June 10, 1941. L. S. ODELL 2,245,047

BRICK SIMULATING SIDING PANEL

Filed June 15, 1939 2 Sheets-Sheet 1

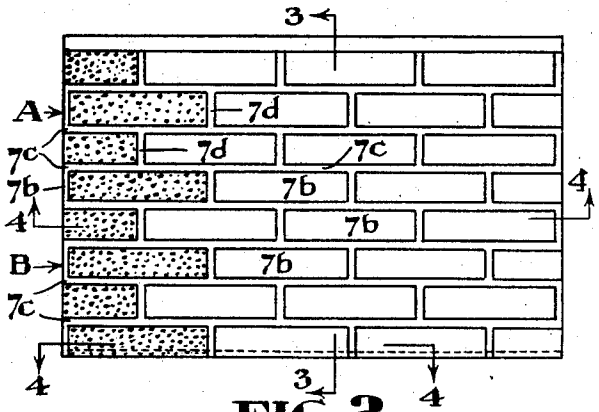


FIG. 2

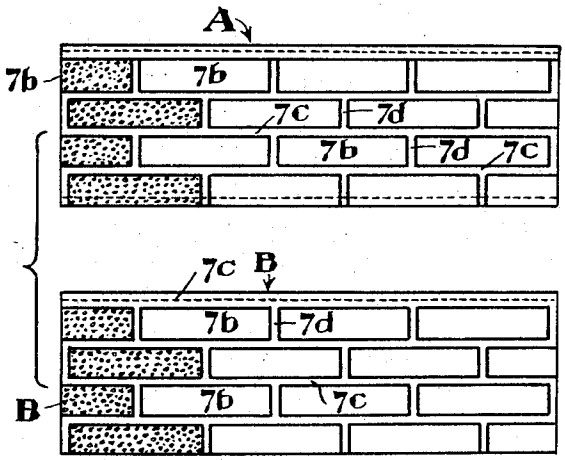


FIG. 1

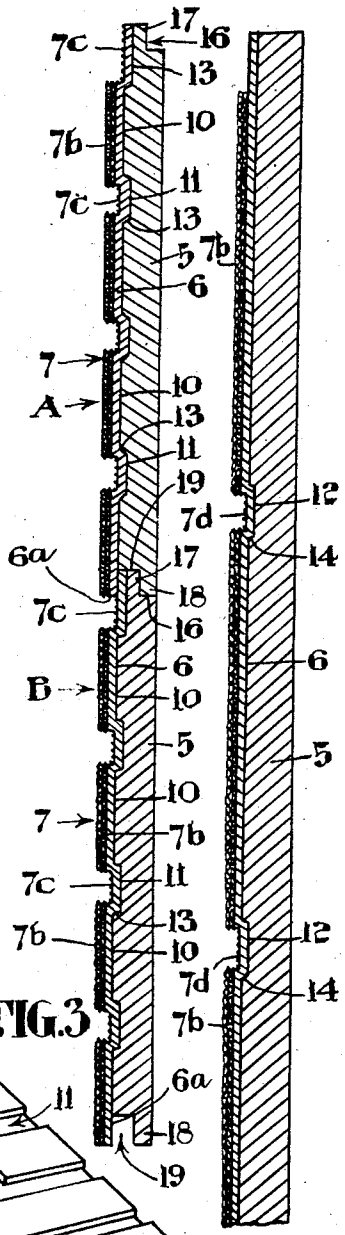


FIG. 3

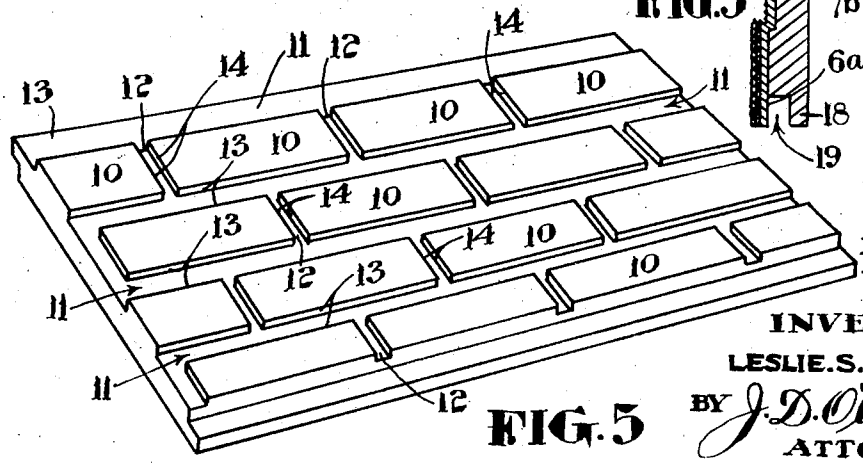


FIG. 5

FIG. 4

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BRICK SIMULATING SIDING PANEL

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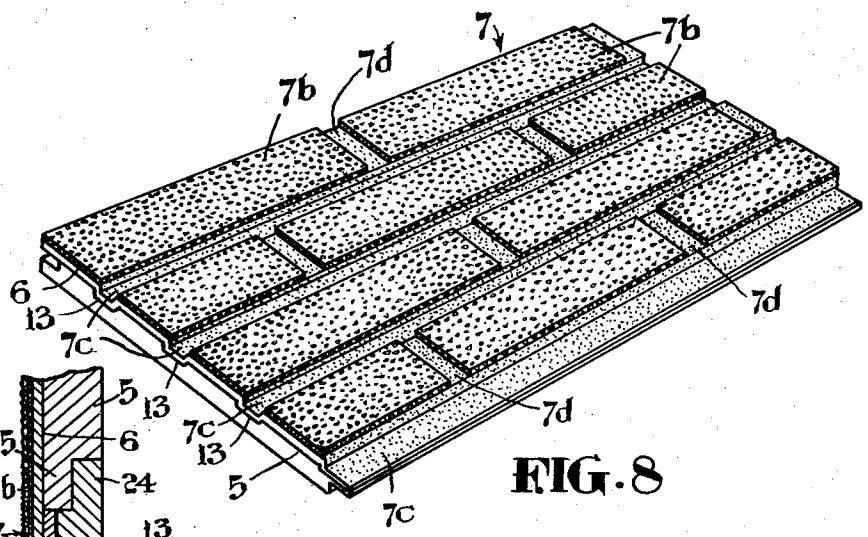


FIG. 8

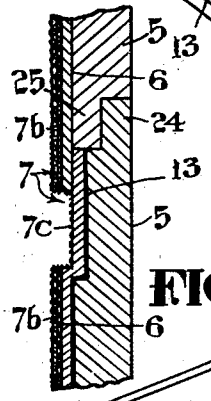


FIG. 10

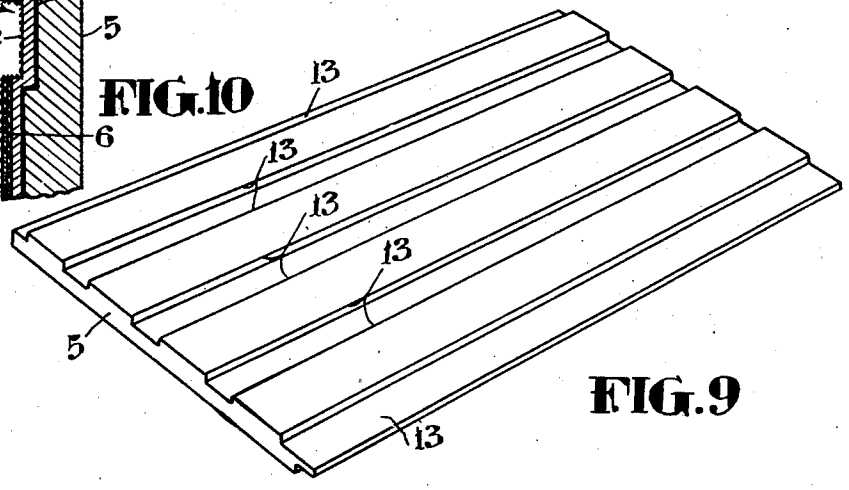


FIG. 9

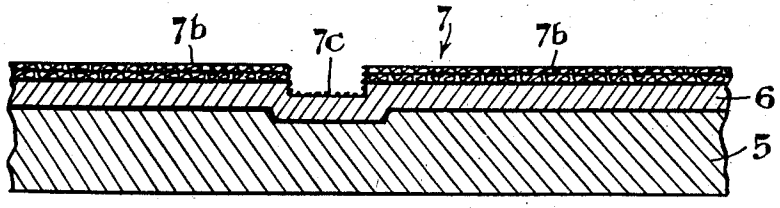


FIG. 6

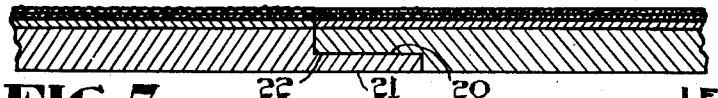


FIG. 7

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Patented June 10, 1941 2,245,047

UNITED STATES PATENT OFFICE

2,245,047

BRICK SIMULATING SIDING PANEL

Leslie S. Odell, Montreal, Quebec, Canada

Application June 15, 1939, Serial No. 279,338

10 Claims. (Cl. 20—5)

This invention relates to insulating siding panels of the brick simulating type disclosed in my prior Patents 2,021,577 and 2,021,578, granted Nov. 19, 1935.

The above mentioned patents disclose certain types of brick simulating siding made in the following manner: A wide sheet of felt is impregnated with asphalt or similar waterproofing composition in accordance with the practice usually followed in the manufacture of felt roofing shingles. One side of the impregnated felt is then completely covered by a foundation layer of granular particles which are partly embedded in asphalt to form a substantially flat granular surface. Spaced rectangular patches of asphalt are then applied to said granular surface in imitation of parallel courses of brick. Following this the granular side of the felt is covered by a layer of brick colored granular particles to which pressure is applied so that the brick colored particles deposited on the previously applied asphalt patches are partially embedded therein to provide the brick simulating elements of the pattern. The brick colored particles deposited on the portions of the foundation layer lying between the asphalt patches eventually fall away or are removed so that such portions of the foundation layer are exposed between the brick simulating areas in the form of narrow strips representing conventional horizontal and vertical mortar joints. The wide strip of felt is then cut longitudinally and transversely into smaller sections of suitable length and width, each section being wide enough to include several parallel courses of the brick simulating areas. Each smaller section of the felt is then attached to a relatively thick and stiff fibrous base by means of an interposed layer or film of asphalt or similar cementing substance. In order to assure proper bonding of the felt sheet to the associated base this assembly is subjected to pressure in a press having flat upper and lower platens.

The present invention provides improvements in the foregoing method of manufacture which result in the production of brick simulating siding panels in which the mortar and brick simulating areas of the granular surface are more clearly and sharply defined to provide a better imitation of a brick wall. The appearance of brick simulating siding panels produced in accordance with the present invention is also greatly enhanced by reason of the fact that the brick colored areas are brought into greater relief than is possible with the method of manufacture disclosed in my prior patents. Another advantage of the improved method of manufacture provided in accordance with the present invention is that it tends to prevent undesirable flowing or displacement of the asphalt layer by which the granular surfaced felt sheet is united with the fibrous base during the previously mentioned pressing operation.

During the pressing operation described in my prior patents the pressure of the lower flat platen is exerted only against the brick colored areas of the granular surface pattern since these areas project above the intervening mortar colored areas. This results in an undesirable flowing or displacement of the asphalt by which the granular felt sheet is cemented to the fibrous base. What actually happens is that some of the asphalt beneath the portions of the covering sheet underlying the brick simulating areas is displaced toward the portions of the felt underlying the adjacent mortar joint simulating areas. The resulting bulging of the felt at the exposed mortar joint simulating areas of the surface pattern tends to impair, to some extent, the appearance and other qualities of the finished product. Another objection arising from the fact that the flat lower platen acts only against the raised brick colored areas of the granular surface pattern is that the granular particles of these areas are embedded more deeply in the underlying asphalt. This diminishes the extent to which the brick simulating areas project above the mortar joint simulating areas and detracts from the appearance of the finished product. The pressure of the lower platen also tends to produce some undesirable lateral spreading of the granular particles comprising the brick colored areas to which said pressure is applied.

According to one feature of the present invention the pressure exerted against the granular surface of the covering sheet during the pressing operation is applied simultaneously to both the brick and mortar colored areas in such manner as to effectively prevent flow or displacement of asphalt from beneath the portions of the felt covering strip carrying the brick colored areas toward adjacent portions of the felt covering sheet carrying the mortar joint simulating areas. Simultaneous application of pressure to both the brick and mortar colored areas of the granular surface pattern also ensures that the original projection of the brick colored areas above the mortar colored areas of the granular surface pattern will not be diminished by the pressing operation. As a matter of fact, according to the preferred embodiment of the invention the simultaneous ap-

plication of pressure to both the brick colored and mortar colored areas of the granular surface pattern is effected in such manner as to actually increase the extent to which the brick colored areas are elevated above the mortar colored areas.

Another feature of the invention resides in the provision of a brick simulating siding panel which is of improved appearance in that the edges of the brick colored areas are evenly and sharply defined as compared with the somewhat ragged edges characteristic of similar siding produced in accordance with my prior patents. This result is achieved by subjecting the panel assembly, comprising the base and the granular surfaced felt covering sheet, to pressure between a pair of platens one of which is provided with flat faces adapted to bear against the brick colored granular areas of the felt sheet and with rib-like projections adapted to fit between said brick colored areas and to bear against the intervening mortar colored areas of the granular surface, said ribs serving to trim and even off the corners and edges of the brick colored areas as they are forced toward the intervening mortar colored areas against which they bear during the final stage of the pressing operation.

Another feature of the invention resides in providing the fibrous base of the panel with preformed grooves into which all or certain of those portions of the felt which lie beneath the mortar joint simulating areas of the granular surface pattern are depressed by the ribbed platen during the aforesaid pressing operation so that all the brick colored areas are thereby brought into greater relief than is possible with the method described in my prior patents.

Proceeding now to a more detailed description reference will be had to the accompanying drawings, wherein—

Fig. 1 is a view showing two siding panels produced in accordance with this invention as they appear in disassembled relation.

Fig. 2 is a view illustrating the manner in which said siding panels are assembled in edge to edge relation when applied to a wall or other surface to be covered.

Fig. 3 is a transverse sectional view along the line 3—3 of Fig. 2.

Fig. 4 is a transverse sectional view along the line 4—4 of Fig. 2.

Fig. 5 is a perspective view of the fibrous base appearing in the preceding views.

Fig. 6 is an enlarged detail view showing more clearly the granular surface of the felt covering sheet and the manner in which portions of the sheet underlying the mortar colored areas are depressed into the preformed grooves of the base.

Fig. 7 is a view showing the manner in which siding panels contained in the same row are assembled to provide waterproof joints at their vertical meeting edges.

Fig. 8 is a perspective view of a modified type of insulating panel.

Fig. 9 is a perspective view showing the fibrous base member of the panel assembly appearing in Fig. 8.

Fig. 10 is a detail view showing a modification of the horizontal joints appearing in Fig. 3.

In Figs. 1, 2 and 3 I have shown two siding panels designated A and B. Each panel comprises a base 5, a covering sheet 6 adhesively united to the outer or weather side of the base and a weather resistant surface 7 composed of granular particles embedded in asphalt at the outer side of said sheet.

The base 5 of each panel may be made of any suitable material. In its preferred embodiment, it comprises a body of compressed paper, wood pulp, asbestos or other fibrous material commonly employed in the manufacture of products known to the trade as wall board or insulating board. The fibrous mass of the base may be of a homogeneous character or may consist of a plurality of separate layers bonded together by asphalt or any suitable cementing agent usually employed in the manufacture of laminated fibre board. The fibrous material, or the different layers of fibrous material, may also be rendered water resistant by treatment with any suitable waterproofing agents. As shown more particularly in Figs. 3, 4 and 5, the weather side of the base is provided with a preformed brick wall design consisting of the raised brick simulating areas 10 and the lower longitudinally and transversely extending mortar joint simulating areas 11 and 12. This result may be achieved in several ways. In the construction shown in Fig. 5, the weather side of the base is provided (by either a routing or molding operation) with longitudinally extending grooves or recesses 13 and intersecting transversely extending grooves or recesses 14. In this case the mortar joint simulating areas 11 and 12 are formed, respectively, by the bottom walls of the grooves or recesses 13 and 14. The same effect may also be obtained by initially making the base with a flat weather side and then applying thereto a plurality of separately formed slabs to provide the spaced brick simulating areas 10.

The covering sheet 6 of each panel is made of roofing felt or other porous fibrous material saturated or impregnated with a waterproofing compound such as tar, pitch or asphalt. The granular surface 7 is applied to the outer surface of the sheet in two layers. The bottom or foundation layer is composed of mortar colored granules and is continuous over the entire outer side of the sheet. A second discontinuous layer of brick colored granules is then superimposed on the foundation layer to provide a plurality of courses of brick simulating areas 7b. The brick simulating areas 7b are spaced apart so that narrow portions of the foundation layer are exposed therebetween to provide the horizontal and vertical mortar joint simulating areas respectively indicated at 7c and 7d. This method of applying the component layers of the granular surface 7 is more fully and completely described in my prior U. S. Patent 2,021,577, granted Nov. 19, 1935.

The component parts of each panel are preferably assembled in the following manner: The granular surfaced covering sheet 6 is laid on the weather side of the base 5 so that the brick colored areas 7b of the granular surface 7 lie directly above the raised brick simulating areas 10 of the base. If the covering sheet is properly applied the horizontal and vertical mortar simulating areas 7c and 7d of the granular surface 7 will lie directly above and in registry with the horizontal and vertical base grooves 13 and 14. This assembly is then subjected to consolidating pressure between suitable upper and lower press platens, the lower platen being provided with flat surfaces adapted to bear against the granular brick simulating areas 7a and with rib-like projections adapted to fit between said brick simulating areas 7b and to bear against the horizontal and vertical mortar joint simulating areas 7c and 7d. As the ribs of the upper or stencil platen are forced into engagement with said areas 7c

and 7d they serve to trim and even off the defining edges of the brick simulating areas 7d. During the final stage of the pressing operation the portions of the felt covering sheet underlying the joint simulating areas 7c and 7d are forced into the base grooves or recesses 13 and 14 as shown in Figs. 3 and 4.

In order to provide watertight joints between the horizontal meeting edges of panels contained in adjacent courses the upper and lower edges of each panel are constructed as shown in Fig. 3. As here shown the uppermost recess 13 of base 5 is approximately twice the width of the remaining grooves or recesses 13. Similarly, the width of the mortar joint simulating area 7c which is depressed into said uppermost groove 14 is approximately twice the width of the remaining joint simulating areas 7c of the felt covering 6. At its inner side the upper edges of base 5 is shaped or cut away to provide a recess 16. In effect, the opposed recesses 14 and 16 provide, at the upper edge of the base, a tongue 17 having its outer surface completely covered by the uppermost mortar joint simulating area 7c of the felt covering. It will be noted that the length of the tongue 17 is equal to approximately one-half the width of recess 14. Immediately adjacent its lower edge the outer surface of the base is shaped or cut to provide a tongue portion 18 projecting below the main body of the base to form the inner wall of a tongue receiving groove 19, the outer wall of which is formed by the opposing lower edge portion 6a of the felt covering sheet 6. With the panels A and B assembled as shown in Fig. 3 it will be noted that tongue 17 of panel B is fitted in groove 19 of panel A so that the felt covering of said tongue is overlapped by the lower portion 6a of the felt covering of panel A. As clearly shown in Fig. 3, the lower edge of the felt covering of each panel terminates in the same horizontal plane as the tongue 18 so that only a portion of the relatively wide mortar joint simulating area 7c at the upper edge of each panel is overlapped by the covering sheet of the next upper panel.

In Fig. 7, I have shown one method of constructing the ends of each panel to form waterproof vertical joints with the meeting ends of adjacent panels in the same row. As here shown one end of the base of each panel is undercut at the side remote from the felt covering 6 to provide a recess 20. A tongue extension 21 projecting from the base of the next panel in the same row is fitted in said recess to provide the ship lap joint generally indicated at 22.

Figs. 8 and 9 show a slight modification in which the base member 5 is provided with longitudinally extending grooves 13 but no vertical or transverse grooves 14. In this instance those portions of the felt covering sheet which underlie the horizontal mortar joint simulating areas 7c are depressed into the base grooves 13 while those portions of the covering sheet which underlie the vertical mortar joint simulating areas 7d are simply cemented to the raised portions of the base lying between the grooves 13. The lower platen employed for pressing together the component parts of the assembly appearing in Fig. 8 must, of course, be designed so that the ribs which bear against the mortar simulating areas 7c during the pressing operation projecting a greater distance below the flat face of the platen than the ribs which bear against the transversely extending mortar joint simulating areas 7d. It may be noted in connection with Figs. 8 and 9 that all of the brick simulating areas 7b are brought into greater relief by depressing the felt covering sheet into the grooves 13 of the fibrous base member.

The horizontal joint construction shown in Fig. 10 may, if desired, be substituted for the joint construction shown in Fig. 3. In this case the upper edge of the base 5 of each panel is shaped to provide a tongue portion 24 which is lapped beneath a similar tongue portion 25 provided at the lower edge of the next upper panel. It will also be noted that, in the construction shown in Fig. 10, the lower edge of the felt covering sheet of the upper panel is projected below the corresponding edge of the associated base and overlaps the upper edge of the felt covering sheet of the lower panel.

In the foregoing I have described what I now conceive to be the preferred embodiments of this invention. However, it will be understood that various modifications may be resorted to within the scope and spirit of the invention as defined by the appended claims.

Instead of using a covering sheet provided with a brick simulating pattern formed by contrastingly colored superposed layers of granular material I may employ a covering sheet having its weather side protected by a single layer of granular material which is substantially uniform in color. In this case the brick simulating effect may be obtained simply by depressing portions of the covering sheet into the preformed grooves in the base to represent the mortar joints, the brick elements being represented by the remaining portions of the covering sheet. By applying sufficient pressure to the depressed portions of the sheet the surface granules thereof may be almost completely embedded in the asphalt so that these portions of the sheet will have a darker appearance than the remaining or brick element simulating portions.

Having thus described my invention, what I claim is:

1. An insulating siding panel of the brick simulating type comprising a base member of substantial thickness and stiffness, a waterproof sheet adhesively secured to said base member, the outer side of said sheet bein provided with an ornamental surface pattern consisting of courses of brick-simulating areas with narrow mortar-joint-simulating areas exposed therebetween, portions of the sheet underlying mortar-joint-simulating areas of said surface pattern being depressed into preformed grooves in the base member so that all of the brick-simulating areas are thereby brought into greater relief than would otherwise be the case.

2. An insulating siding panel of the brick simulating type comprising a base member of substantial thickness and stiffness, a waterproof sheet adhesively secured to said base member, brick colored particles of granular material covering certain areas only of said sheet to represent a plurality of courses of spaced brick with narrow mortar-joint-simulating areas of contrasting color exposed therebetween, portions of the sheet underlying mortar-joint-simulating areas of the surface pattern being pressed into preformed grooves in the base so that all of the brick colored areas of said pattern are thereby brought into greater relief than would otherwise be the case.

3. An insulating siding panel of the brick simulating type comprising a base member of substantial thickness and stiffness, a covering sheet adhesively secured to said base member, the out-

er side of said sheet being provided with an ornamental surface pattern consisting of courses of brick-simulating areas with narrow mortar-joint-simulating areas exposed therebetween, portions of the sheet underlying mortar-joint-simulating areas of said surface being depressed into preformed grooves in the base member so that at least one margin of each brick-simulating area is thereby brought into greater relief than would otherwise be the case.

4. An insulating siding panel of the brick simulating type comprising a base member of substantial thickness and stiffness, a covering sheet adhesively secured to said base member, the outer side of said sheet being provided with an ornamental surface pattern consisting of courses of brick-simulating areas with narrow mortar-joint-simulating areas exposed therebetween, portions of the sheet underlying mortar-joint-simulating areas of said pattern being depressed into preformed grooves in the base member so that at least two marginal portions of each brick-simulating area are brought into greater relief than would otherwise be the case.

5. An insulating siding panel of the brick simulating type comprising a base member of substantial thickness and stiffness, a covering sheet adhesively secured to said base member, the outer side of said sheet being provided with an ornamental surface pattern consisting of courses of brick-simulating areas with narrow mortar-joint-simulating areas exposed therebetween, portions of the sheet underlying mortar-joint-simulating areas of said pattern being depressed into preformed grooves in the base member so that at least two opposite marginal portions of each brick-simulating area are thereby brought into greater relief than would otherwise be the case.

6. An insulating siding panel of the brick simulating type comprising a base member of substantial thickness and stiffness, a covering sheet adhesively secured to said base member, the outer side of said sheet being provided with an ornamental surface pattern consisting of courses of brick-simulating areas with narrow mortar-joint-simulating areas exposed therebetween, portions of the sheet underlying mortar-joint-simulating areas of said pattern being depressed into preformed grooves in the base member so that the opposite horizontally extending marginal portions of each brick colored area are thereby brought into greater relief than would otherwise be the case.

7. An insulating siding panel of the brick simulating type comprising a base member of substantial thickness and stiffness, a covering sheet adhesively secured to said base member, the outer side of said sheet being provided with an ornamental surface pattern consisting of courses of brick-simulating areas with narrow mortar-joint-simulating areas exposed therebetween, portions of the sheet underlying mortar-joint-simulating areas of said pattern being depressed into preformed grooves in the base member so that all the marginal portions of each brick-simulating area are thereby brought into greater relief than would otherwise be the case.

8. An insulating siding panel of the brick simulating type comprising a fibrous base member of substantial thickness and stiffness, a waterproof sheet adhesively secured to said base member by a relatively thin layer of asphalt, a foundation layer of granular material completely covering the outer side of said sheet, brick colored particles of granular material covering certain areas only of said layer to represent a plurality of courses of spaced brick with narrow mortar-joint-simulating areas of said layer exposed therebetween, portions of the sheet underlying all the exposed mortar joint-simulating areas of said layer being depressed into preformed grooves provided in the base.

9. An insulating siding panel of the brick simulating type comprising a fibrous base member of substantial thickness and stiffness, a waterproof sheet adhesively secured to said base member by a relatively thin layer of asphalt, a layer of mortar-colored granular particles completely covering the outer side of said sheet, brick colored particles of granular material covering certain areas only of said layer to represent a plurality of courses of spaced brick with narrow mortar-joint-simulating areas of contrasting color exposed therebetween, portions of the sheet underlying all of the horizontally extending mortar-joint-simulating areas being depressed into preformed grooves provided in the base.

10. An insulating siding panel of the brick simulating type comprising a base member of substantial thickness and stiffness, a waterproof sheet adhesively secured to said base member, the outer side of said sheet being provided with a weather resistant granular surface, narrow portions of said sheet being depressed into preformed grooves in the base member to represent the mortar joints of brickwork, the brick elements of which are represented by the remaining portions of the sheet.

LESLIE S. ODELL.

DISCLAIMER

2,245,047.—*Leslie S. Odell*, Montreal, Quebec, Canada. BRICK SIMULATING SIDING PANEL. Patent dated June 10, 1941. Disclaimer filed August 9, 1943, by the assignee, *Bird & Son, Inc.*

Hereby enters this disclaimer to claim 10 of said patent.

(*Official Gazette September 7, 1943*).