

ORNAMENTED WALL BOARD FOR OUTSIDE WEATHERPROOFING

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2 Sheets-Sheet 1

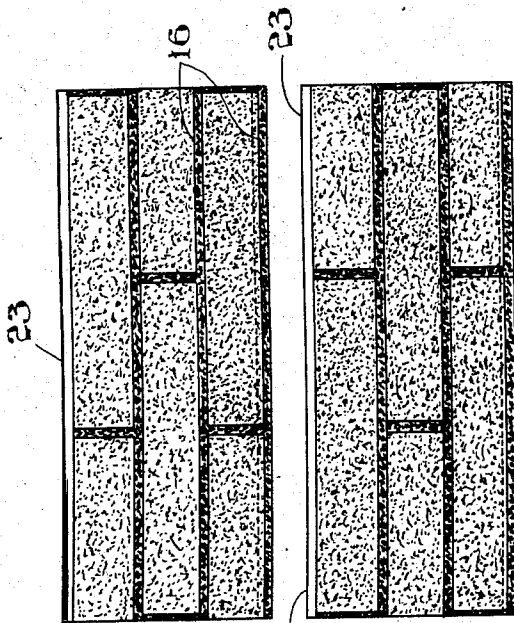


FIG. 1

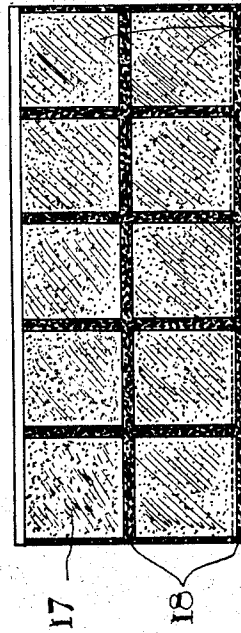


FIG. 4

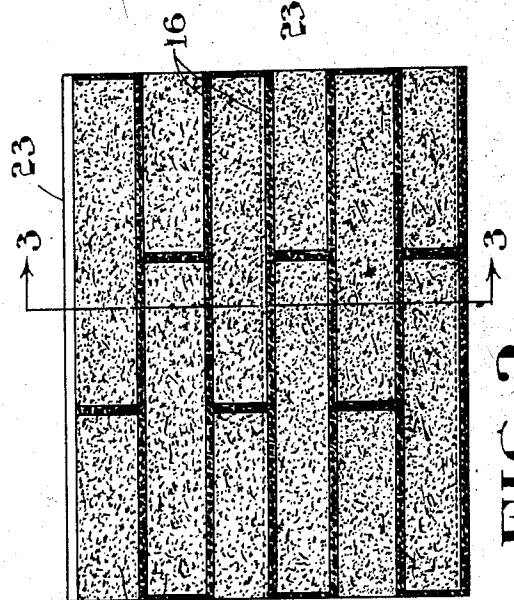


FIG. 2

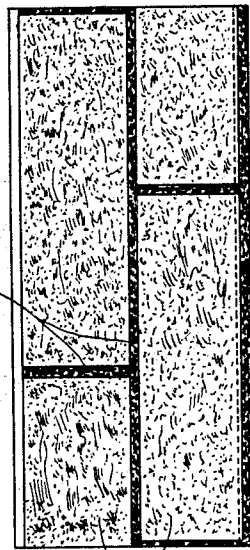


FIG. 5

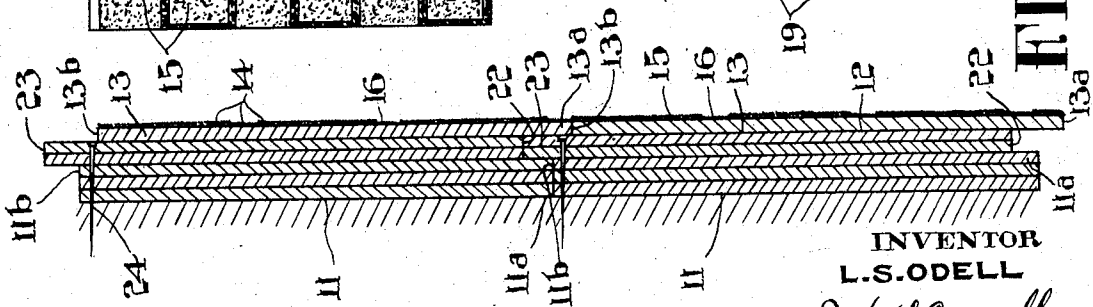


FIG. 3

INVENTOR  
 L.S. ODELL  
 BY *J. D. O'Connell*  
 ATTORNEY

Nov. 19, 1935.

L. S. ODELL

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2 Sheets-Sheet 2

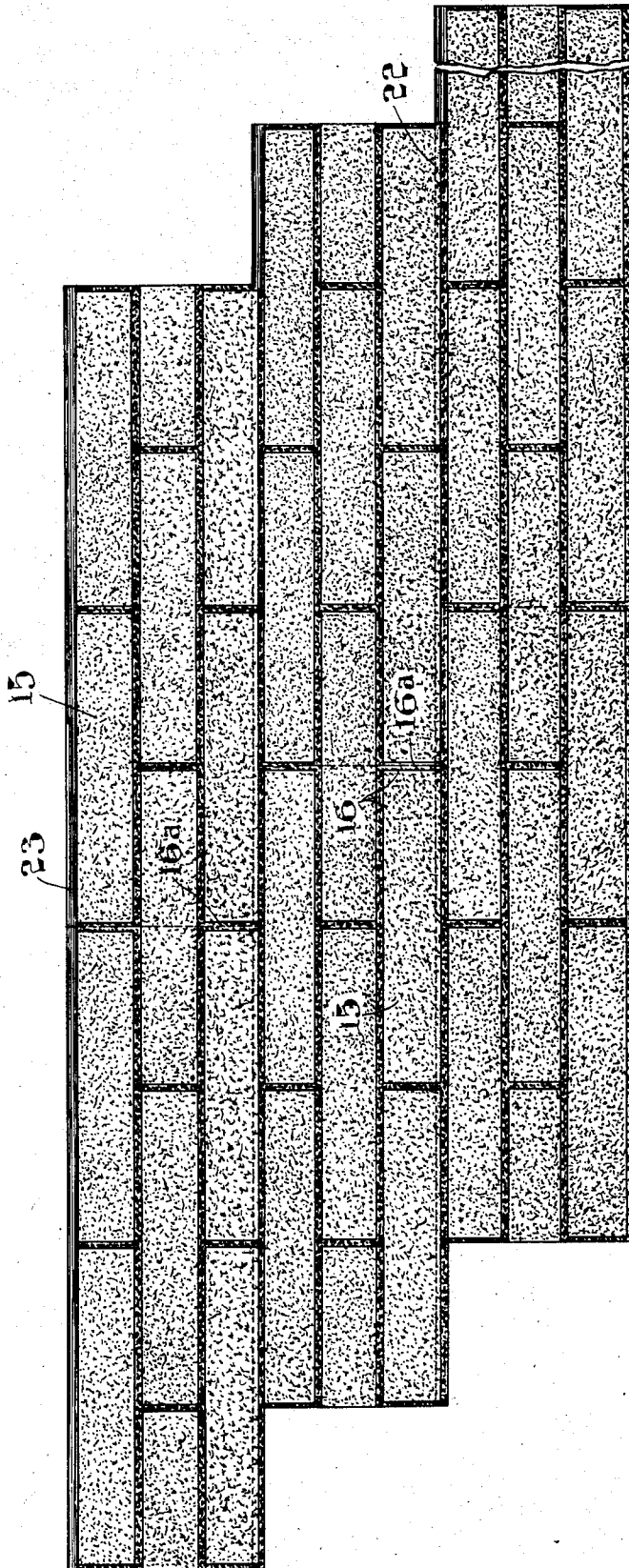


FIG. 6

INVENTOR  
L.S. ODELL

BY *J. L. Connell*  
ATTORNEY

# UNITED STATES PATENT OFFICE

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## ORNAMENTED WALL BOARD FOR OUTSIDE WEATHERPROOFING

Leslie S. Odell, Montreal, Quebec, Canada, assignor to Building Products Limited, Montreal, Quebec, Canada

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3 Claims. (Cl. 20—5)

This invention relates to the manufacture and use of paper or other fibrous wall board as an outside weatherproofing covering for the walls, roofs and other exposed surfaces of building structures. More particularly, the invention is concerned with eliminating certain undesirable characteristics which have heretofore retarded the adoption and sale of wall board for this particular purpose in spite of its economy of application and other advantages.

When used for outside weatherproofing work wall board is usually provided with a weatherproofing surface of plain colored granular material and is nailed in place in sections with the edges of adjacent sections butted together. One objection to the use of wall board in this relation is that the joints between the sections are extremely conspicuous and must be covered by wooden or other battens in order to conceal their unsightly appearance. Another objection is that the joints are deficient in weatherproofing qualities and the material will not remain in a perfectly flat condition on the nailing surface unless each section is nailed at both its upper and lower edges or is covered at these edges by wooden battens and both of these methods increase the cost of application and mar the appearance of the finished surface. For these and other reasons the quantity of wall board now sold for outside weatherproofing purposes is relatively small in comparison with the sale of competing coverings such as brick colored siding shingles, which are in much greater demand on account of their superior weatherproofing qualities and more pleasing appearance when applied to walls and similar surfaces.

The present invention aims to provide an ornamented wall board covering for outside weatherproofing purposes which compares favorably in appearance and weatherproofing qualities with the now widely used brick colored shingles and which has the following additional advantages: (1) The ornamental felt coverings of adjacent sections are joined together in edge to edge relation to complete the continuity of the surface pattern. This reduces the quantity of felt required to cover a given section as compared with the overlapping of adjacent felt section required in connection with the application of siding shingles. It also provides a better imitation of a brick, tile or stone surface since the contiguous sections of the pattern surface are contained in a common flat plane and produces a more realistic effect compared with the overlapping characteristic of siding shingles. (2) The interposi-

tion of a comparatively rigid wall board base between the nailing surface and the ornamental felt covering sections serves, in some manner, to eliminate the warping and relative displacement of the pattern sections which occurs, in the case of siding shingles, due to warping of the nailing surface to which the shingles are directly applied. This may possibly be attributed to the fact that warping of the nailing surface is reduced by the protective coverage afforded by the wall board but it is probably also due, in some measure, to the fact that the nails securing the wall board sections to the nailing surface do not pass through the felt coverings so that a condition is provided wherein the compressible nature of the nailed down base material takes care of movement of the fastening nails due to warping in such manner as to prevent any displacement or distortion of the felt coverings. In any event the mounting of the felt coverings on a wall board base prevents the bulging or disalignment of the pattern section which ordinarily occurs when felt sections carrying the pattern are nailed directly to the nailing surface. (3) Rapid assemblage of the ornamented wall board sections in their proper relation to complete the continuity of the granular surface pattern is facilitated by reason of the fact that the wall board edges of each applied section serve as definite stops or abutments facilitating proper placement of subsequently applied sections. (4) The thickness and comparative rigidity of the wall board base to which the granular pattern is applied enables the use of tongue and groove joints at the upper and lower edges of contiguous sections and permits all of said sections to be fastened down in a perfectly flat condition by means of a relatively small number of nails which are passed only through the upper edge of each section, the lower edge of each section being effectively held against displacement by its tongue and groove connection with the nailed down edge of the next lower section and being arranged to overlie and entirely conceal the fastening nails. (5) The number of sections of wall board and the amount of nailing required to cover a given area of wall surface is considerably reduced as compared with the number of pieces and amount of nailing required for covering the same surface area with siding shingles, this being due to the fact that the rigidity of the ornamented wall board material permits it to be conveniently handled and applied in large sections whereas, in the case of siding shingles, the flexible nature of the shingle strips is such that these strips cannot be con-

veniently handled except in small sizes and the amount of nailing required for securing the flexible strips in place is considerably greater than that required where wall board is applied. Consequently, the cost of handling, fitting into place and nailing the sections of wall board is considerably less than the similar cost incident to the use of siding shingles and this, together with other advantages in favor of wall board coverings, more than offsets the slight difference in the manufacturing cost of the two materials.

When the ornamented wall board sections are assembled in edge to edge relation on the surface to be covered the lines of the joints between the meeting edges of the sections are blended for at least a portion of their length with similarly extending lines of the granular surface pattern so that, at a relatively short distance from the covering, these joint lines are so confused with the lines of the pattern as to be substantially inconspicuous. This use of the granular surface pattern to obscure the joint lines of the sectional wall board covering constitutes a simple and effective method of eliminating the principal defect which has heretofore retarded the sale and adoption of wall board for outside weatherproofing purposes.

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

Fig. 1 is a view in front elevation of two complementary wall board sections constructed and ornamented in accordance with this invention, said sections being shown in disassembled relation.

Fig. 2 is a view similar to Fig. 1 but showing the complementary wall board sections in their assembled relation.

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

Figure 4 is a view in front elevation of a section of wall board having an ornamental surface pattern differing from that appearing in Figs. 1 to 3 inclusive.

Figure 5 is a view similar to Fig. 4 but showing a further modification of the ornamental surface pattern.

Figure 6 is a view similar to Fig. 2 but showing a greater number of sections in order to illustrate the relative arrangement of the vertical end edges of contiguous sections.

Each section of my improved covering material includes a comparatively stiff and rigid base 11 comprising a body of compressed paper, asbestos or other fibrous materials ordinarily 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 it may consist of a plurality of separate layers of paper or other fibrous material bonded together in face to face relation by means of any of the cementing agents usually employed in the wall board industry. The fibrous material, or the different layers of fibrous material, may also be rendered waterproof by treatment with any desirable waterproofing agents. When the base is complete it is provided on the weatherside with an adhesive layer 12 of asphalt or other waterproofing cementitious material of a bituminous nature. The prepared surface 12 is then covered by a sheet 13 made of felt or other porous material saturated or impregnated with a waterproofing compound such as tar, pitch or asphalt. Prior to its application to the base the outer surface of the impregnated

sheet 13 is completely covered with a weather resistant surface composed of ground stone, slate or other granular particles 14 embedded in asphalt. In the construction shown in Figs. 1 to 3 inclusive the weather resistant surface consists of differently colored granular particles applied in such a way as to present a plurality of rectangular brick colored areas 15 separated by intervening mortar colored areas 16 and provides a very effective imitation of a brick surface when the sections of the material are assembled to complete the continuity of the pattern. In the construction shown in Fig. 4 the differently colored granular particles are applied to present rectangular tile simulating areas 17 separated by mortar colored areas 18. In the construction shown in Fig. 5, the differently colored granular particles are applied to present cut stone simulating areas 19 of rectangular contour separated by intervening mortar colored areas 20.

When a plurality of sections of the covering material are assembled on the nailing surface in edge to edge relation, as shown in Fig. 6, the lines of the joints formed between meeting edges of the sections are blended for at least a portion of their length with similarly extending lines of the mortar colored portions of the granular surface pattern so that these joint lines are rendered substantially inconspicuous at a relatively short distance from the covering material. In the construction shown in Fig. 6 bisecting of certain brick colored areas by the joint lines formed between the vertical meeting edges of the covering sections is more or less unavoidable but it will be observed that these joint lines are lost for the greater portion of their length, in similarly extending mortar colored portions of the surface pattern and are not sufficiently conspicuous to mar the general appearance of the pattern. In the case of the joints formed between the horizontal meeting edges of adjacent covering sections it will be observed that the lines of these joints are blended throughout their length with similarly extending mortar colored portions of the granular surface pattern and do not bisect any of the brick colored areas.

As shown to advantage in Fig. 3, the lower edge of each section is provided with a groove 22 lying between the inner and outer surfaces of the section and adapted to receive a tongue 23 projecting upwardly from the upper edge of the next lower section. The groove 22 is formed by cutting away the outer lower edge portion of the base 11, the outer wall of the groove being formed by the projecting portion 13a of the felt strip 13 and the inner wall of the groove being formed by the projecting portion 11a of the base 11. The tongue 23 at the upper edge of each section is formed by cutting away the inner upper edge portion of the base 11 of each section to provide a recessed portion 11b adapted to receive the projecting portion 11a at the lower edge of the base of the next upper portion. The upper edge 13b of the felt strip 13 of each section is also cut away so that this edge of the strip is below the plane of the horizontal shoulder formed by the bottom of the recess 11b. The purpose of spacing the upper edge of the felt strip below the shoulder formed by the base of the recess 11b is to permit fastening nails to be driven through the intervening portion of the base as indicated at 24. It will also be noted that the nails 24 passing through the upper portion of each section are concealed by the overlapping felt projection 13a of the next upper section, this felt projection 13a being made

of sufficient length to engage with the upper edge 13b of the felt strip of the lower section so that the outer surface of each tongue 23 and the portion of the base through which the nails 24 are passed are effectively concealed. In this assembly it will also be noted that the lower edge of each section of the covering material is held in place without the use of nails since the base projection 11a is confined beneath the tongue 23 of the nailed down upper edge of the next lower section. The base portion of each section which is exposed beyond the edge 13b of the felt covering strip is preferably coated with asphalt or other waterproofing compound.

The improved covering material described herein may be conveniently produced in the following manner: A wide sheet of felt is impregnated with low melting point and then with high melting point asphalt or similar bituminous waterproofing compositions in accordance with the practices usually followed in the manufacture of siding shingles. One side of the impregnated felt is then completely covered by a foundation layer of mortar colored granular particles deposited thereon from a suitable hopper beneath which the felt is passed after being impregnated with the asphalt or similar waterproofing substance. The granular side of the felt is then partly covered by spaced rectangular patches of asphalt arranged to simulate parallel courses of brick, stone or tile elements, said patches being conveniently applied by asphalt pick-up wheels of suitable pattern having their lower portions moving in a bath of asphalt and their upper portions disposed to contact with the granular side of the web, the arrangement and use of such wheels being well known in connection with the manufacture of brick simulating siding shingles. As it leaves the pick-up wheels the granular side of the felt passes beneath a second hopper containing granular particles of a different color compared with the color of the previously applied particles. The granular particles falling on the asphalt patches applied by the pick-up wheels are embedded in the asphalt to form the brick, stone or tile elements of the pattern. Those particles from the second hopper which are deposited on the felt between the patches of asphalt applied by the pick-up wheels eventually fall away from the felt or are removed so that the foundation layer of granular material is exposed between the brick, stone or tile areas in the form of narrow strips representing conventional mortar joints.

Following the application of the granular surface pattern the wide strip of felt is cut longitudinally and transversely into smaller sections of suitable length and width, each section being preferably wide enough to include several parallel courses of the brick, stone or tile simulating areas. In practice it has been found expedient to cut the felt into sections having a length of approximately ten feet and a width of approximately one foot, these dimensions being suitable for rapid handling and application of the material with a minimum amount of nailing. When cutting the felt to provide these smaller sections the transverse cuts are made along the line of the mortar colored strips of the pattern in order to avoid, as far as possible, bisecting of the brick, stone or tile colored areas. In other words these cuts are made so that the lines of the vertical joints between the meeting edges of adjacent sections of the felt will follow, for at least a portion of their length, the similarly extending lines

of the mortar colored strips of the pattern and will not appear in prominent contrast with the adjacent brick, stone or the simulating areas of the pattern. The longitudinal cuts through the felt strip are made so that they follow, throughout their entire length, similarly extending mortar colored strips of the pattern. The transverse and longitudinal cuts may bisect the co-extensive mortar colored strips of the pattern or they may be made close to the parallel edges of the brick, stone or tile simulating areas.

Each small section of the felt is then attached to its wall board base 11 by placing it on the base and subjecting the assembly to pressure applied in any suitable manner. If the base engaging surface of the felt section is not sufficiently adhesive it may be coated, prior to the pressing operation, with a layer of adhesive asphalt or, alternately, a layer of adhesive asphalt may be applied to the felt engaging surface of the base. The base 11 is, of course, cut to size and provided with the groove 22 and the tongue 23 prior to the application of the felt covering and the latter is arranged on the base so that its edge 13b is spaced inwardly from the base of the tongue 23 while its opposite edge 13a is projected beyond the underlying portion 11a of the base as previously described herein.

Having thus described my invention, what I claim is:—

1. A section of siding material comprising a base of substantial thickness and stiffness formed with an inner horizontal recess adjacent its upper edge and an outer horizontal recess adjacent its lower edge, a sheet of waterproof material secured to the outer surface of said base with the upper edge of the sheet lying in a plane below the bottom wall of the inner recess and the lower edge of the sheet projecting beyond the lower edge of the base, and a weather resistant surface of granular material covering the outer surface of said sheet.

2. Covering material composed of a plurality of sections of siding material constructed as claimed in claim 1 and assembled in courses on the surface to be covered, the projection provided at the upper edge of the base of each section by the formation of the inner horizontal recess being received in the outer recess at the lower edge of the base of the adjoining section in the next upper course and the projection provided at the lower edge of the base of each section by the formation of the outer recess being received in the inner horizontal recess at the upper edge of the base of an adjoining section in the next lower course, and the lower edge portion of the covering sheet of each section being butted against the upper edge of the covering sheet of the adjoining section in the next lower course.

3. Covering material of the character described comprising a plurality of sections of siding material assembled in courses on the surface to be covered, each section comprising a base of substantial thickness and stiffness formed with an inner horizontal recess adjacent its upper edge and an outer horizontal recess adjacent its lower edge, said inner recess affording a projection at the upper edge of each base which is received in the outer horizontal recess at the lower edge of the adjoining base in the next upper course and the said outer recess of each base affording a projection at the lower edge thereof which is received in the inner recess at the upper edge of the adjoining base in the next lower course, and a sheet of waterproof material secured to the outer

5 surface of each base with the upper edge of the sheet lying in a plane below the bottom wall of the inner base recess, and the lower edge of said sheet projecting beyond the lower edge of the base into abutting engagement with the upper edge of the covering sheet of the adjoining base in the next lower course, and joint concealing

means on the outer surface of the sheets comprising a plurality of differently colored particles of granular material arranged to present pattern lines coinciding with and obscuring the joint lines formed by and between the meeting edges of said sheets.

LESLIE S. ODELL.