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Taylor et al.

[11] **3,740,910**

[45] **June 26, 1973**

[54] **SIMULATED BRICK PANELS**

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[52] **U.S. Cl.** **52/315**, 52/420, 52/396

[51] **Int. Cl.** **B44f 7/00**

[58] **Field of Search** 52/314, 315, 311, 52/420, 419, 417, 416, 606, 396, 403, 394, 393

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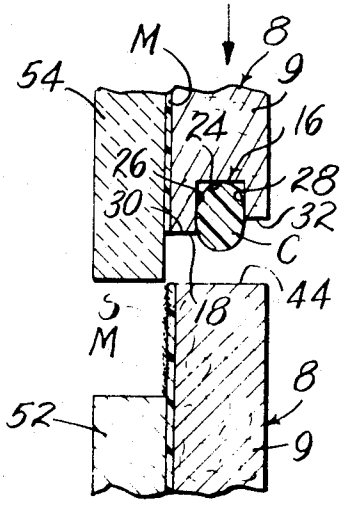
[57] **ABSTRACT**

A simulated brick panel that can be applied to any type building structure to give the appearance of full-size masonry construction. The panel includes a dense backing sheet coated with a uniform layer of water-impermeable epoxy resin adhesive and faced with several courses of thin facing slabs. The panel has longitudinal upper and lower edges and transverse side edges, one of the longitudinal edges and one of the side edges being plain and the other longitudinal edge and side edge each having a central caulking groove cut therein with the side wall of the groove adjacent the inner side of the panel of less height than the height of the groove side wall adjacent the outer side of the panel. The bottom course of slabs projects below the lower edge of the panel so that the slabs will partially overlie the upper part of a panel therebeneath. Caulking compound in excess of that required to fill the grooves is applied so that it can flow laterally toward the inner and outer faces of the panel as the upper panel is pressed downwardly against a lower panel and laterally against the end of an adjacent panel. All exposed portions of the joints between the panels are sealed with adhesive, and then sand is applied thereto before the adhesive sets. The blank spaces at the vertical joints between adjacent panels, when present, are filled by adhesively bonding a flat filler slab in place. Blank spaces in the panels at the corner of a building are filled by similarly applying L-shaped filler slabs.

19 Claims, 12 Drawing Figures



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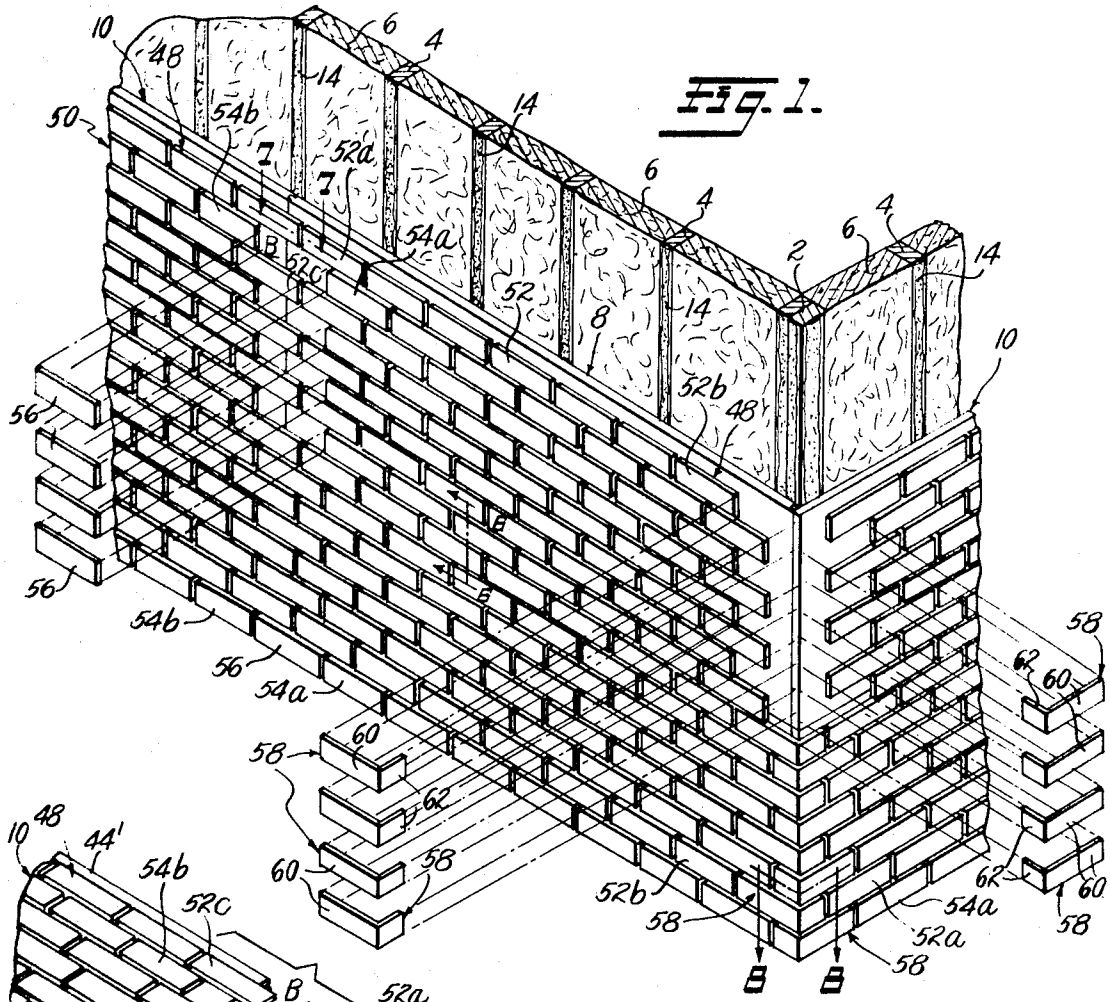

Fig. 1.

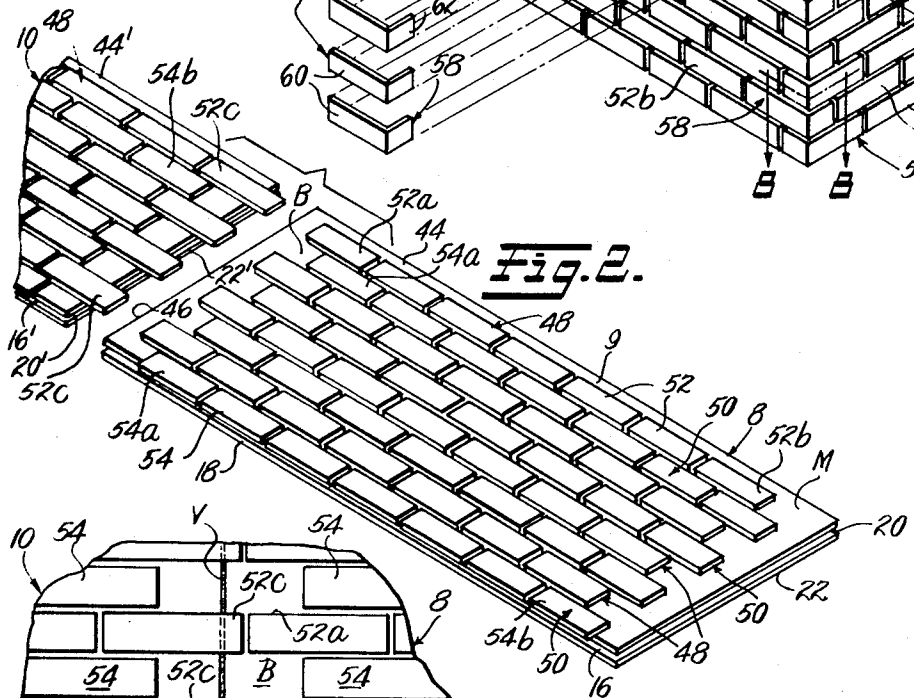

Fig. 2.

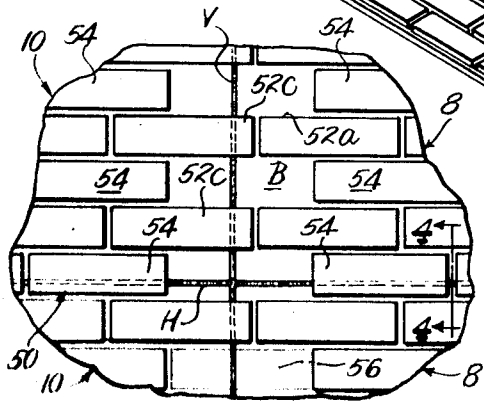

Fig. 3.

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Fig. 5.

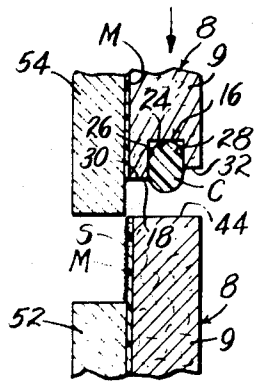


Fig. 7.

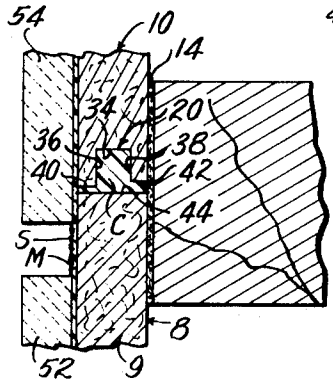
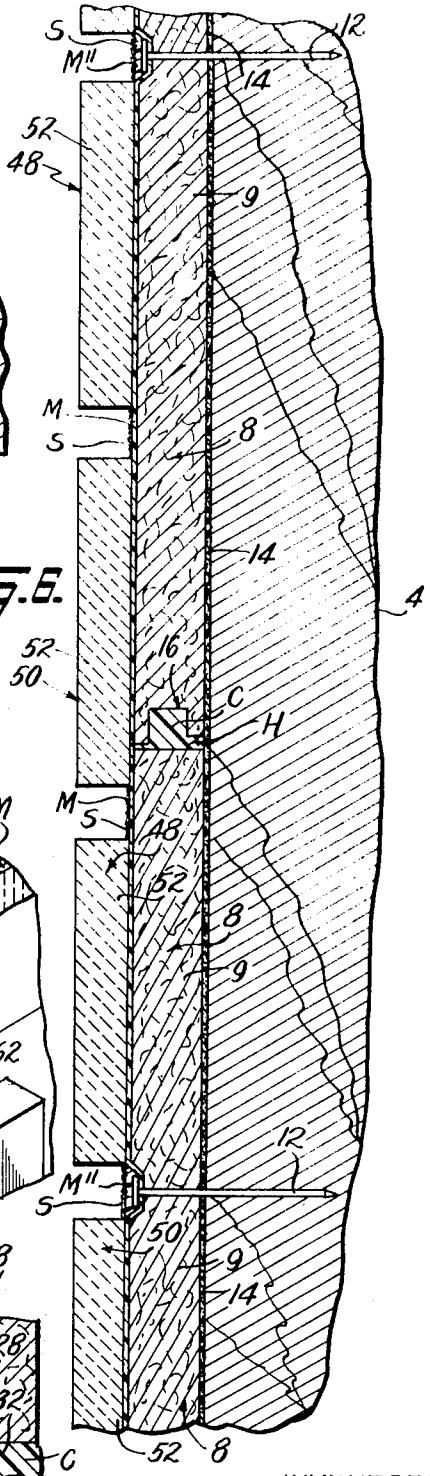


Fig. 6.



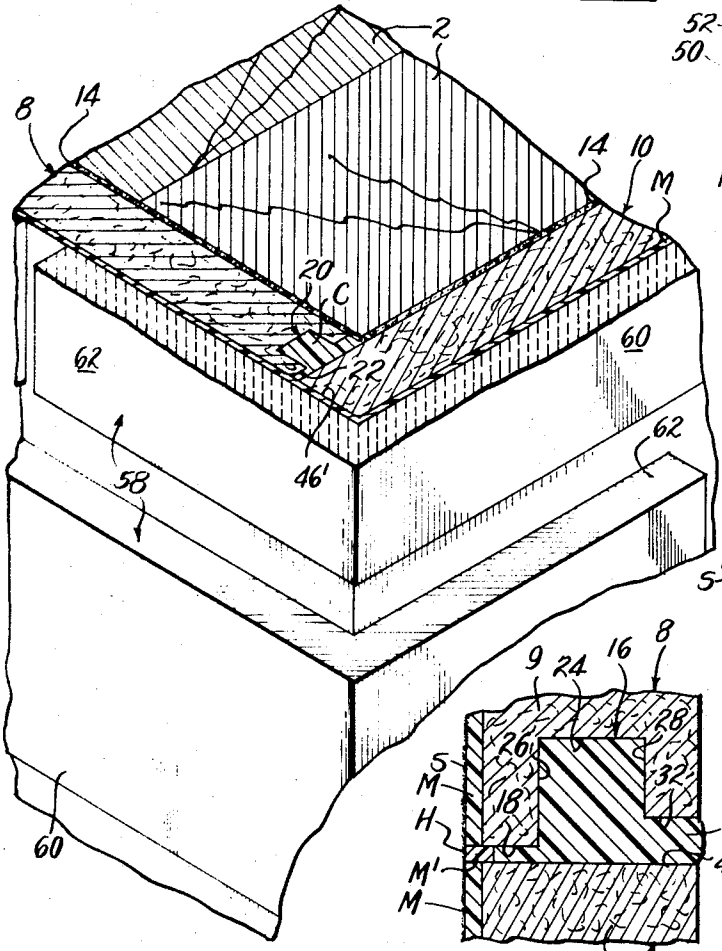


Fig. 8.

Fig. 4.

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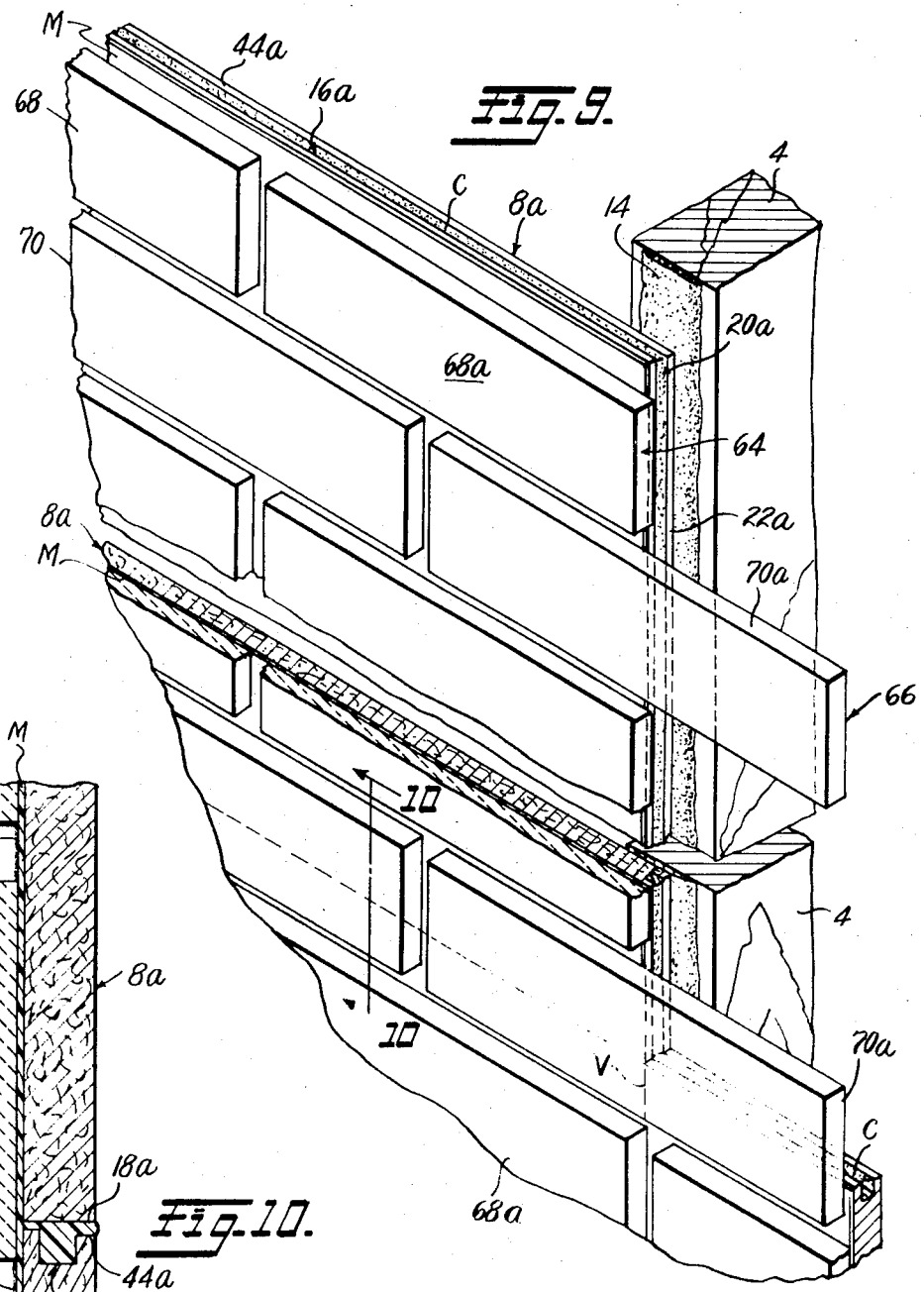

Fig. 9.

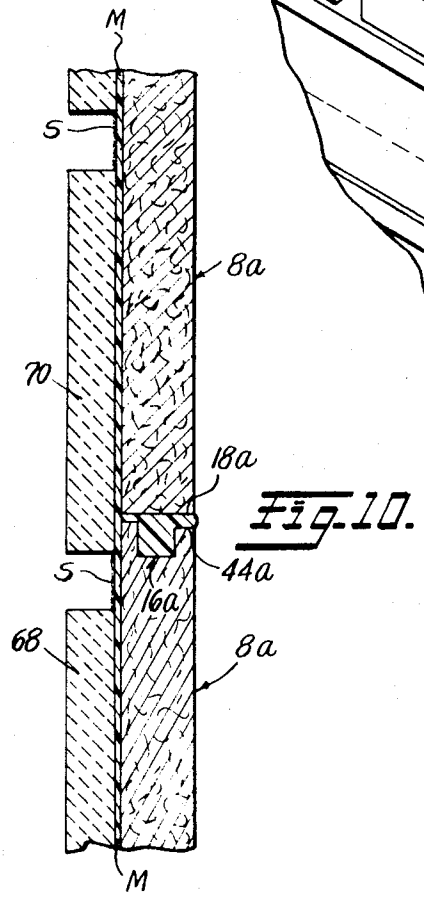

Fig. 10.

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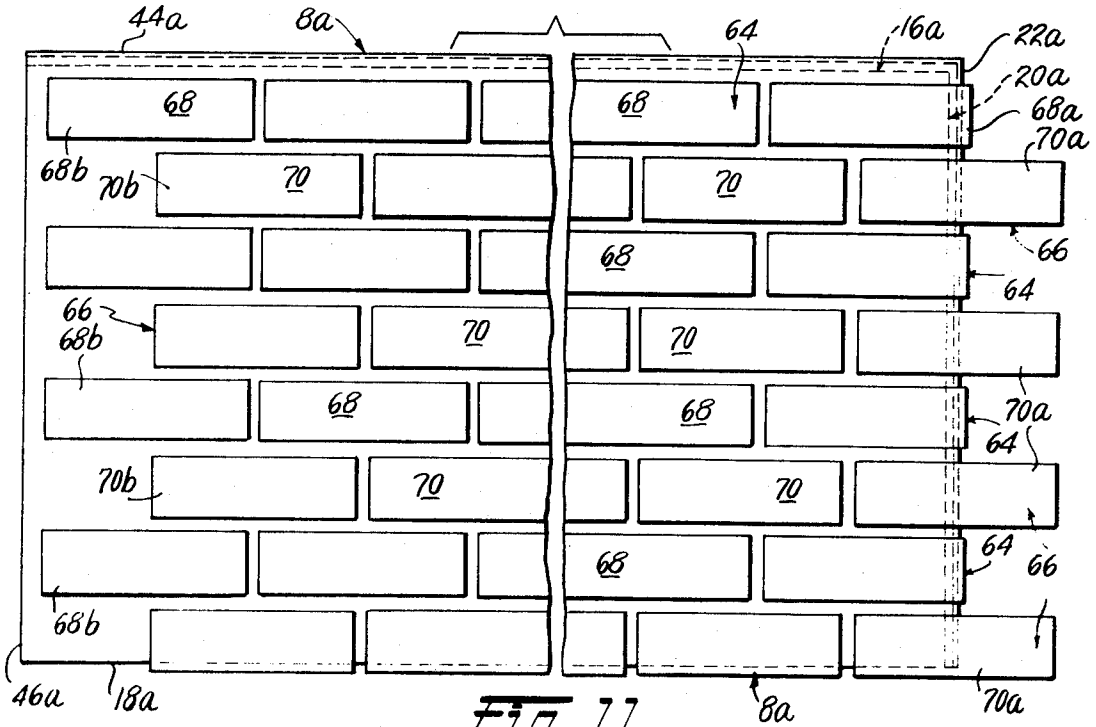

Fig. 11.

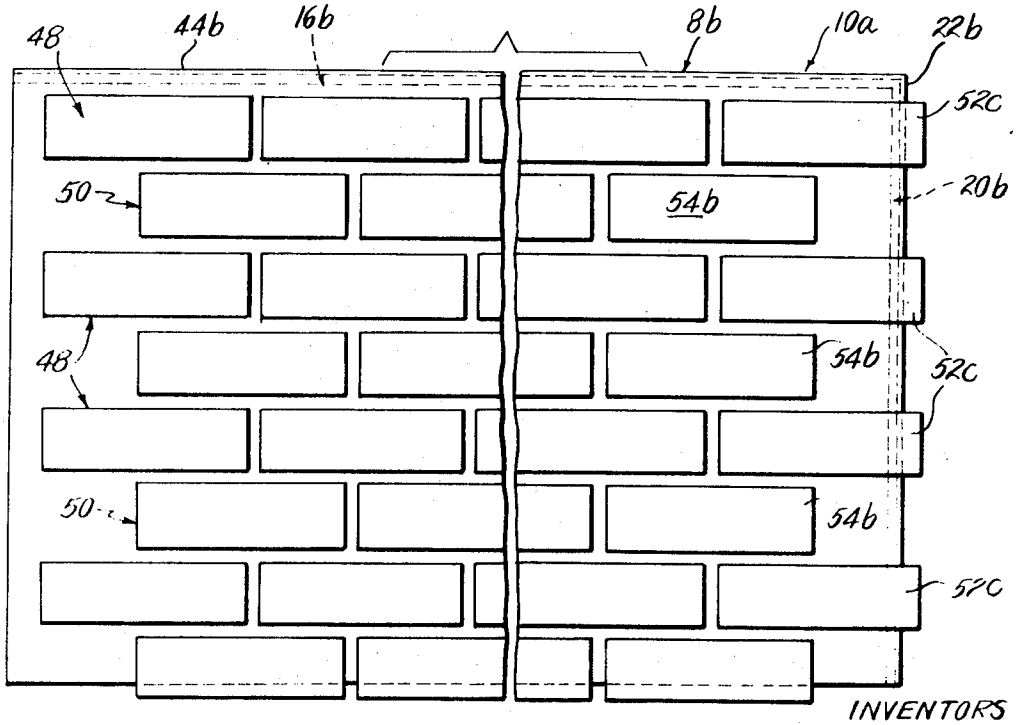

Fig. 12.

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SIMULATED BRICK PANELS

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to simulated brick panels to be secured to wood or metal studs of a building, to brick or concrete walls, etc., to provide a simulated masonry wall.

2. Description of the Prior Art

Simulated brick panels have been heretofore proposed, consisting of a backing material to which strips of fibrous material simulating brick have been applied by adhesive and wherein the backing materials have been provided along the longitudinal edges with grooves forming a lap joint (U.S. Pat. No. 2,241,898). This type of structure has the objection that the fibrous strips crack and otherwise deteriorate in a short period of time and present an unsightly appearance. Further, the backing sheets supporting the fibrous strips are designed so that the side edges thereof meet at a point coinciding with the simulated mortar joint between the adjacent side edges of the panels without caulking or other material to provide a seal against penetration of rain, etc.

Other simulated brick panels have been proposed wherein the material intended to simulate bricks is poured into a mold and a base layer consisting of a cement mix is added to the mold to adhere to the brick layer (U.S. Pat. No. 3,304,673). Panels of this type are to applied to concrete structures and require the insertion of a specially formed section with projecting simulated brick portions mounted between them. This type of construction results in panels that are very heavy and, hence, difficult to handle when made of any substantial size, and are also subject to cracking or breaking in handling, while being transported, while being mounted, etc.

Still other proposals have included large, plain panels provided with tongue and groove joints at their longitudinal edges to be filled with caulking material, which is completely exposed at the outer face of the panels (U.S. Pat. No. 2,387,431). The panels are also grooved at their side edges to receive the flange of an I-beam, the space between adjacent ends of the panel being filled with caulking material and also being exposed to the elements. This type of construction has the disadvantage of leaving the caulking material surrounding the panels exposed to the sun and other elements so that it dries out in a short time and cracks or shrinks, thereby rendering the joints non-waterproof.

SUMMARY OF THE INVENTION

The present invention overcomes the defects and objections to structures such as those described above, in that the brick slab facings are permanently bonded to the outer face of the panels by a suitable coating of waterproof epoxy resin adhesive material, the exposed portions of which simulate a mortar joint. Further, all edges of the panels are caulked and all exposed portions of the joints between the panels are covered with the same adhesive or matrix so that the entire wall formed by the panels is rendered water-tight.

The panel itself is made of a hard, pressed, asphalt-impregnated fiberboard backing sheet, so that it is waterproof and thus impervious to rain and moisture penetration. The panels are preformed with a central caulking groove in either the lower or upper longitudinal edge, and in one vertical side edge thereof. The side walls of the grooves are greater in height adjacent the outer side of the sheet than adjacent the inner side. Thus, the lands at the inner side of the panel will be spaced farther from the plain edge of an adjoining panel to provide a greater thickness of caulking at the inner side of the panel.

In accordance with the principles of the present invention, the panels can be made in any size desired, although for non-special purposes, the length of the panel coincides with multiples of the conventional center-to-center stud spacing of 16 to 24 inches. In one practical embodiment of the invention, the backing sheet of the panels is 96 inches in length and 21½ inches in height; and with eight courses of facing slabs applied thereto, weighs only about 67 lbs. The panels are designed to be fastened to the studs at their ends and at one or more intermediate points, not in excess of 32 inches apart. The grooves in the panel edges are filled with a volume of caulking material greater than that required to fill the grooves themselves, so that when the panels are mounted in place, the caulking material is displaced laterally in both directions from the grooves, with the greater volume flowing to the inner side of the panel, as indicated above.

The facing slabs are mounted upon the backing sheet or panel in courses, with the lowermost course extending below the lower edge of the panel, and with the joints in alternate courses staggered relative to each other. In one form of the invention, the courses of slabs are also arranged so that the edges of the slabs do not project beyond the side edges of the panel, but are spaced closer to one vertical edge of the sheet than they are to the other vertical edge, with the edge spacing being reversed in adjacent courses. A panel of this type serves well as a corner panel. A cooperating panel has slabs in alternate courses that project beyond the right edge of the panel to cover the shorter space left blank in the corresponding course of an adjacent panel. Thus, a slab bridges the joint between the panels and the edges of two adjacent panels do not coincide with the simulated mortar joints between the facing slabs. In such panel design empty spaces between adjacent slabs at the joint are formed in the remaining courses. These spaces are then covered by filler slabs adhesively held in place.

The present panel designs also provide for a unique corner structure in that they provide empty or blank areas in the corner panels that are covered by L-shaped filler pieces initially having one leg shorter than the other, or having both legs of equal length to be clipped to a length to suit field or factory conditions.

The permanent bonding of the facing slabs to the panels eliminates the problem of the facings falling off; and the provision of the grooves along two of the edges of the panel to receive caulking material provides a water tight joint that is further protected by the slabs extending beyond the lower edge of the panel and projecting beyond the side edge of the panel, respectively, so that only small areas constituted by the joints between slabs are exposed to the elements. The longitudinal offsetting of the courses of slabs on the panel assures that the vertical joints between adjacent panels is likewise protected by overlying slabs, thereby covering the entire vertical joint except for the exposed areas at the simulated mortar joints, between the courses of slabs. This same feature is incorporated in the corner

joint in conjunction with the L-shaped filler pieces. All such portions of the joints, both horizontal and vertical, are covered by applying the waterproof matrix thereto to seal the same.

A further embodiment of panel design provides slabs extending across the vertical joint between adjacent panels without requiring the use of filler slabs.

Accordingly, the principal object of the invention is to provide a unique simulated brick panel designed so that the panel can be applied in a minimum of time to the studs of a building, or to a wall surface, to present the appearance of a masonry type wall.

Another object is to provide a simulated brick panel designed so that a minimum amount of the joints between the edges of adjacent panels is exposed to the atmosphere.

A further object is to provide a panel designed so that the vertical edges between adjacent panels do not coincide with the joint between adjacent slabs of facing material mounted on the panels.

A still further object is to provide a panel designed so that the joint formed by the panels at a corner of the building has a minimum area exposed to the atmosphere.

Still another object is to provide a panel construction having grooves formed in only one longitudinal and one vertical edge thereof and designed so that a substantial body of caulking material can be received in the grooves and flow toward both the inner and outer faces of the panel, with the greater amount of caulking material flowing toward the inner face of the panel so that a good seal is provided, while at the same time the longitudinal and vertical joints between the panels of the outer side thereof are hardly noticeable, and which in any event are exposed only at points between slabs and can be readily covered and sealed by a matrix.

Still another object is to provide simulated brick panels that can be quickly and uniformly fabricated and which are superior to and more versatile than panels of prior construction.

A still further object is to provide a simulated brick panel design, wherein the slabs of facing material are arranged so that they substantially cover the outer region of the joints between adjacent and superposed panels, to thus minimize the possibility of moisture penetrating the joints between the panels.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary perspective view of a corner of a building structure including conventional wood studs and illustrating the manner in which simulated brick panels constituting embodiments of the present invention can be applied to the studs at the corner of the building.

FIG. 2 is a perspective view of a pair of panels, one of which is designed to serve as a corner panel and the other to be positioned in longitudinal relation to the first panel, with both panels having a groove in the lower edge and in the vertical edge at the right end of the panels.

FIG. 3 is a fragmentary elevational view showing the caulking at the joints of the juncture of four panels.

FIG. 4 is a greatly enlarged cross-sectional view, taken on the line 4—4 of FIG. 3, particularly showing the matrix seal that is applied later over the caulking material to conceal the joint between adjacent slabs.

FIG. 5 is an enlarged fragmentary sectional view showing the longitudinal edges of adjacent panels with one of the panels having caulking material in a groove in the lower edge thereof ready to be pressed against the plain edge of a panel therebeneath.

FIG. 6 is an enlarged fragmentary vertical sectional view, taken on the line 6—6 of FIG. 1, illustrating the joint formed between adjacent panels, and particularly showing the lateral displacement of the caulking material between the confronting edges of the panels, and the heads of the countersunk nails securing the panels to a stud covered with matrix to conceal and seal the same.

FIG. 7 is a fragmentary vertical sectional view, taken on the line 7—7 of FIG. 1, showing the details of the joint between the horizontal edges of adjacent panels.

FIG. 8 is an enlarged fragmentary perspective view, partly in cross-section, taken on the line 8—8 of FIG. 1, and showing the details of the joint at the corner of the building structure.

FIG. 9 is a fragmentary perspective view, partly in cross-section, of a modified, but preferred, form of panel construction with the panels secured to a stud, and wherein the grooves for the caulking material are formed in a top edge and one vertical edge of the panel, and wherein the slabs are arranged at one end of the panel so that they all overlap the joint between the vertical edges of adjacent panels to form uninterrupted courses of slabs.

FIG. 10 is a fragmentary vertical sectional view, taken on the line 10—10 of FIG. 9, showing the caulking compound in the groove in the upper edge of one of the panels.

FIG. 11 is an elevational view of a panel with the slabs arranged as shown in FIGS. 9 and 10.

FIG. 12 is an elevational view of a modified form of panel having slabs arranged so that the slabs in alternate courses will only slightly overlap the vertical edge of an adjacent panel and cover the joint between the panels.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1 of the drawings, a portion of a building structure is shown comprising a double corner stud 2 and side studs 4, with insulating material 6 mounted between the studs. The studs 4 may be spaced 16 inches or 24 inches apart, as is conventional. Several panels, such as panels 8 and 10 illustrated in FIG. 2, are shown secured to the studs 2 and 4 by countersunk nails 12. (FIG. 6). Adhesive material 14, FIGS. 1 and 6 to 8, is preferably applied to the studs 2 and 4 before the panels 8 and 10 are positioned thereagainst and before the nails 12 are driven into the studs.

Referring particularly to FIG. 2, the panel 8 comprises a rectangular backing sheet 9 of hard, dense, waterproof, asphalt-impregnated fiberboard, or any other suitable backing, having a central groove 16 formed in its lower edge 18 and a similar groove 20 formed in its vertical edge 22 at the right end of the sheet. The panel is ½ inch thick and the grooves 16 and 20 are one quarter inch wide. However, it will be understood that the thickness of the backing sheet 9 and the dimensions of the grooves 16 and 20 can be varied to suit different requirements.

The backing sheets for the panels **8** are cut to accurate size from a larger sheet. The grooves **16** and **20** are cut in the edges **18** and **20**, respectively, before any slabs are applied. In constructing the panel, the facing slabs are pre-arranged and retained in a jig (not shown) in a pattern conforming to the slab arrangement to be applied to the backing sheet. One side of the backing sheet **9** is preferably coated with a suitable epoxy resin matrix or adhesive M (or any other suitable adhesive), and is positioned beneath the jig in proper registration therewith. The jig is then lowered to embed the slabs in the adhesive material M. Thereafter, the slabs are released and the jig is withdrawn. Fine sand S is sprinkled over the entire area of the panel before the adhesive M sets. After setting, the excess sand S is removed. The sand S adhering to the adhesive in the spaces between the slabs presents the appearance of a cement mortar joint. The adhesive material M may be made in various colors, as may also the facing slabs. Sand or other granular material of matching color may be applied to the adhesive before it sets to simulate a cement mortar joint. The panel **10** is similarly constructed. The sand S does not adhere to the slabs.

The groove **16** in the lower edge **18** of the panel **8** is best shown in FIGS. **5** and **6**, and comprises a bottom wall **24** and side walls **26** and **28**, terminating at outer and inner lands **30** and **32**, respectively. The outer side wall **26** is of greater vertical height than the inner side wall **28**, so that when caulking material C in excess of that required to fill the groove **16** is placed in the groove, and the confronting edges of the sheets are pressed toward each other, the caulking material will more readily flow inwardly and a greater thickness of the caulking material C will be formed at the inner edge of the panels to assure a leakproof seal. The groove **20** is best shown in FIG. **7** and has a bottom wall **34** and side walls **36** and **38** terminating at outer and inner lands **40** and **42**. The outer side wall **36** is of greater vertical height than the inner side wall **38**. The panel **8** has a plain upper edge **44** and a plain left end edge **46**.

By way of example, and not limitation, the outer groove side walls **26** and **36** may be one quarter inch in height and the inner side walls **28** and **38** may be 3/16 inches in height, so that when caulking material C is pressed against the plain upper edge **44** of the adjacent panel, the excess of caulking material that flows toward the inner side of the panel will be at least 1/16 of an inch thicker than the caulking material that is displaced toward the outer side of the panel. The panel **10** is grooved in the same manner as the panel **8**, that is, a groove **16'** formed in its lower or longitudinal edge, and a groove **20'** is formed in its right side edge, with the two remaining top and left end edges **44'** and **46'** being plain.

As is best shown in FIG. **2**, the panel **8** has eight rows or courses, of ceramically fired clay or even brick or other facing slabs. Alternate courses are numbered **48** and **50** and comprise slabs of brick clay or other facing material **52** and **54**, respectively. These slabs may be made of any desired thickness, but are preferably about ⅜ of an inch thick. The length and height of the slabs preferably correspond to that of conventional size brick, although the dimensions of the slabs can be varied, as desired. The slabs are spaced apart ½ inch or other desired distance, to simulate conventional mortar joints.

The slabs **54** in the lowermost course **50** may extend about ¼ of an inch or more below the lower edge **18**; whereas, the slabs in the uppermost course **48** are spaced from the upper edge **44** of the panel a distance equal to the width of the simulated mortar joint between the courses plus the distance that the slabs **54** in the courses **50** project beyond the edge **18**. With the slabs arranged as described, it will be apparent that the joint H between the lower edge **18** of one panel and the upper edge **44** of a panel disposed therebelow will be protected against the elements by the overlapping of the slabs **54** onto the upper portion of the panel therebelow (See FIG. **6**). Accordingly, only those portions of the horizontal joint H lying between adjacent slabs is exposed. These portions are intended to be very narrow to provide an inconspicuous joint, which is facilitated by flow of most of the caulking C toward the inner side of the panels.

It will be noted that the slabs **52** in the courses **48** are arranged so that the end slabs **52*a*** are closer to the left edge **46** of the panel **8** than are the end slabs **52*b*** relative to the right edge **22** of the panel. The opposite is true of the slabs **54** in the courses **50**, that is, the end slabs **54*a*** are further from the left side edge **46**, than the end slabs **54*b*** are from the right side edge **22**. In other words, the slabs in adjacent courses **48** and **50** are staggered relatively to each other.

The arrangement of the slabs on the panel **10** is the same as that on the panel **8**, except that an additional slab **52*c*** is added to the right end of each course **48**. These slabs extend beyond the right side edge **22** a distance approximately equal to about one-third the length of a slab, or the distance between the left edge **46** of the panel and the end slabs **52*a***, minus the width of the simulated mortar joint between adjacent slabs, that is, about ½ inch. On the other hand, the slabs **54*b*** are set back from the edge **22'** a distance equal to about two-thirds the length of a slab, plus the width of a mortar joint. As a result, when the panels **8** and **10** are mounted upon the studs **4**, as shown in FIG. **1**, the slabs **52*c*** will partially overlap the panel **8** to present the appearance of an uninterrupted course of slabs. Thus, the courses **48** on the two panels **8** and **10** will appear to be continuous upon installation of the panels. While an overlap of one-third the length of a slab **52*c*** has been indicated, this distance can be varied within reasonable limits.

In contrast, a blank space B is left in the course **50** between the left end slab **54*a*** of the panel **8** and the right end slab **54*b*** of panel **10**. The blank spaces B are formed jointly by the panels **8** and **10** and each space has an overall length equal to the length of a slab, plus twice the width of the simulated mortar joint. A filler slab **56** is positioned in each of the blank spaces B to fill the same and to complete the courses **50**. This is done by applying the adhesive or matrix to one side of the filler slabs **56** and then pressing the same in place across the joint between the adjacent ends of the panels **8** and **10**. The dot-and-dash lines extending from the slabs **56** in FIG. **1**, indicate the position that the slabs **56** ultimately occupy. The filler slabs **56** are thinner than the slabs **52** and **54** to compensate for the thickness of the matrix used to adhere the same to the panel. For example, the slabs **56** may be ¼ inch thick.

FIG. **4** is a greatly enlarged cross-sectional view taken through a horizontal joint H between the top edge **44** of one panel and the bottom edge **18** of an-

other panel. This view particularly shows the manner in which a body of matrix material M' is applied in the regions between adjacent slabs **54** to seal and conceal the joint and caulking C. As is here shown, the caulking material C does not extend all the way to the outer face of the panels. The adhesive body M' thus extends partly into the space between the panels and fills the gap between the adhesive material M on the outer face of the panels, and is smoothed flush therewith and "sanded." Since the adhesive M' added to seal the joint H is the same as the material M applied to the backing sheets **9** to bond the slabs thereto, they blend together so that the joint H is concealed and is not noticeable.

FIG. **3** illustrates the joints formed by the corners of four adjacent panels. It will be noted that the slabs **52***c* overlap the vertical joint V between the adjacent panels **8** and **10**, and that the slabs **54** in the bottom course **50** overlap the horizontal joint H between panels **8–8** and **10–10** shown disposed one above the other. The exposed portions of the vertical joint V are concealed and sealed by filling the same with the adhesive material so that the surface is flush with the previously applied adhesive material M. FIG. **4** illustrates the adhesive material M' as applied to a horizontal joint H. It will be understood that the vertical joint V is sealed in the same manner. Hence, the surfaces at the joints have a homogeneous appearance rendering the initial joints unnoticeable.

FIG. **6** shows matrix material M'' applied to the indentations formed by countersinking the nails **12**. The matrix material covers, seals and conceals the nail heads. Fine sand S is applied to such matrix so that the simulated mortar joint is free from interruptions or blemishes.

Referring to FIGS. **1** and **8**, the panels **8** and **10** are arranged at the corner of the building structure so that the side edge **22** of the panel **8** is at the inner side of the panel **10** adjacent its side edge **46'**. Caulking material C will have been disposed in the groove **20** to form a seal with the inner face of the panel **10**. The side edge **46'** is preferably coated with matrix at the time of installation to seal said edge. Thereafter, the spaces in the panels **8** and **10** are filled by L-shaped filler pieces **58** having one long leg **60** and a short leg **62**. The L-shaped filler pieces **58** are mounted with the long leg **60** adjacent the end slabs **52***b* of the courses **48**, and the short leg **62** is positioned to fill the space on the panel **10** between the slab **52***a* and the left end **46'** of the panel.

It will be understood that the L-shaped pieces **58** are coated with adhesive on the inner side thereof before they are mounted in place. It will also be understood that the L-shaped pieces **58** are mounted at the corner of the structure between the slabs **54***b* and the slabs **54***a* to complete the courses **50**. The dot-and-dash lines extending from the L-shaped pieces **58** to the panels **8** and **10** in FIG. **1** indicate the ultimate position that these pieces will occupy to complete the facing at the corner of the building.

FIGS. **9** to **11** illustrate a further and preferred embodiment of the invention, wherein a groove **16***a*, similar to the groove **16** is formed in the upper edge **44***a* of a panel **8***a*, instead of in its lower edge **18***a*. As is shown in FIG. **10**, the lower edge **18***a* is plain. Either the right or the left side edge of the panels **8***a* may be provided with a groove similar to the groove **20**. FIGS. **8** and **11** illustrate a groove **20***a* formed in the right edge **22***a* of the panel **8***a*, but it will be understood that the groove **20***a* could be formed in the left edge **46***a*, such edge being presently illustrated as plain.

The arrangement of the facing slabs on panel **8***a* is also different from that on the panels **8** and **10**, the design of the courses of slabs on the panel **8***a* being such that the use of filler slabs to be put in place after the panels have been applied to a building structure is eliminated. With specific reference to FIG. **11**, the panel **8***a* has alternate courses of slabs **64** and **66**, a total of eight courses of slabs being shown. The course **64** comprises slabs **68** arranged so that the slabs **68***a* at the right side edge **22***a* project slightly beyond the edge, say about ½ inch. The slab **68***b* at the left end of the course is set back from the left edge **46***a*, a distance of about **1** inch, so that when a similar panel is positioned in abutting relation therewith, a space of ½ inch equal to the width of a mortar joint will be present between the slabs **68***a* and **68***b*.

The courses **66** consist of slabs **70** arranged so that an end slab **70***a* at the right end of the panel **8***a* projects slightly less than half the length of a slab beyond the edge **22***a*, whereby when a similar panel is positioned adjacent the left end **46***a*, it will fill the space between an end slab **70***b* at the left end of the course **66**, except for a space equal to the width of a mortar joint. It will be understood, of course, that adhesive material will be applied to the end slabs **68***a* and **70***a* before the panel **8***a* is positioned in abutting relation with the left end of a similar panel, so that the slabs **68***a* and **70***a* will be adhered to the adjacent panel **8***a*, FIG. **9**. It will likewise be apparent that since all the slabs **68***a* and **70***a* at the right end of the panel **8***a* extend beyond the edge **22***a* of the panel, the vertical joint V between the panels will be substantially completely covered by the facing slabs, except at the simulated mortar joint between the course of slabs. Caulking material C will have been placed in the groove **20***a* in the same manner as in the groove **20**, so that it will be displaced toward both the front and rear faces of the panel **8***a*. The caulking material at the simulated mortar joint will be covered by adhesive material to seal the same and sand S applied to the adhesive, as previously explained, so that all areas between the slabs will have the same appearance.

FIG. **12** illustrates a further embodiment of the invention in the form of a panel **10***a*, which is similar to the panel **10**, except that it has a caulking groove **16***b* in its top edge **44***b* and a caulking groove **20***b* in its right edge **22***a*. In the interest of brevity, the courses and slabs have been identified by the same reference numerals applied to corresponding parts of the panel **10**. One of the important advantages of the panels **8***a* and **10***a* shown in FIGS. **9** to **12**, wherein the caulking grooves **16***a* and **16***b*, respectively, are formed in the upper edge of the panels, is that the panels can be mounted upon a building structure, and the caulking material applied to the grooves after the panels have been secured in place. This greatly simplifies and speeds up installation.

The backing sheets **9** for the panels may be made in any size desired, but in the interest of ease in handling and rapid installation, the panels are made 8 ft. in length and 21½ inches in height, although it is apparent that the panels may be made 48 inches in length or any multiple of the modular distance between studs. The panels are designed to be nailed to conventional 2 by 4 wooden studs on **16** inch or **24** inch centers. If desired, the bonding material M may be colored to match

or contrast with the shade of the brick slabs or other facing material. In all instances, the finished wall has the attractive appearance of high grade, hand-laid masonry work, but can be done in less time and at substantially lower cost.

It will be understood that variations may be made in the design and arrangement of the facing slabs on the backing sheets, and that the size of the panels and the number of courses of slabs applied thereto, can be varied to suit requirements without departing from the principles of the invention or the scope of the annexed claims.

We claim:

1. In a building structure, a first rectangular panel having longitudinal edges, and side edges; a second rectangular panel having longitudinal edges, and side edges, said panels being positioned with the longitudinal edge of one panel above and confronting the longitudinal edge of the other panel, one of said confronting edges being plain and the other having a centrally located groove extending throughout the length thereof, and lands on opposite sides of said groove, said groove having a bottom wall and opposed side walls, one of said side walls being of a greater height than the other; a coating of water impermeable adhesive on one side of each of said panels; a plurality of courses of slab material embedded in said adhesive, said slabs being spaced apart to simulate a mortar joint therebetween, the groove side wall of greater height being nearest to said one side of said panels having said slab material thereon; and caulking material filling said groove and extending between said lands and the plain confronting edge of said other panel and spacing the panels apart a distance equal to said simulated mortar joint.

2. A building structure as defined in claim 1, in which the confronting longitudinal edge of the one panel contains the groove, and the confronting longitudinal edge of the other panel is plain.

3. A building structure as defined in claim 1, in which the confronting longitudinal edge of the one panel is plain and the confronting edge of the other panel has the groove.

4. A building structure as defined in claim 1, wherein one of the side edges of the first and second panels each has a centrally located groove extending throughout its length and wherein each groove has a bottom wall and opposed side walls, one of said side walls being of greater height than the other, the groove side wall of greater height being nearest to the one side of the panels having the slab material thereon.

5. A building structure as defined in claim 1, in which the lowermost course of slabs on the first panel projects beyond the lower edges of said first panel and onto the upper portion of the second panel.

6. A building structure as defined in claim 5, wherein the exposed adhesive material simulating the mortar joints is coated with fine sand, and wherein adhesive material is added to the longitudinal joint between the first and second panels at the spaces between adjacent slabs to conceal the joint, and wherein the added adhesive is coated with fine sand.

7. A building panel, comprising: a generally rectangular backing sheet of high density, asphalt-impregnated material or other suitable backing having longitudinal upper and lower edges, and side edges; a coating of water impermeable adhesive on one side of said sheet; and several courses of slab material embedded in said adhesive, said slabs being of substantially uniform length and width and being substantially equally spaced apart to simulate mortar joints therebetween, one of said longitudinal edges and one of said side edges of said sheet each having a centrally located caulking groove extending throughout the length thereof, said grooves having a bottom wall and opposed side walls, one of said side walls of each groove being of greater height than the other, said sidewall of greater height being nearest said one side of said sheet having said slab material thereon.

8. A building panel as defined in claim 7, in which the adhesive at the simulated mortar joints is coated with sand to present the appearance of cement mortar.

9. A building panel as defined in claim 7, in which the grooves are formed in the upper edge and one side edge of the panel and the lower edge and the other side edge of the panel are plain.

10. A building panel as defined in claim 7, in which the grooves are formed in the lower edge and one side edge of the panel and the upper edge and the other side edge of the panel are plain.

11. A building panel as defined in claim 7, in which the courses contain the same number of slabs, and wherein the end slab in alternate courses is closer to one side edge of the backing sheet than the corresponding end slab in the intermediate courses.

12. A building panel as defined in claim 11, wherein the distance between the end slab of said alternate courses from the one side edge of the backing sheet is slightly less than half the length of a slab.

13. A building panel as defined in claim 7, in which each course of slabs is spaced from the side edges of the backing sheet and wherein the end slabs of adjacent courses are spaced different distances from the respective side edges of the backing sheet.

14. A building panel as defined in claim 7, wherein the spacing distance of the end slabs in the courses from one side edge of the backing sheet is equal to about one-third the length of the slab and the spacing distance at the opposite end of the backing sheet is equal to about two-thirds the length of a slab.

15. A building panel as defined in claim 7, in which the end slabs of alternate courses project beyond one side edge of the backing sheet, and in which the slabs in the intermediate courses are spaced inwardly from both side edges of the backing sheet.

16. A building panel as defined in claim 7, in which the slabs in the lowermost course adjacent to the lower edge of the sheet project beyond said lower edge, and wherein the upper course of slabs is spaced from the upper edge of the sheet a distance equal to the projecting portion of the lowermost course of slabs, plus the width of the mortar joint between the courses of slabs, whereby when the panel is mounted in place above a similar panel, the projecting slabs will overlap the upper portion of said similar panel.

17. A building panel as defined in claim 7, in which the end slabs in all of the courses project beyond one side edge of the backing sheet.

18. A building panel as defined in claim 17, in which the end slabs in alternate courses project beyond one side edge of the backing sheet a distance slightly less than one-half the length of a slab.

19. A building panel as defined in claim 12, in combination with a similar panel, and arranged in end-to-end relation therewith, and wherein filler slabs are mounted in the spaces in the alternate courses, straddling the joint between the ends of the panels and forming continuous courses of slabs.

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