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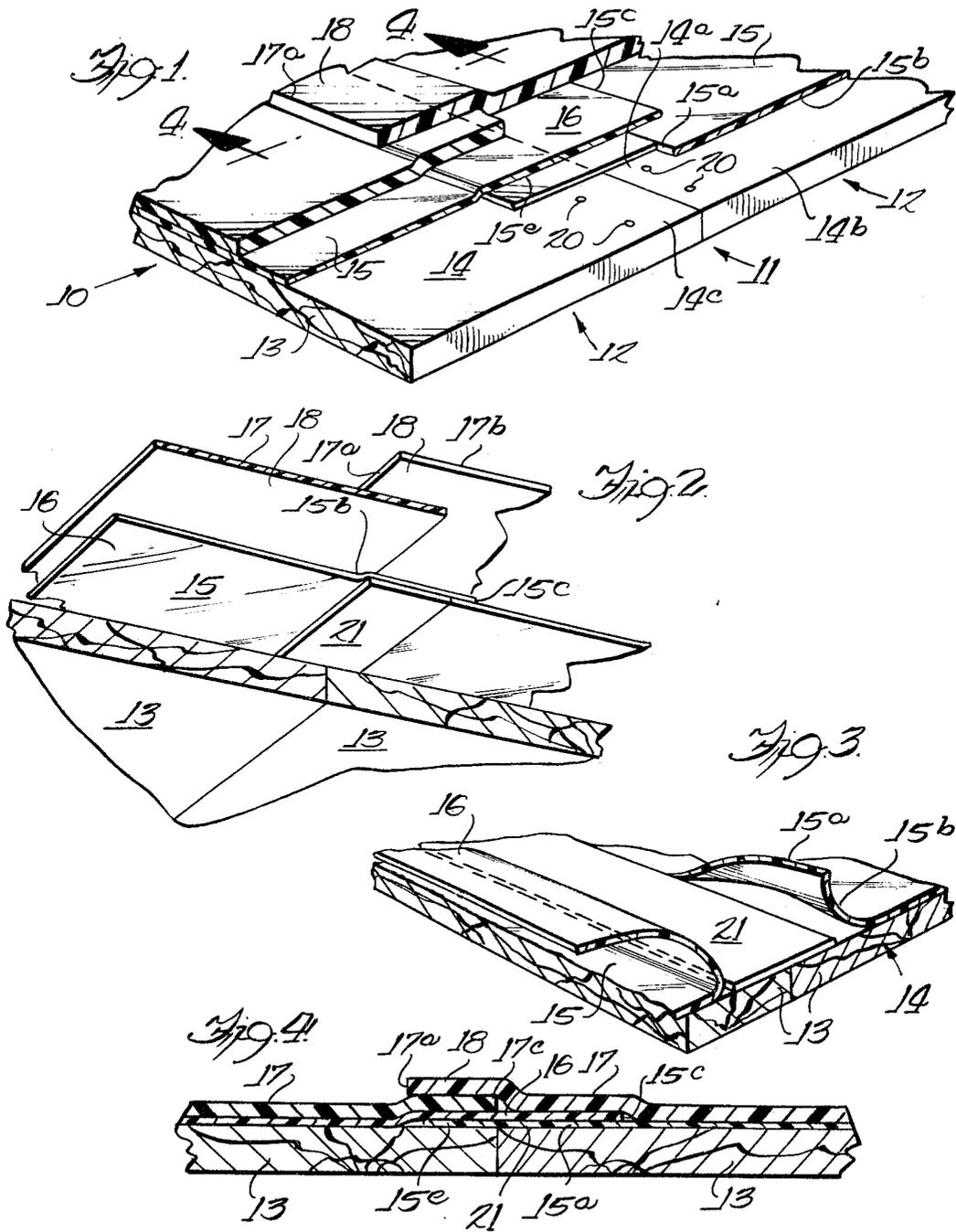
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BUILDING CONSTRUCTION

Filed Nov. 25, 1968

2 Sheets-Sheet 1



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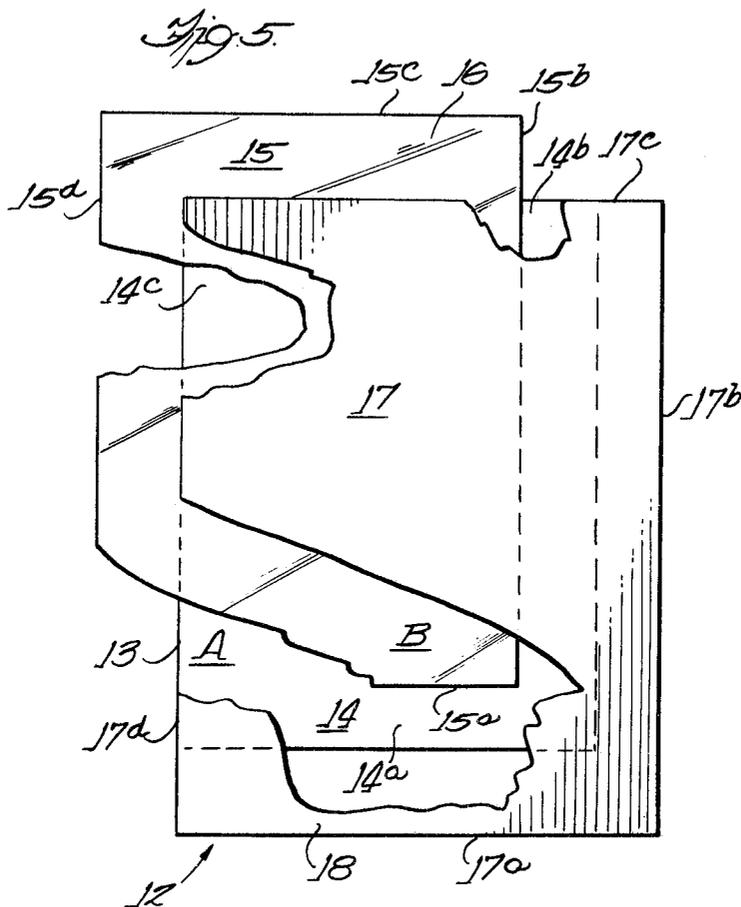
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BUILDING CONSTRUCTION

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7 Claims

ABSTRACT OF THE DISCLOSURE

A panel is provided for use with a second panel of substantially like construction to form a weather-proof roof or exterior wall. Each panel is a self-contained unit and includes a base member having a broad surface over which a pair of weather-proof laminas are positioned. Peripheral segments of the laminas of one panel are adapted to be disposed in substantially interlaid relation with respect to the peripheral segments of the laminas of the other panel, when said panels are arranged in abutting side-by-side relation, so as to form a weather-proof joint.

BACKGROUND OF THE INVENTION

Various sloping roofs and vertical exterior walls have heretofore been provided; however, in most instances the structure in question is formed of a plurality of complementary parts, requiring a substantial amount of time and manual labor to properly position said parts in order to form an effective weather-proof structure. Because the erection of such a structure is time consuming and requires the talents of a skilled roofer and/or carpenter, the cost of such a structure is frequently inordinately high.

SUMMARY OF THE INVENTION

Thus, it is an object of this invention to provide a weather-proof roof or wall construction which is simple and inexpensive to erect.

It is a further object of this invention to provide a roof or wall panel which is self-contained and includes various weather-proof laminas and thus may be readily erected without requiring the additional application of numerous shingles or the like in order to render the erected roof or wall weather-proof.

It is a further object of this invention to provide a self-contained weather-proof panel which may be readily cut to a desired shape and does not require the erector to carry numerous and varied types of complementary parts to the job site in order to erect an effective weather-proof roof or exterior wall.

Various other objects will appear from the description, accompanying drawing and appended claims.

In accordance with one embodiment of the invention, a panel is provided which is adapted to be used with a panel of substantially like construction to form a weather-proof or exterior wall. Each panel is a self-contained unit and includes a base member having a broad surface and a first plastic lamina partially overlying and being secured to said surface. The first lamina is offset with respect to the base member surface so as to form an uncovered elongated narrow band along a marginal portion of said surface. The marginal portion of the base member surface opposite the narrow band is overlaid by a flap formed on the first lamina. The flap is not secured to the overlaid marginal portion surface and projects a substantial distance beyond the peripheral portion of the overlaid marginal surface. The panel also includes a second lamina which is secured to the surface of the first lamina. The second lamina has a peripheral portion which projects beyond the peripheral portion of the first lamina which delimits the narrow band. The said peripheral portion of the second lamina forms a second flap which overlies but

2

is not secured to the band and projects a substantial distance therebeyond.

DESCRIPTION

For a more complete understanding of the invention, reference should be made to the drawing wherein:

FIG. 1 is a fragmentary enlarged perspective view taken from above of the improved roof and showing a weather-proof joint thereof and with the laminas of the abutting panels partially removed so as to expose same.

FIG. 2 is a fragmentary enlarged perspective view taken from below of the improved roof and weather-proof joint of FIG. 1 with the base member and the laminas of each of the panels partially removed so as to expose the various components thereof.

FIG. 3 is a fragmentary enlarged perspective view, similar to FIG. 1 but showing the weather-proof joint in a state of partial formation.

FIG. 4 is an enlarged fragmentary sectional view taken along line 4—4 of FIG. 1.

FIG. 5 is a top view of a complete panel with portions of the laminas cut away for clarity and to illustrate the areas covered with adhesives to secure said laminas.

Referring now to the drawing and more particularly to FIG. 1, an improved roof or exterior wall 10 is shown which is possessed of weather-proof joints 11, only one being shown. The roof 10 in this instance is formed of a plurality of panels 12, each of which is of like construction and shaped to conform to the area intended to be covered. The panels are arranged in abutting side-by-side relation so as to form a substantially coplanar surface. Each of the panels overlies suitable supporting members or joists, not shown.

Each panel 12 is a prefabricated, self-contained unit and comprises a base member 13 preferably formed from a sheet of plywood or the like of suitable thickness and strength. The base member 13 may vary in dimensions but preferably has a broad top surface 14 of approximately 4 feet by 8 feet. Overlying the broad surface 14 of member 13 is a first lamina 15 formed from a pliable thin plastic film which is moisture-proof and is bonded by a suitable adhesive A or the like to the member surface as will hereinafter be more fully described. The dimension of lamina 15 closely approximates that of surface 14; however, said lamina is offset with respect thereto. Two adjoining sides 15a and b of the lamina 15 are spaced inwardly from the corresponding peripheral edge of member 13 so as to form on surface 14 uncovered narrow elongated marginal bands 14a and b, respectively, see FIGS. 1 and 5. The width of each band may vary, but it is preferably approximately 1"—2". By reason of the offsetting of lamina 15 the sides 15c and d thereof opposite sides 15a and b overhang the corresponding edges of member 13 by at least a like amount so as to form first flaps 16, see FIGS. 2 and 5. The portions 15e of lamina 15 adjacent flaps 16 are not bonded to the adjacent marginal portions 14c of the broad surface 14 of member 13 for distance of approximately 1"—2" from the adjacent edges of said member 13. Thus, when the panels are arranged in abutting side-by-side relation, the narrow band 14a or b of one panel is adjacent the surface margin 14c of the other panel from which a flap 16 overhangs.

Overlying and secured by suitable adhesive B to the first lamina 15 is a second lamina 17 which is preferably formed from a thin piece of pliable asphalt-impregnated fabric or plastic. Lamina 17 is similar in shape to lamina 15 but of slightly greater area. The edges 17a and b of the lamina 17, adjacent corresponding edges 15a and b of lamina 15, extend a substantial distance beyond same so as to form flaps 18, see FIGS. 1, 2, 4 and 5. The width of flap 18 should be approximately the combined widths of the band 14a or b and the adjacent surface margin 14c. The oppo-

site edges 17c and d of the lamina 17 are substantially aligned with the adjacent edge of member 13 which in turn is in abutting relation with the edge of the member 13 of the other panel, see FIG. 4.

When erecting the roof or wall 10, one of the panels is first placed over or against the supporting members and then secured thereto by nails or fasteners 20 which penetrate the marginal portions of the base member 13. Subsequent to the first panel being secured to the supporting members, the second panel is placed in abutting side-by-side relation with one edge of the first panel. In positioning the second panel, care should be exercised so as to assure that the edge of the second panel provided with the narrow band is positioned adjacent the edge of the first panel having the first flap 16, or vice versa. The second panel is secured in its proper position by a plurality of nails or fasteners 20 which penetrate the margin of the second panel.

After both panels are in place, the flap 16 and the portion of lamina 17 secured thereto are folded back, see FIG. 3, so that the abutting edges of the panels are exposed. The exposed abutting edges are then covered over by an elongated strip 21 formed of polypropylene fabric or plastic. The strip is coextensive with the abutting edges and has one side thereof abutting or in close proximity to the adjacent edge 15a or b of the first lamina 15 of one of the panels. The strip 21 also overlies the adjacent surface margin 14c of the other panel. Once that strip 21 is in place, the adjacent flap 16 is adhesively secured in overlapping relation thereto and the outer or distal edge of the flap is adhesively secured to the portion of the lamina 15 of the other panel forming the band 14a or b.

The secured flap 16 and edge 17c of the one panel is then overlapped by the flap 18 of the other panel and the two flaps are bonded to one another.

In FIGS. 1 and 4 the thicknesses of laminas 17 are exaggerated somewhat for purposes of illustration.

While the panels have been described as being secured to the supporting members by nails or fasteners 20, it is to be understood, of course, that suitable adhesive may be substituted therefor, if desired. Furthermore, various other types of suitable materials may be utilized besides those aforedescribed.

It is also understood that while the panels are described as being in abutting side-by-side relationship so as to form a substantially co-planar surface, it is conceivable that the panels could form a non-coplanar surface if placed on a hip roof, folded plate or the like. Furthermore, while the flaps are described as being on two adjoining sides, certain applications may require each lamina to overlap only one side, as for instance when the panel extends from the eave to the peak of a roof. It is also conceivable that the prepared panel may have a base member which is not planar, for example, corrugated or curved, or other non-planar surfaces could be employed.

By reason of the laminas 15 and 17 being previously secured to the base member 13 at the time the panel is fabricated, it is only necessary for the erector to carry to the job site the required number of prefabricated self-contained panels, adhesive and nails or fasteners therefor.

Thus, it will be seen that an effective weather-proof roof or exterior wall may be readily and easily erected. Because of the self-contained character of the panels used, a minimum number of component parts are required to effect erection of the roof or wall.

While a particular embodiment of the invention has heretofore been described, it is to be understood, of course, that the invention is not limited thereto, but further modifications are contemplated and it is intended by the appended claims to cover such modifications.

I claim:

1. A prefabricated panel adapted for use with a second panel of substantially like construction to form a weather-proof roof or wall, said panel comprising a substantially rigid base member having a broad surface; a pliable film-

like first lamina secured to said surface, a first peripheral segment of said lamina being spaced from the perimeter of said surface so as to form thereon an elongated uncovered narrow band, a perimetric segment of said surface opposite said band being overlaid by but not secured to said first lamina, a second peripheral segment of said lamina forming a first flap which projects beyond the said perimetric segment of said surface; and a second lamina of moisture-proof material overlying and being affixed to said first lamina, said second lamina having a first peripheral segment substantially aligned with the said perimetric segment of said surface and a second peripheral segment forming a second flap which overlies and projects a substantial distance beyond the uncovered narrow band of said base member.

2. The panel of claim 1 wherein said base member is formed of a material that can be secured by fasteners or adhesives and said first lamina is bonded to the broad surface thereof and said second lamina is bonded to said first lamina, both said first and second laminas being of water-proof material.

3. The panel of claim 1 wherein said base member is formed of plywood, said first lamina is a plastic film, and said second lamina is an asphalt impregnated fabric.

4. The panel of claim 1 wherein two adjoining sides of said panel are provided with elongated uncovered narrow bands, both of said bands being overlaid by but not secured to second flaps formed on said second lamina, and the two adjoining sides of said panel opposite said first-mentioned adjoining sides being overlaid by but not secured to said first lamina and having projecting therefrom first flaps formed on said first lamina.

5. A weather-proof joint formed from a pair of panels of the type defined in claim 1 wherein said panels are disposed in side-by-side substantially coplanar abutting relation and the narrow band on the broad surface of one panel is disposed adjacent the perimetric segment of the broad surface of the second panel, said perimetric segment being overlaid by but not secured to said first lamina, said joint comprising an elongated strip of flexible plastic material overlying in registered relation and in contact with the narrow band of said one panel and the perimetric segment of said second panel, a portion of said strip being disposed between the base member and the first lamina of said second panel; the first flap formed on said second panel overlying and being secured in sealing relation to said elongated strip and the portion of the first lamina of said one panel circumjacent the narrow band thereof; and the second flap formed on said one panel overlying and being secured in sealing relation to the exterior of the second lamina of the second panel and the first flap of the second panel previously sealed to said elongated strip.

6. The weather-proof joint of claim 5 wherein the elongated strip is of polypropylene material, the first lamina of each of said panels is a plastic film, and the second lamina of each of said panels is an asphalt impregnated fabric made from polyolefins.

7. The weather-proof joint of claim 6 wherein a peripheral segment of said elongated strip is in abutting relation with the peripheral segment of the first lamina of said one panel delimiting said narrow band.

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