravity via the row of tiles situated underneath. The water can thus not penetrate as far as the façade or the roof structure in front of which the tiles have been placed. The tiles, by means of their nose which is situated at the top side of the tiles, are supported on, for example, tiling battens and these tiling battens are attached to the façade or roof structure.

[0005] With the roof covering as illustrated in Fig. 27 from WO 99/19579, each tile has a recess on its front side at the location of its nose in order to be able to receive the nose of a tile which is stacked thereon, so that tiles can be stacked on top of one another in a more compact manner for transportation. However, this recess has a disadvantageous effect with regard to the watertightness of the roof covering, as rainwater penetrating locally at the location of this nose would no longer drain off downwards and to the outside on account of the force of gravity on this tile, but would, on the contrary, be drained off laterally to the inside via this recess. In order to prevent this, the tiles in a roof covering are always arranged in three overlapping layers on top of one another at the location of the nose, so that the risk of rainwater penetrating as far as the bottom layer of the three layers of tiles at the location of the nose becomes negligible.

[0006] With the façade coverings as illustrated in Fig. 7 in GB 2 150 194 A and Fig. 2 in GB 2 321 069 A, the tiles are also fitted in three overlapping layers on top of each other (although only up to a certain height), so that the parts of the tiles above the nose which are situated in the bottom of three overlapping layers have no waterproofing function. In addition, in GB 2 321 069 A, these parts above the nose have to be made sufficiently strong, since these parts are fitted against the fastening structure and are therefore subjected to mechanical load.

[0007] The façade covering from FR 914 243 relates to a completely different type of façade covering than the façade covering to which the present invention relates, since the tiles in the former do not comprise noses for fastening the tiles to the fastening structure.

[0008] A drawback of existing rainproof façade coverings or roof coverings of the type to which the present invention relates is the fact that they have a weight which is relatively high per square meter of façade/roof structure to be covered. As a result thereof, the roof structure or the façade is subj ected to a relatively great load. In particular in cases where façade coverings are added to an existing dwelling, this represents a significant additional load on the façade and the foundations of the dwelling. The large weight of the tiles also leads to high transport costs and puts a large amount of strain on the individual who has to fit the tiles.

[0009] When such a façade covering is being installed, more and more insulation is also being fitted between the tiles and the façade (both in the construction of new buildings and in the renovation of existing buildings). The greater the desired degree of insulation, the further the façade covering will protrude from the façade and the greater the load on the façade and, to a lesser degree, also on the foundations thereof.

[0010] In order to achieve a rainproof layer, the façade coverings or roof coverings form a relatively thick stack. This is a drawback, in particular in the case of renovation/insulation of existing façades which are built in alignment. Various regions have issued different regulations in this respect to offer a solution for this impasse (an example is the building line decree which applies to Flanders and which allows buildings to protrude 14 cm from the building line into public space). This regulation imposes quite a few restrictions if it is desired to apply a reasonably thick layer of insulation in addition to a façade covering within this space.

[0011] It is an object of the invention to provide a façade covering or roof covering which is lighter and thinner than the existing façade coverings or roof coverings and still continues to meet the criteria regarding occasional mechanical load (impact load) and the most common range of wind load.

[0012] This object of the invention is achieved by providing a façade covering or roof covering comprising tiles for arranging in a bond with offset joints and comprising

a fastening structure for fastening the tiles. Each tile comprises a visible part on its lower side which remains exposed in the bond. Each tile comprises an invisible part on its upper side which is overlapped in the bond by the visible parts of two overlapping tiles and, on its upper side, each tile also comprises a nose on its rear side for fastening the tile to the fastening structure. In each tile, the nose divides the invisible part of the tile into, on the one hand, a mechanically loaded and watertight part which adjoins the visible part and, on the other hand, a purely watertight part which extends between the nose and the upper edge of the tile.

[0013] Due to the fact that the portion of the invisible part of the tile which extends between the nose and the upper edge of the tile only has a waterproofing function and does not have to bear any mechanical load, this portion can be designed to be much thinner, thus resulting in a significant reduction in weight. However, there is a limit as to how thin this portion can be made due to restrictions in terms of production engineering and because said portion becomes too susceptible to damage during transportation if it is too thin. However, it is possible to make said portion significantly thinner than the tiles of existing façade coverings or roof coverings.

[0014] An additional weight saving can be achieved by placing the nose in a specific position. Tiles from a façade covering or roof covering have to be able to absorb external forces after they have been fitted, such as for example wind load, impact load caused by people or objects, etc. These external forces mainly act on the visible part. The invisible part is covered by overlapping tiles and is thus less susceptible to the external loads. The main forces acting on the visible part are caused by the wind drawn in by the lower side. Forces acting on the lower side of the tiles create a lever effect between the underside of the tile and the fastening point (at the location of the nose). The load acting on the fastening point is therefore greater at a greater distance between the underside of the tile and the fastening point. With façade coverings or roof coverings according to the invention, the nose, i.e. the fastening point, is lower than with the existing tiles of façade coverings or roof coverings. The loads which have to be absorbed at the fastening point of the tiles in the façade coverings or roof coverings according to the invention are therefore lower than with the existing façade coverings or roof coverings. As a result of the maximum load to be expected on the fastening point being lower, the entire tile can be made thinner than is the case in the prior art. In other words, tiles for façade coverings or roof coverings according to the invention can be made much thinner and therefore lighter than existing tiles for façade coverings or roof coverings without loss of breaking strength.

[0015] Due to the tiles being thinner and lighter, the fastening structure to which the façade covering or roof covering is fitted is subjected to less load, as a result of which it is possible to make the fastening structure thinner as well. The total weight of the tiles and the fastening structure can thus be significantly reduced, so that the façade/the roof and the construction situated underneath up to and including the foundations are subjected to significantly less load. The façade covering or roof covering can also be fitted closer against the façade/the roof or can be installed at a greater distance therefrom at the same load of the façade/the roof.

[0016] By keeping the nose positioned in the invisible part of the tile, the risk of the formation of lines on the front side of the tile is limited to tiles made of clay (or other materials). At the location of the nose, the tile comprises larger parts of clay, as a result of which these parts dry more slowly than the surrounding parts during production and as a result of which a certain degree of shrinking of the front side occurs locally. Of course, tiles for façade coverings or roof coverings according to the invention may also be made of any other suitable material instead of clay.

[0017] In addition, any fastening elements which fasten the tile to the fastening structure situated underneath at the location of the nose are hidden from view if this nose is arranged in the invisible part of the tile.

[0018] In order to achieve savings in material and therefore also in weight, the purely watertight part of each tile is preferably thinner than the mechanically loaded and watertight part of said tile.

[0019] In a preferred embodiment of a façade covering or roof covering according to the present invention, the fastening structure of the façade covering or roof covering comprises battens which are arranged substantially parallel to each other for fastening the noses of the tiles and, in the fitted state of the façade covering or roof covering, the watertight part of each tile extends at least partly between adjacent battens within the thickness of the fastening structure.

[0020] Such battens may also be wooden tiling battens or metal or plastic (e.g. PVC) profiles, etc.

[0021] Due to the fact that a part of the tiles is displaced within the thickness of the fastening structure, the façade covering or roof covering comes to lie closer to the façade/the roof and the façade covering or roof covering protrudes less far with respect to the façade. This results in a reduced load on the façade and/or makes it possible for a thicker layer of insulation to be fitted within the thickness restrictions of the applicable rules (such as the distance which is stipulated by the Flemish decree regarding the building line).

[0022] Preferably, the battens of the fastening structure are designed as tiling battens. Tiling battens are inexpensive and commonly available.

[0023] Furthermore, a façade covering or roof covering may comprise fastening elements for fastening the tiles to the fastening structure. Apart from brackets, the fastening elements may also be tile hooks, screws and/or clamps.

[0024] According to the invention, the fastening elements preferably comprise fastening brackets which can be fastened to the front side of the tiles at the location of

the nose, in which each tile preferably comprises a hook element on the rear side of the visible part, in which the hook element of an overlapping tile can be hooked into a fastening bracket which is attached to an overlapped tile.

[0025] Due to the fact that tiles are not only secured to the fastening structure at their nose, but are in addition also secured to the tiles situated underneath at the location of the hook element, the wind load acting on the tile can be neutralized more effectively. In this case, there are two fastening points which are a certain distance apart. Due to the relatively large distance between the fastening points which act as the absorption points for the forces, the mechanical strength required from the material at the same load can be reduced further and the weight of the structure can be reduced further still.

[0026] Preferably, the fastening elements, in addition to such fastening brackets, also comprise fastening screws for fastening the fastening brackets to the tiles and for simultaneously fastening the tiles to the fastening structure.

[0027] In this way, two tiles can be secured in a single operation using a fastening bracket and a corresponding screw.

[0028] In a particularly preferred embodiment, each fastening bracket comprises a securing plate for fastening the fastening bracket to said tile and each securing plate comprises at least one hook element which is directed obliquely with respect to the securing plate and into which the hook element of an overlapping tile can be hooked after the fastening bracket has been fastened to an overlapped tile.

[0029] In a more particular embodiment, each fastening bracket comprises two of said hook elements which are spaced apart.

[0030] With these specific fastening brackets, screws can be screwed down between these hook elements using a screwdriver without the hook elements forming an obstruction to the screwing down. The two hook elements ensure that the bracket and the screw by means of which the latter is secured are loaded symmetrically after the overlapped tile has been hooked into the bracket. This prevents torsion on the hook and ensures that the hook remains in situ, even at relatively large loads.

[0031] In an even more particular embodiment, each fastening bracket comprises an opening in its securing plate for fastening a fastening screw, and an access slot to said opening.

[0032] In such a first embodiment, the direction of said access slot comes to lie at an angle with respect to the edges of this fastening bracket. The edge of the bracket is set in such a manner with respect to the profile on the front side of the tile at the location of the nose, as a result of which the bracket can no longer turn around the screw after it has been fastened and is pulled from the screw under load of the tile which is hooked to said bracket, through the access slot.

[0033] In another such embodiment, the access slot ends straight between the hook elements and this access slot therefore is straight with respect to the edges of the fastening bracket, but then viewed from the front side of the bracket (opposite side from the earlier embodiment). In this case as well, the rear edge of the bracket is adapted to the profile on the front side of the tile at the location of the nose, as a result of which the bracket is no longer pulled from the screw through the access slot after the tile has been fastened and hooked to said bracket.

[0034] In both cases, the fastening screw is fastened more easily by means of said access slot.

[0035] In a preferred embodiment, each tile comprises an oblique surface on its front side at the location of the nose for fastening the fastening surface of said fastening bracket against said oblique surface.

[0036] By means of a fastening screw through the tile and the hook fastening of the tile situated underneath, an identical tile is secured diagonally in order to thus maximize the capacity of the façade covering or roof covering to absorb forces. Due to being fastened obliquely, the hook can be made larger and can thus easily be handled, for example, when wearing gloves. The oblique arrangement also ensures that the hook absorbs the pulling force. In addition, the oblique arrangement is more ergonomic for the installer, as it is not obvious to fix nails or screws at right angles to the roof surface. As a result of the oblique arrangement of the screw, the tile is pulled towards the tiling batten in 2 dimensions. In the case of a perpendicular fastening, the 2nd direction (at right angles to the screw) remains free.

[0037] In a first specific embodiment of a façade covering or roof covering according to the invention, the façade covering or roof covering is a façade covering for covering a façade.

[0038] In such a preferred embodiment, the façade covering comprises end tiles which only comprise a visible part and, in the bond, overlap the upper of said tiles across the entire width in order to border the bond on the upper side.

[0039] Furthermore, each end tile may comprise a hook element across the entire width to hook said end tile over the upper side of the watertight part of the tiles overlapped by this end tile. In this way, no ingress of water at the location of the end tiles is possible.

[0040] In a second specific embodiment of a façade covering or roof covering according to the invention, the façade covering or roof covering is a roof covering for covering a roof.

[0041] The present invention will now be described in more detail by means of the following detailed description of some preferred embodiments of façade coverings and roof coverings according to the present invention. The sole aim of this description is to give illustrative examples and to indicate further advantages and features of these façade coverings and roof coverings and can therefore not be interpreted as a limitation of the area of application of the invention or of the patent rights defined in the claims.

[0042] Reference numerals are used in this detailed description to refer to the attached drawings, in which:

- ***Fig. 1*** shows a perspective view of a façade covering according to the invention;
- ***Fig. 2*** shows a detail view of 3 rows of tiles from the façade covering from Fig. 1 in perspective;
- ***Fig. 3a*** shows a detail view of a first provided fastening bracket from the façade covering in Fig. 1 in perspective;
- ***Fig. 3b*** shows a detail view of a second provided fastening bracket from the façade covering in Fig. 1 in perspective;
- ***Fig. 4*** shows a side view of the façade covering from Fig. 1;
- ***Fig. 5*** shows a tile of the façade covering from Fig. 1 in more detail in perspective;
- ***Fig. 6*** shows an end tile of the façade covering from Fig. 1 in more detail in perspective;
- ***Fig. 7*** shows a side view of a façade covering according to the invention for covering a façade adjoining an existing roof covering for covering a roof;
- ***Fig. 8*** shows a roof covering according to the invention in side view;
- ***Fig. 9*** shows a roof covering according to the invention in side view.

[0043] The tiles (3) in the illustrated embodiments of façade coverings and roof coverings (1) according to the invention are in each case made of baked clay. Alternatively, tiles (3) for façade coverings and roof coverings (1) according to the invention may also be made from any other suitable material, such as for example plastic, concrete, etc.

[0044] The façade coverings (1) and details of façade coverings (1) for covering a façade, as illustrated in Figs. 1 to 7, comprise tiling battens (2b) for fastening the tiles (3) to the façade. These tiling battens (2b) are in turn attached to rafters (2a), as can be seen in Fig. 1, in which these rafters (2a) are attached to the façade. The tiles (3) are arranged in a bond with offset joints (6) (here in stretcher bond). If insulation is fitted against the façade, this may be fitted between the façade and the rafters (2a) or between the rafters (2a) or in both locations.

[0045] On its lower side, each tile (3) comprises a visible part (3a) which remains exposed in the bond and, on its upper side, an invisible part (3b) which is overlapped in the bond by the visible parts (3a) of two overlapping tiles (3), as can be seen in Figs. 1, 2, 4 and 7. Each tile (3) also comprises a nose (3c) at the location of its invisible part (3b) for fastening the tile (3) to the tiling battens (2b), as can clearly be seen in Figs. 4 and 7. This nose (3c) divides the invisible part (3b) of each tile (3) into, on the one hand, a mechanically loaded and watertight part (3d) which adjoins the visible part (3a) and, on the other hand, a purely watertight part (3e) which extends between the nose (3c) and the upper edge (3h) of the tile (3). On the front side, at the location of the nose (3c), each tile (3) comprises an oblique surface (3g) for fastening a fastening bracket (5), as can be seen in Figs. 2 and 4. Such a fastening bracket (5) is shown separately in Figs. 3a and 3b. At the location of this oblique surface (3g), each tile (3) comprises a number of perforations (3i) which are clearly illustrated in Fig. 5 and which extend through the tile (3) to enable a fastening screw (3e) to engage therewith so as to fasten such a fastening bracket (5).

[0046] The nose (3c) of the tiles (3) is designed to be continuous. This offers the advantage that if the tile (3) has to be sawn, for example in half, there is always a protruding nose (3c) present. If the nose (3c) is designed, for example in the form of projections, this is not always the case.

[0047] Fig. 4 shows that the parts of the tiles (3) which have a purely waterproofing function and are not subjected to mechanical load (3e) are thinner.

[0048] The fastening structure (2) for fastening the façade covering (1) to the façade comprises tiling battens (2b) which are arranged parallel to one another for fastening the noses (3c) of the tiles (3). In the fitted position of the façade covering (1), the watertight part of each tile (3) extends between these tiling battens (2b) within the thickness of the tiling battens (2b), as can be seen in Figs. 1 and 4. Of the three layers, one layer is thus situated between the tiling battens (2b) and two layers are situated in front of the tiling battens (2b).

[0049] The façade covering (1) also comprises fastening elements (5) for fastening the tiles (3) to the tiling battens (2b). The fastening brackets (5) can be fastened on the front side of the tiles (3) at the location of the nose (3c). Each tile (3) also comprises a hook element (3f) on the rear side of the visible part (3a) and the hook element (3f) of an overlapping tile (3) can be hooked into a fastening bracket (5) which is fastened to an overlapped tile (3). The fastening elements (5) furthermore comprise fastening screws (5e) for fastening the fastening brackets (5) to the tiles (3) and for simultaneously fastening the tiles (3) to the tiling battens (2b). To this end, these fastening screws (5e) can engage in said perforations (3i) in the tiles (3) to be fastened. If desired, for example depending on the anchoring required to be able to withstand the usual wind loads, one or more fastening brackets (5) may be fitted per tile (3), as can also be seen in Fig. 2, where two fastening brackets (5) have been fitted to the tile on the upper left and only one such fastening bracket (5) has been fitted on the upper right. In a façade covering (1), the number of fastening brackets (5) per tile (3) may thus vary.

[0050] Each fastening bracket (5) comprises a securing plate (5a) with an opening (5c) and an access slot (5d) to this opening (5c). In the embodiment as illustrated in Fig. 3a, this access slot (5d) is at an angle to the edges of this fastening bracket (5). Each fastening bracket (5) also comprises two hook elements (5b) which are directed obliquely with respect to the securing plate (5a) and are spaced apart. In the other version of the fastening

bracket (5), as illustrated in Fig. 3b, the access slot (5d) is at right angles to the edge, but in the sense that, after the fastening bracket (5) has been fitted, there is no longer any possibility for the bracket (5) to come loose from the screw (5e).

[0051] The securing plate (5a) serves to fasten the fastening bracket (5) to the tile (3) and the hook elements (5b) serve to hook in the hook element (3f) of an overlapping tile (3). The hook elements (5b) are situated at a certain distance from each other so that the fastening screw (5e) can be tightened easily. In order to fit the fastening bracket (5) in a simple manner, the securing plate (5a) comprises an opening (5c) through which the fastening screw (5e) can pass and an access slot (5d) to said opening (5c).

[0052] The illustrated façade covering (1) also comprises end tiles (4) which are placed at the top of the façade covering (1), as can be seen in Fig.1. These end tiles (4) only comprise a visible part and they comprise a hook element (4a). This hook element (4a) serves to hook the end tile (4) over the upper edge (3h) of the tiles (3) which are overlapped by this end tile (4).

[0053] For façade coverings (1) and for roof coverings (1), clay tiles (3) are often used which are made of baked clay. When clay tiles (3) are used for tile assemblies (1) according to the invention, the weight of the illustrated embodiment is more than 20% less than that of existing similar rainproof façade coverings and roof coverings (1'). The façade coverings and roof coverings (1) according to the invention are not inferior to existing similar tile assemblies with regard to their rainproof properties and mechanical strength.

[0054] Fig. 7 shows a façade covering (1) according to the invention adjoining an existing roof covering (1'). It can clearly be seen with the existing roof covering (1') that the nose (3c') for fastening the tile (3') to the tiling battens (2b) is situated at the top of the tile (3'). Three layers are present above each tiling batten (2b). A first layer which is formed by the tile (3') which rests on the tiling batten (2b), a second layer which is formed by a tile (3') which overlaps the tile (3') resting on the tiling batten (2b) and another formed by another overlapping tile (3'). As a result of these three layers resting on the tiling battens (2b), the existing roof covering (1') is significantly thicker than the roof covering (1) according to the invention, where one of the three layers extends between the tiling battens (2b).

[0055] Figs. 8 and 9 illustrate two examples of how roof tiles (3) from roof coverings (1) according to the invention can be fitted on tiling battens (2c). In Fig. 8, the tiling battens (2c) are placed closer together and the closest possible placement of the tiles (3) is shown, whereas in Fig. 9, the tiling battens (2c) are further apart and the furthest possible placement of the tiles (3) is shown which still ensures good rainproof properties.

[0056] The illustrated roof tiles (3) again show the visible parts (3a), the invisible parts (3b), the mechanically loaded and watertight parts (3d), the nose (3c) and the purely watertight parts (3e). These parts (3a, 3b, 3c, 3d, 3e) have the same function and share the tiles (3) in an identical manner to that described above for the façade tiles (3). As the embodiment of roof tiles (3) illustrated here in Figs. 8 and 9 is not fastened to the tiling battens with similar fastening brackets (5), they do not comprise an oblique surface (3g) nor a hook element (3f) as is the case with the façade tiles (3).

[0057] The minimum distance between the tiling battens (2c) is determined by the purely watertight part (3e) of the invisible part (3b) which is situated between the nose (3c) and the upper edge (3h) of the tile (3). It has to be possible to place this purely watertight part (3e) between the tiling battens (2c) in order to ensure that the distance between the roof structure and the tiles (3) is as small as possible.

[0058] The maximum distance between the tiling battens (2c) is determined by the overlap of the three layers of tiles (3) which still ensures good rainproof properties.

Claims

1. Rainproof façade covering or roof covering (1), comprising tiles (3) for arranging in a bond with offset joints (6) and comprising a fastening structure (2) for fastening the tiles (3), in which each tile (3) comprises a visible part (3a) on its lower side which remains exposed in the bond, comprises an invisible part (3b) on its upper side which is overlapped in the bond by the visible parts (3a) of two overlapping tiles (3), and comprises a nose (3c) on its rear side for fastening the tile (3) to the fastening structure (2), **characterized in that** in each tile (3), the nose (3c) divides the invisible part (3b) of the tile (3) into, on the one hand, a mechanically loaded and watertight part (3d) which adjoins the visible part (3a) and, on the other hand, a purely watertight part (3e) which extends between the nose (3c) and the upper edge (3h) of the tile (3).

2. Façade covering or roof covering (1) according to Claim 1, **characterized in that** the purely watertight part of each tile (3e) is thinner than the mechanically loaded and watertight part of said tile (3d).

3. Façade covering or roof covering (1) according to one of the preceding claims, **characterized in that** the fastening structure (2) comprises battens (2b) which are arranged substantially parallel to one another for fastening the noses (3c) of the tiles (3) and **in that**, in the fitted state of the faqade covering or roof covering (1), the watertight part of each tile (3) extends at least partly between adjacent battens (2b) within the thickness of the fastening structure (2).

4. Façade covering or roof covering (1) according to Claim 3, **characterized in that** the battens (2b) of the fastening structure (2) are designed as tiling bat-

tens (2b).

5. Façade covering or roof covering (1) according to one of the preceding claims, **characterized in that** said façade covering or roof covering (1) comprises fastening elements (5) for fastening the tiles (3) to the fastening structure (2), **in that** the fastening elements (5) comprise fastening brackets (5) which can be fastened to the front side of the tiles (3) at the location of the nose (3c), and **in that** each tile (3) comprises a hook element (3f) on the rear side of the visible part (3a), in which the hook element (3f) of an overlapping tile (3) can be hooked into a fastening bracket (5) which is attached to an overlapped tile (3).

6. Façade covering or roof covering (1) according to Claim 5, **characterized in that** the fastening elements (5) comprise fastening screws (5e) for fastening the fastening brackets (5) to the tiles (3) and for simultaneously fastening the tiles (3) to the fastening structure (2).

7. Façade covering or roof covering (1) according to Claim 5 or 6, **characterized in that** each fastening bracket (5) comprises a securing plate (5a) for fastening the fastening bracket (5) to said tile (3) and comprises at least one hook element (5b) which is directed obliquely with respect to the securing plate (5a) and into which the hook element (5b) of an overlapping tile (3) can be hooked after the fastening bracket (5) has been fastened to an overlapped tile (3).

8. Façade covering or roof covering (1) according to Claim 7, **characterized in that** each fastening bracket (5) comprises two of said hook elements (5b) which are spaced apart.

9. Façade covering or roof covering (1) according to Claim 6 and Claim 7 or 8, **characterized in that** each fastening bracket (5) comprises an opening (5c) in its securing plate (5a) for fastening a fastening screw (5e) and an access slot (5d) to said opening (5c), in which the direction of said access slot (5d) comes to lie at an angle with respect to the edges of said fastening bracket (5) or in which said access slot (5d) ends straight between the hook elements (3f).

10. Façade covering or roof covering (1) according to one of Claims 7 to 9, **characterized in that** each tile (3) comprises an oblique surface (3g) on its front side at the location of the nose (3c) for fastening the fastening surface of said fastening bracket (5) against said oblique surface (3g).

11. Façade covering or roof covering (1) according to one of the preceding claims, **characterized in that** said façade covering or roof covering (1) is a façade covering (1) for covering a façade in a rainproof manner.

12. Façade covering (1) according to Claim 11, **characterized in that** the façade covering (1) comprises end tiles (4) which only comprise a visible part and, in the bond, overlap the upper of said tiles (3) across the entire width in order to border the bond on the upper side.

13. Façade covering (1) according to Claim 12, **characterized in that** each end tile (4) comprises a hook element (4a) across the entire width to hook said end tile (4) over the upper side of the watertight part of the tiles (3) overlapped by this end tile (4).

14. Façade covering or roof covering (1) according to one of Claims 1 to 10, **characterized in that** said façade covering or roof covering (1) is a roof covering (1) for covering a roof.

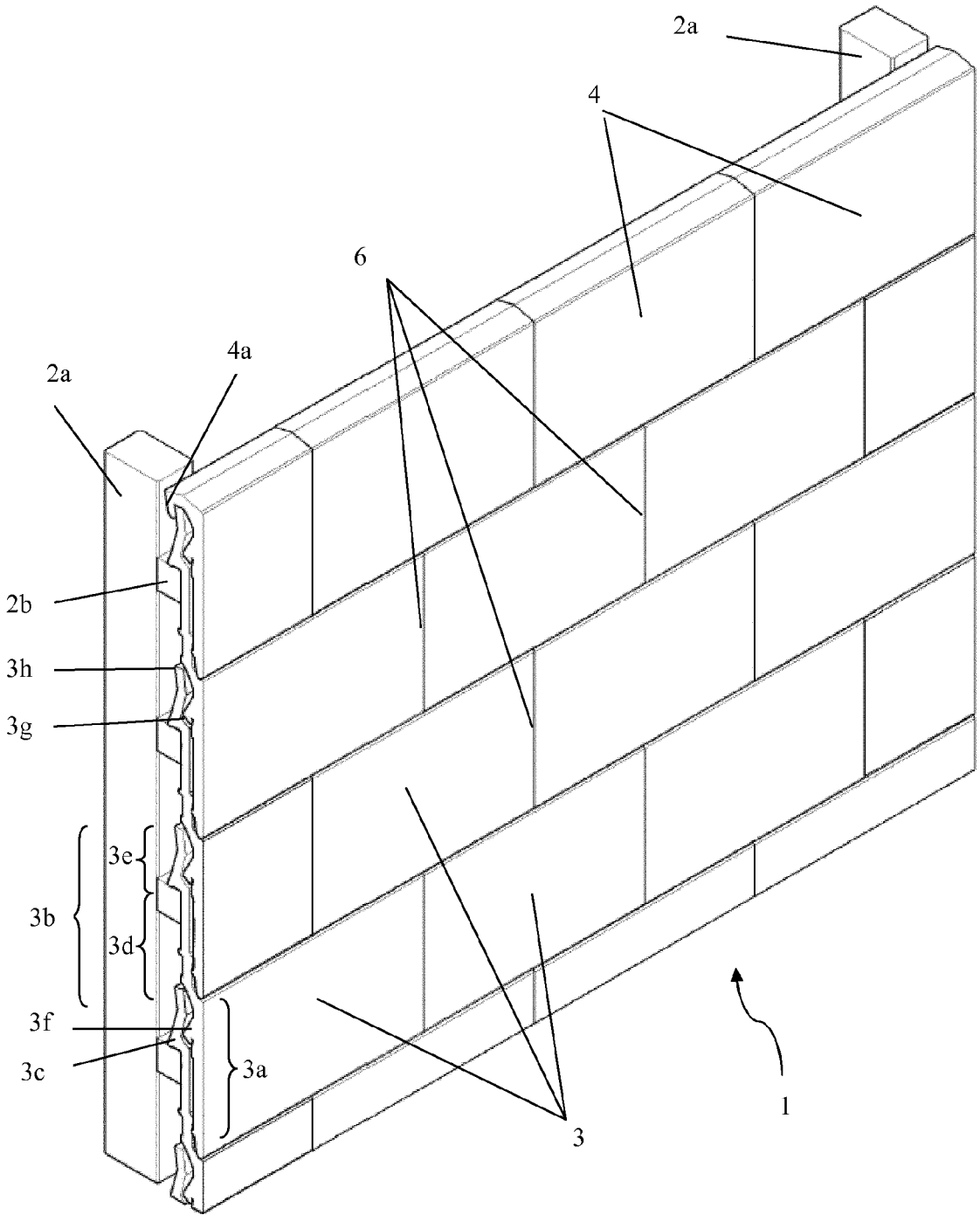

FIG. 1

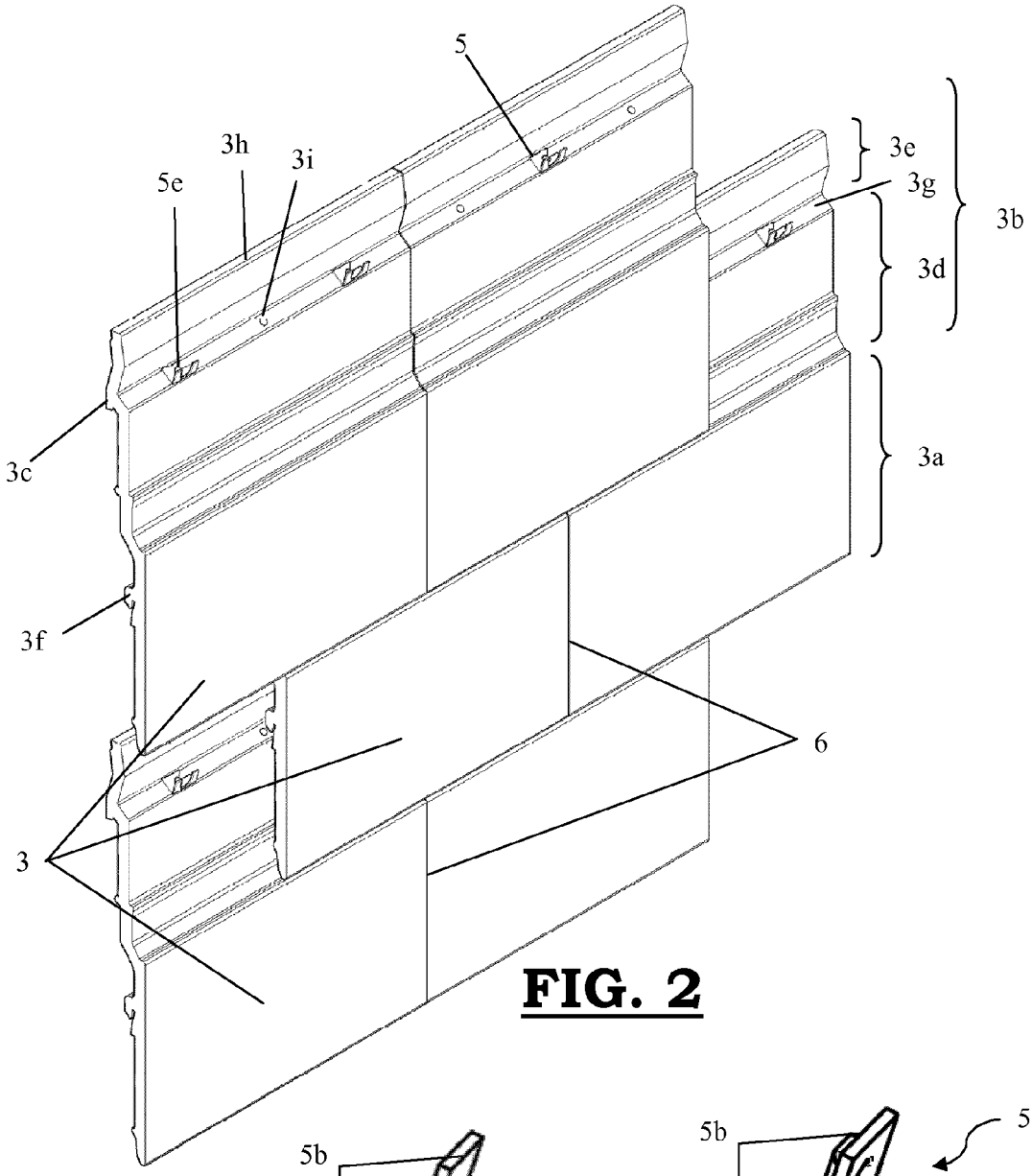

FIG. 2

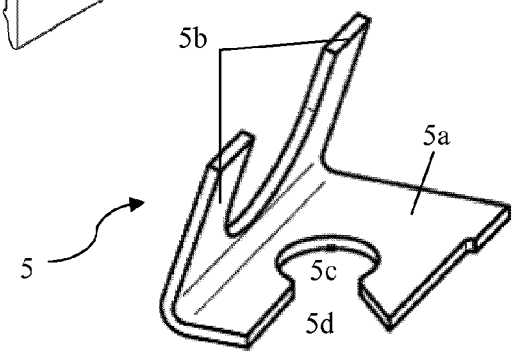

FIG. 3a

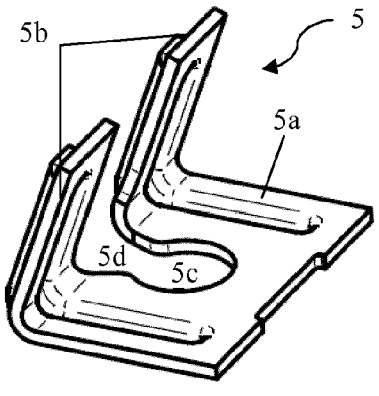

FIG. 3b

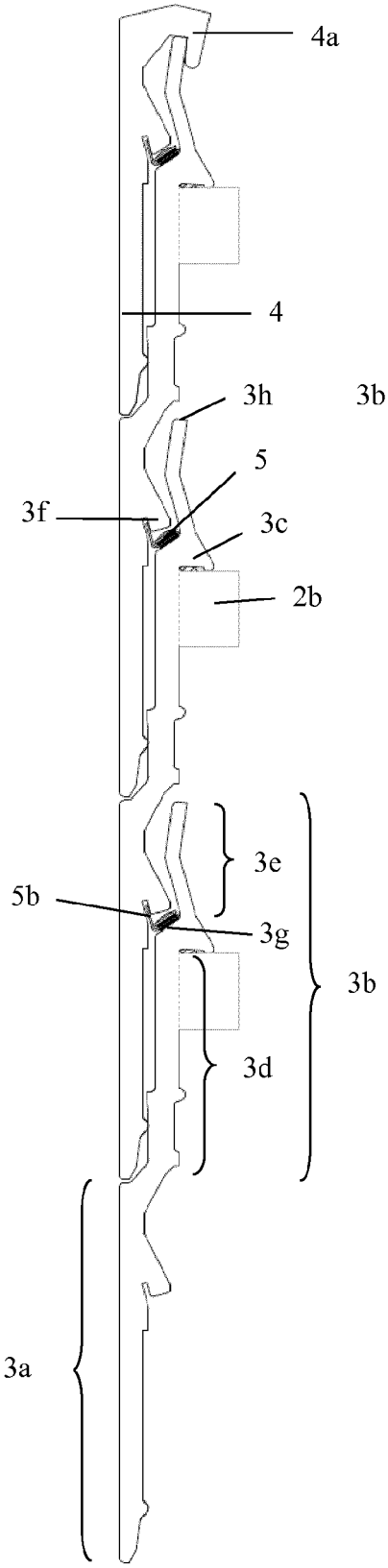

FIG. 4

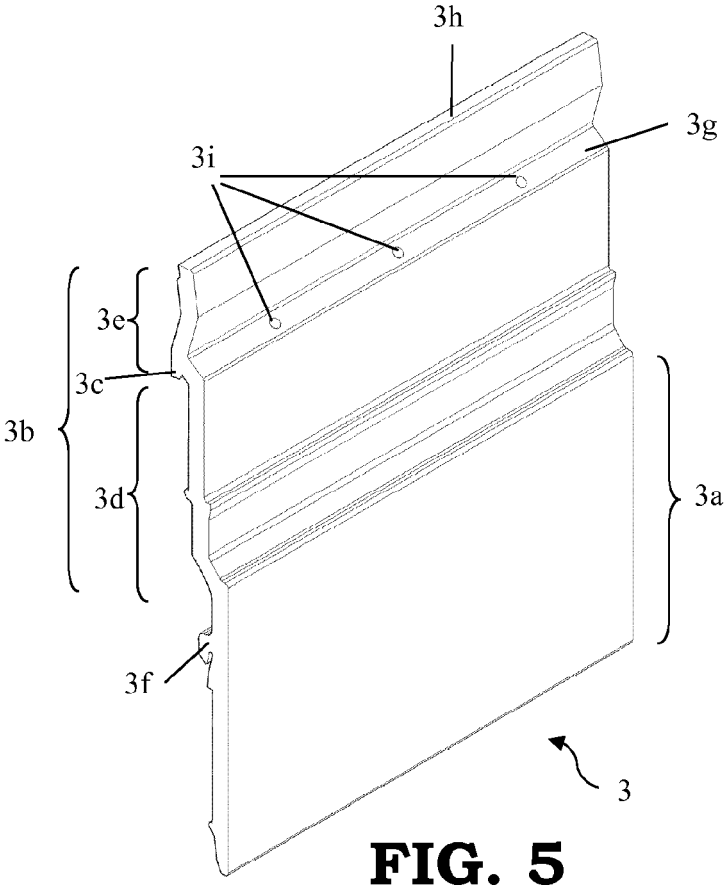

FIG. 5

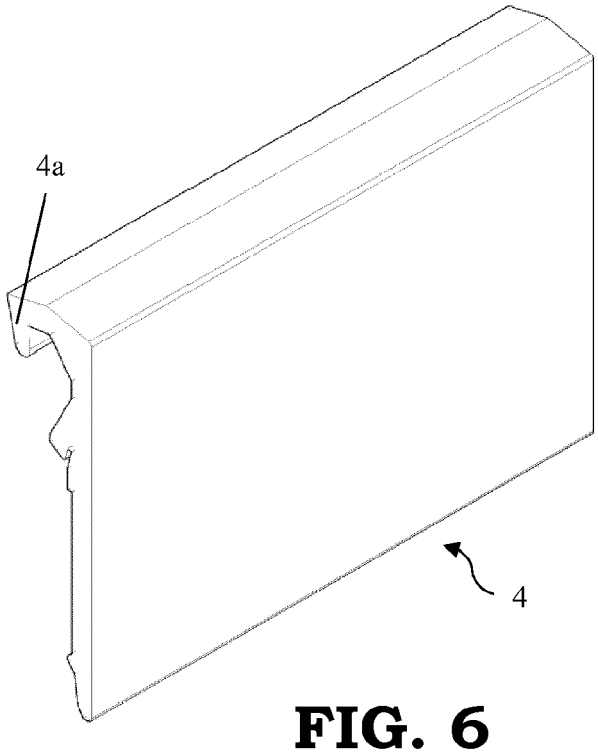

FIG. 6

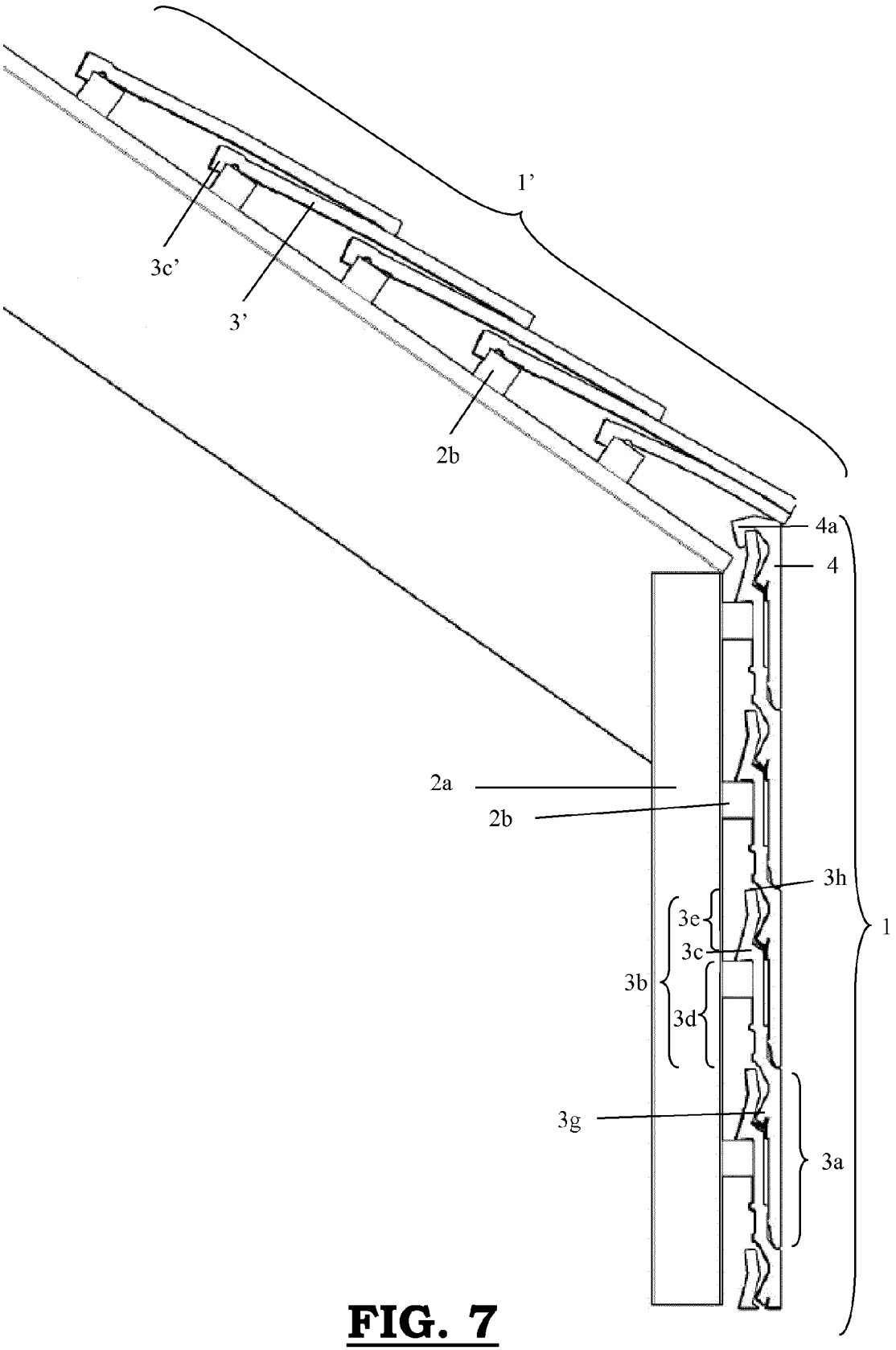

FIG. 7

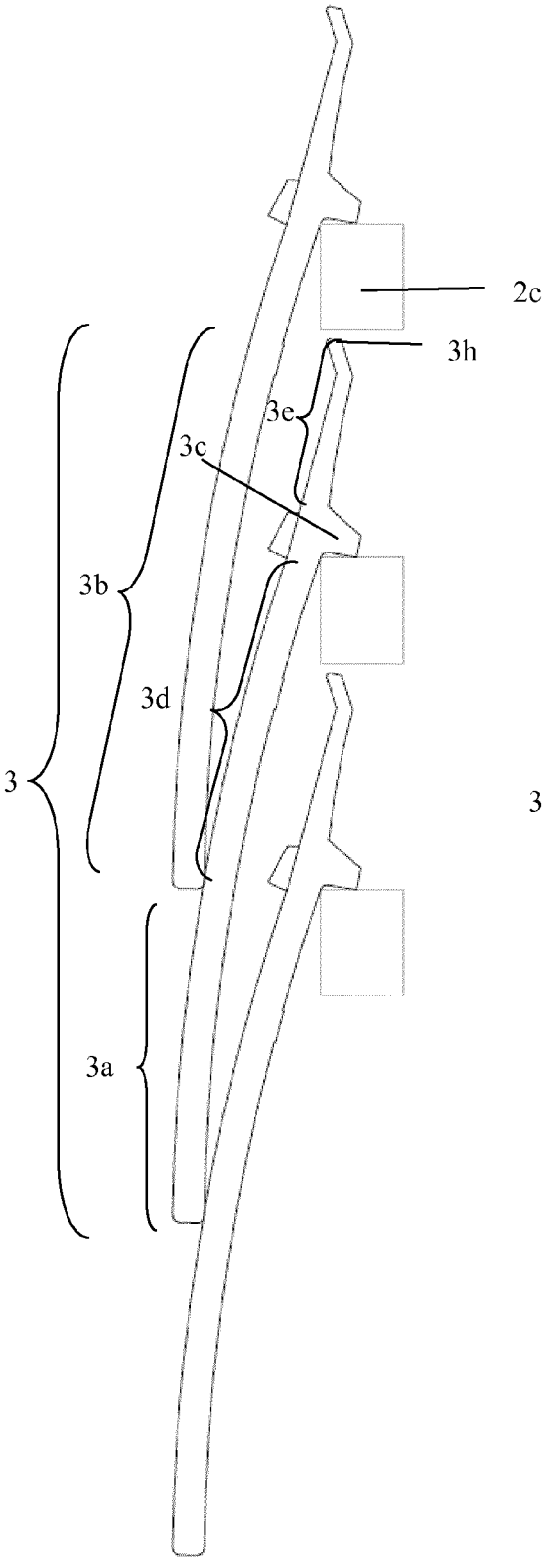

FIG. 8

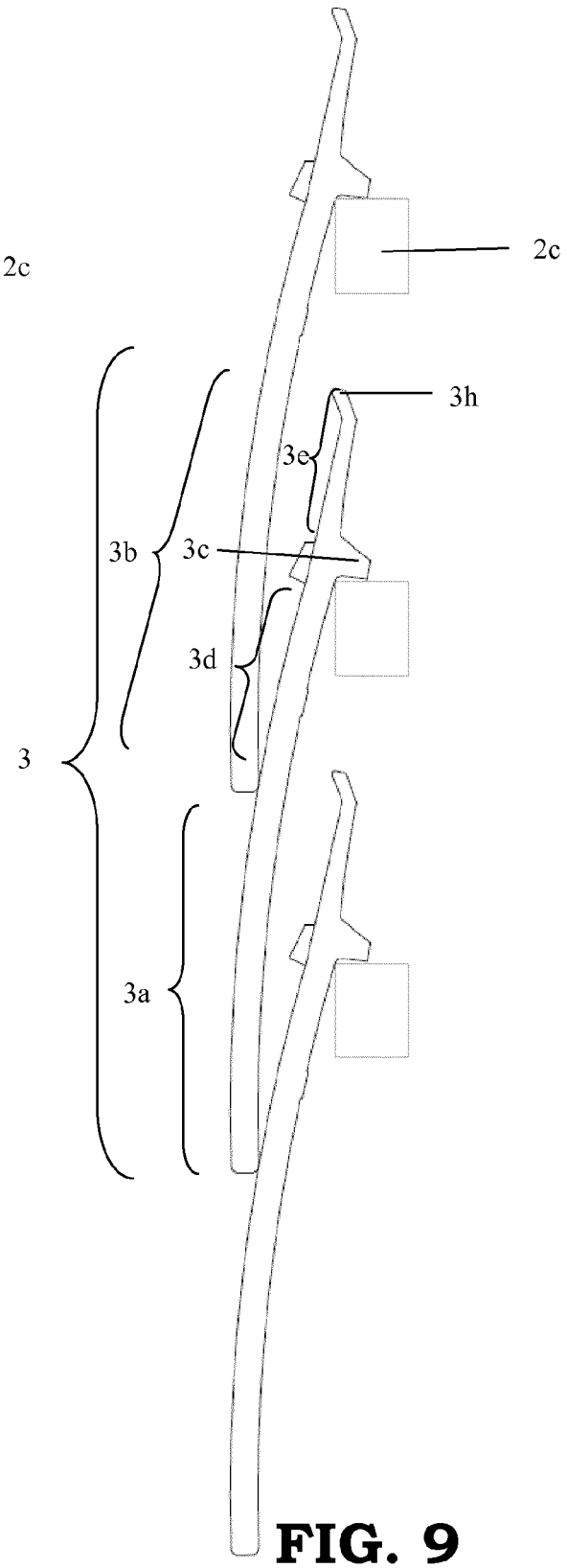

FIG. 9

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EUROPEAN SEARCH REPORT

Application Number
EP 12 19 4754

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 99/19579 A1 (SCOTT TOOMEBRIDGE LIMITED [GB]; BAMBER BARRY HUGH [GB]; FIFIELD JOHN A) 22 April 1999 (1999-04-22) * figures 21-27 * -----	1-4, 12-14	INV. E04D1/16 E04F13/08 E04F13/14
X	GB 2 150 194 A (MARLEY ROOF TILE CO LTD THE) 26 June 1985 (1985-06-26) * figures 5, 7 * -----	1,3,4, 11,12,14	ADD. E04D1/34
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A	FR 914 243 A (M CREY) 2 October 1946 (1946-10-02) * figures * -----	5	

TECHNICAL FIELDS SEARCHED (IPC)
E04D E04F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	27 February 2013	Demeester, Jan

CATEGORY OF CITED DOCUMENTS

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27-02-2013

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REFERENCES CITED IN THE DESCRIPTION

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- GB 2150194 A **[0004] [0006]**
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- FR 914243 **[0004] [0007]**
- WO 9919579 A **[0005]**