Nov. 19, 1935. L. S. ODELL 2,021,579

ORNAMENTED WALL BOARD SIDING FOR OUTSIDE WEATHERPROOFING

Filed Dec. 7, 1933 2 Sheets-Sheet 1

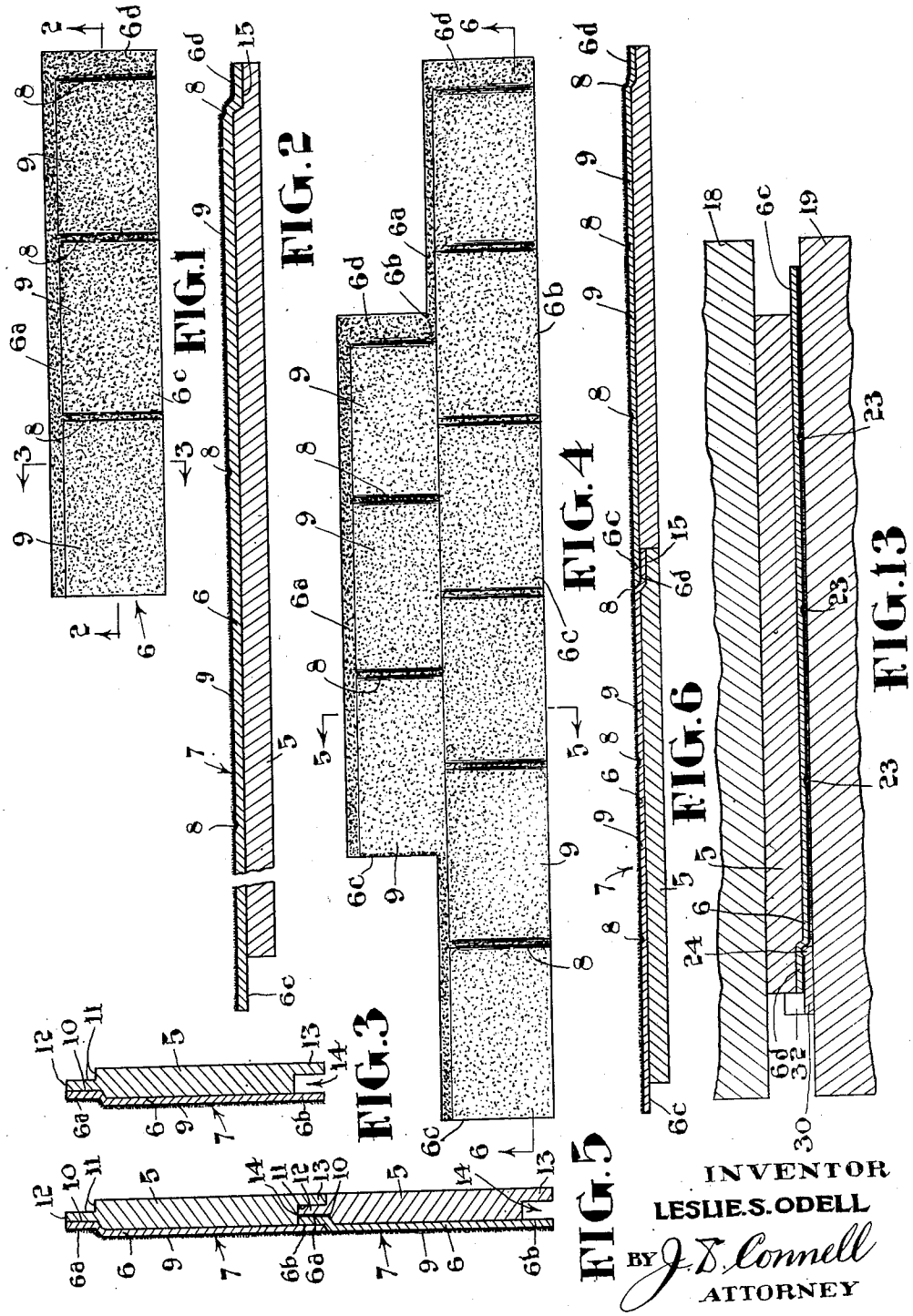


FIG. 1

FIG. 2

FIG. 3

FIG. 4

FIG. 5

FIG. 6

FIG. 13

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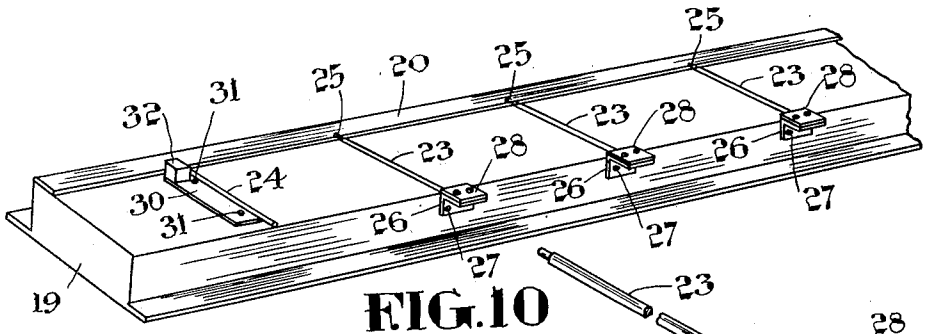


FIG.10

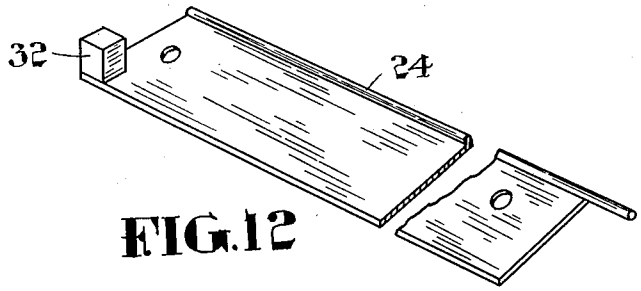


FIG.12

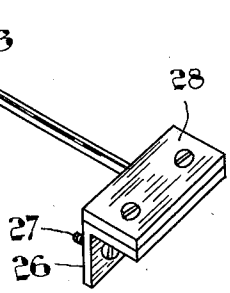


FIG.11

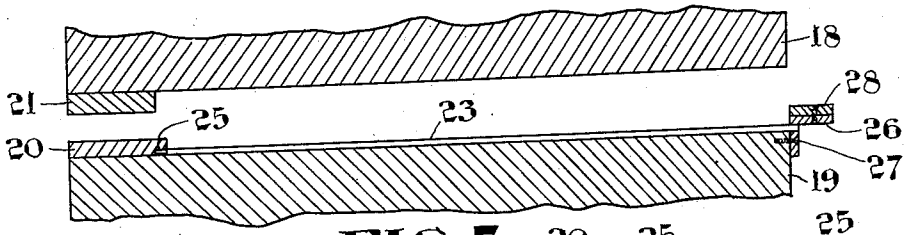


FIG.7

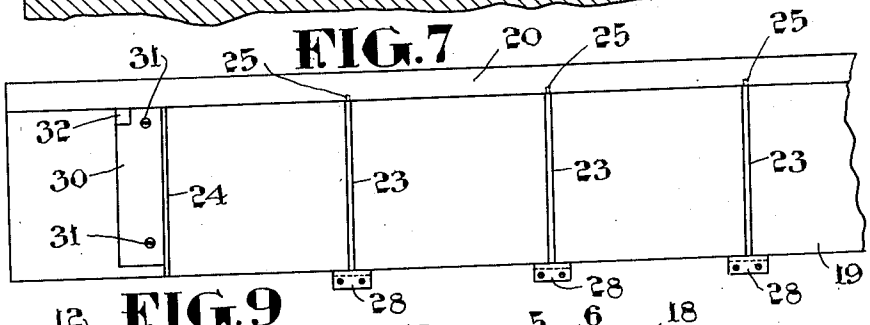


FIG.9

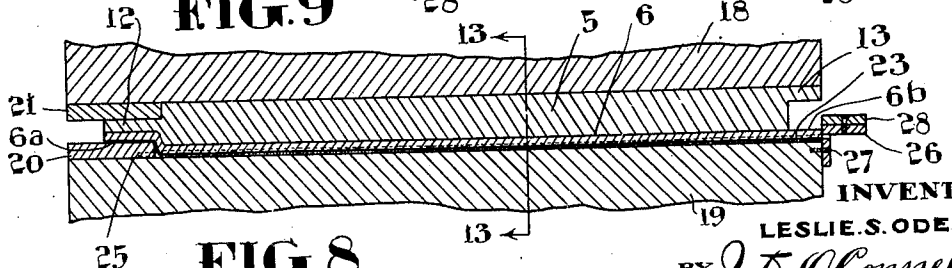


FIG.8

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Patented Nov. 19, 1935 2,021,579

UNITED STATES PATENT OFFICE

2,021,579

ORNAMENTED WALL BOARD SIDING FOR OUTSIDE WEATHERPROOFING

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Application December 7, 1933, Serial No. 701,384

9 Claims. (Cl. 20—5)

This invention relates to siding for application to the walls or other surfaces of building structures and particularly to siding of the type comprising a plurality of complementary sections adapted to be assembled in edge to edge relation on the surface to be covered, each section embodying a stiff waterproof base of fibrous material, a sheet of waterproof felt adhesively secured to the weather side of the base and a weather resistant surface comprising a layer of granular particles embedded in asphalt at the outer side of the felt sheet and arranged to form a definite ornamental surface pattern presenting lines coinciding with and serving to conceal the joint lines between adjacent sections of the siding. Examples of this general type of siding are described and claimed in my co-pending applications Serial Nos. 584,109, filed Dec. 31, 1931, and 620,186, filed June 30, 1932.

One feature of the present invention resides in constructing and assembling the siding sections so that the horizontal and vertical edge portions of the felt covering sheet of each section are disposed in lapping engagement with corresponding edge portions of the felt covering sheets of adjacent sections to provide substantially waterproof joints at both the horizontal and vertical meeting edges of the sections.

Another feature of the invention resides in constructing the siding sections with narrow portions of the granular weather resistant surface depressed below the general plane of said surface to provide an ornamented stone block surface pattern which blends with and effectively conceals the actual joint lines formed by and between adjacent sections of the siding.

A further feature of the invention resides in the provision of a simple method and apparatus for producing siding having the above mentioned characteristics.

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

Fig. 1 is a plan of a section of ornamented siding produced in accordance with the present invention.

Fig. 2 is an enlarged longitudinal sectional view along the line 2—2 of Fig. 1.

Fig. 3 is an enlarged transverse sectional view along the line 3—3 of Fig. 1.

Fig. 4 is an enlarged view similar to Fig. 1 but showing three sections of the siding material as they appear when assembled in edge to edge relation on a wall or other surface to be covered.

Fig. 5 is a transverse sectional view along the line 5—5 of Fig. 4.

Fig. 6 is a longitudinal sectional view taken substantially along the line 6—6 of Fig. 4.

Fig. 7 is a view, in transverse section, of the upper and lower press members of a specially designed press employed in the production of the sliding sections shown in the preceding figures.

Fig. 8 is a view similar to Fig. 7 illustrating the manner in which the press members serve to form depressions in the granular surface of each section of the siding material while employing pressure to firmly unite the felt sheet with its associated wall board base.

Fig. 9 is a top plan view illustrating the assembly of the lower press member appearing in Figs. 7 and 8.

Fig. 10 is a perspective view of the lower press member assembly.

Fig. 11 is a perspective view of one of a series of removable ribs associated with the lower press member to form the aforesaid depressions in the granular surface.

Fig. 12 is a perspective view of a combined rib and shaping plate also associated with the lower press member to form one of the terminal depressions in the granular surface of the felt sheet while simultaneously pressing an adjacent terminal portion of the felt sheet into one of the recesses of the associated wall board base.

Fig. 13 is a longitudinal section view taken substantially along the line 13—13 of Fig. 8.

The ornamented siding produced in accordance with the present invention comprises a plurality of complementary sections adapted to be assembled in edge to edge relation on a wall or other surface to be covered. As shown in Figs. 1 to 5 inclusive each section comprises a stiff fibrous base 5, a waterproof felt sheet 6 covering the outer or weather side of the base, and a surfacing layer 7 of granular particles embedded in asphalt at the outer side of said sheet. At suitable intervals along the length of each section, narrow transversely extending areas 8 of the granular surface 7 are depressed below the general plane of said surface to provide an ornamental pattern simulating the appearance of a stone block surface, the stone blocks being represented by the granular areas 9 lying between the parallel depressions 8 which simulate vertical mortar joints between the blocks. In the present instance each section is dimensioned to include only a single course of the stone block simulating areas but each section may, if desired, be made wide enough to include two or more parallel

courses of the stone block simulating areas arranged with the stone block and mortar joint simulating areas of each course staggered in the conventional manner with respect to the similar areas of adjoining courses. In the latter instance it will be understood that each section is provided with horizontal depressions in the granular surface to represent the horizontal mortar joints between the stone simulating areas of adjacent courses.

In order to provide watertight joints between the horizontal meeting edges of sections in adjoining rows the upper edge of each section is preferably formed as shown in Figs. 3 and 5. As indicated in these figures a recess 10 is provided in the outer surface of the base 5 immediately adjacent its upper edge. The depth of this recess is approximately equal to the thickness of the felt covering sheet 6, the upper edge portion of which is depressed into contact with the walls of the recess as indicated at 6a. Directly opposite the recess 10 the inner surface of each base 5 is shaped or cut away to provide a similar but deeper recess 11. In effect, these opposed recesses 10 and 11 provide, at the upper edge of each base 5, a tongue 12 having its outer surface completely protected by the overlying depressed portion 6a of the felt covering sheet. Immediately adjacent its lower edge the outer surface of each base 5 is shaped or cut to provide a tongue portion 13 projecting below the main body of the base to form the inner wall of a tongue receiving groove 14, the outer wall of which is formed by the opposing lower edge portion 6b of the associated felt covering sheet 6. With the sections assembled as shown in Figs. 4 and 5 it will be noted that the tongues 12 of the lower sections are fitted in the grooves 14 provided at the lower edges of the upper sections so that the felt covering portions 6a of said tongues are overlapped by the lower edge portions 6b of the felt covering strips forming the outer side walls of the grooves. This method of joining the sections at their horizontal meeting edges is more fully described in my co-pending application Serial No. 620,186, filed June 30, 1932.

The manner in which the ends of each section are constructed to form waterproofed vertical joints with the meeting ends of adjacent sections contained in the same row is shown to advantage in Figs. 2 and 6. As here shown one end of each base 5 is cut square and the corresponding end of the felt covering strip 6 is projected beyond the base to form a flap extension 6c. At its opposite end the outer face of the base is cut away to provide a recess 15 which has a depth approximately equal to the thickness of the felt strip and is somewhat wider than the previously mentioned recess 10. The remaining end portion of the felt strip indicated at 6d is depressed into the recess 15 so that it lies below the general plane of the granular surface. When several sections are assembled as shown in Figs. 4 and 6 the felt flap extension 6c at one end of each section overlies the depressed felt portion 6d at the meeting end of the next adjacent section. It will also be noted that the upper portion of the felt flap extensions 6c of the lower sections are received in the grooves 14 of the upper sections and this assists in holding said extensions in place.

The complete process followed in the production of the ornamented wall board siding sections shown in Figs. 1 to 6 inclusive is substantially as follows. A layer of granular surfacing material is applied to a relatively wide and long sheet of felt in accordance with any of the well known practices followed in the manufacture of granular covered shingle strips. The granular covered sheet is then divided into smaller sheets such as those indicated at 6 in the present drawings and each sheet 6 is then assembled with its preformed fibrous base element 5 to provide the assembly shown in Figs. 1 to 3 inclusive. This assembly is then subjected to consolidating and shaping pressure between the upper and lower press members 18 and 19 appearing in Figs. 8 to 13 inclusive. As here shown the lower press member 19 is provided with a flat upper surface on which is arranged a lengthwise extending strip 20, said strip being positioned adjacent one longitudinal edge of the press member 19 and immediately below a similar strip 21 attached to the upper press member 18. A series of spaced transversely extending shaping ribs indicated at 23 and 24 are removably mounted on the upper surface of the press member 19 at suitable intervals. One end of each rib 23 is reduced and fitted in a socket 25 formed in the lower surface of the strip 20. At its opposite end each rib 23 is fixed to an angle bracket 26 that is detachably fastened to the press member 19 by screws 27. A plate 28 is fastened to the horizontal leg of each angle bracket 26 and co-operates therewith to form a stop as hereinafter described. The remaining shaping rib 24 constitutes one longitudinal edge of a transversely extending shaping plate 30 which is fastened to the upper surface of the press member 19 by screws 31 and is provided with a stop projection 32 in spaced relation to its ribbed edge 24. In practice the lower press member 19 is preferably attached to a stationary supporting frame equipped with guides in which the upper press member 18 is moved vertically by suitable power means either mechanical or hydraulic. However, it is not considered necessary to illustrate or describe in detail the manner of mounting and operating the press members since this may be accomplished in various ways and forms no vital part of the present invention. The manner in which the siding assembly of Figs. 1 to 3 inclusive is subjected to consolidating and shaping pressure between the press members 18 and 19 is illustrated in Figs. 8 and 13. As shown more particularly in Fig. 8, the siding assembly is arranged with the granular surface of the felt sheet 6 resting on the upper surface of the press member 19, with the longitudinal edge 6b of said felt sheet butted against the stops formed by the angle plates 27 and their superimposed plates 28, the opposite depressed longitudinal edge 6a of said sheet being positioned to overlie the shaping strip 20. The depressed end edge 6d of the felt sheet is arranged, as shown in Fig. 13, to overlie the rib 24 and the upper surface of the shaping plate 30 in abutting engagement with the stop 32. After the siding assembly has been thus arranged on the lower press member 19 the upper press member 18 is moved downwardly so that the opposing surfaces of the press members, together with the shaping plates 20, 21 and 30 serve to press the body portion of the sheet together with the depressed portions 6a and 6d firmly against the contacting surfaces of the base. At the same time the ribs 23 and 24 are embedded in the granular surface of the felt sheet to form the aforementioned depressions 8.

In case it is desired to produce siding sections similar to that shown in Figs. 1 to 3 inclusive

without the depressions 8, this may be accomplished by eliminating the depression forming ribs 23 and substituting a suitable ribless plate for the previously described ribbed plate 30.

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

1. A section of siding material comprising a relatively long and narrow base member provided, on one side, with a lengthwise extending recess adjacent each longitudinal edge and a transversely extending recess adjacent one of its transversely extending edges, one of said longitudinal recesses being relatively deep and the remaining longitudinal recess being relatively shallow, a sheet of waterproofed felt covering the aforesaid side of the base member, one longitudinal edge of said sheet being depressed into the relatively shallow longitudinal recess of the base and the opposite longitudinal edge of said sheet being disposed to form an outer wall for the relatively deep longitudinal recess of the base, one of the transverse edges of said sheet being depressed into the aforesaid transversely extending recess of the base.

2. A section of siding material comprising a preformed base provided, on one side, with two lengthwise extending recesses located adjacent its longitudinal edges and with a transversely extending recess located adjacent one of its transverse edges, one of said longitudinally extending recesses being substantially deeper than the remaining longitudinally extending recess and the latter being of substantially the same depth as the transversely extending recess, a sheet of waterproofed felt covering the aforesaid side of the base member and having one of its longitudinal edges depressed into the relatively shallow longitudinal recess of the base and one of its transverse edge portions depressed into the transverse recess of the base, the opposite longitudinal edge of said sheet being disposed to overlie the relatively deep longitudinal recess of the base to form an outer wall therefor and the remaining transverse edge of said sheet being projected beyond the corresponding transverse edge of the base to form a flap extension, and a layer of granular material covering the weather side of said sheet and forming a weather resistant surface thereon.

3. A section of siding material as claimed in claim 2 in which the opposite side of the base is provided with a lengthwise extending recess directly opposite the shallower of the two first mentioned lengthwise extending recesses.

4. A section of siding material comprising a base of substantial thickness and stiffness adapted to be applied to the surface to be covered, said base being formed with upper and lower horizontal recesses adjacent its upper and lower edges and an outer vertical recess adjacent one of its vertical edges, a sheet of waterproofed felt applied to the outer side of the base with one end of the sheet projecting beyond the vertical edge of the base remote from said vertical recess, said felt sheet having its upper horizontal edge portion pressed into the upper outer horizontal recess of the base, its remaining vertical edge portion pressed into the vertical recess of the base and its lower edge portion disposed to overlie the lower horizontal recess of the base to form an outer wall therefor, and a weather resistant layer of granular material covering the outer side of said sheet.

5. A section of siding material comprising a base formed with inner and outer horizontal recesses adjacent its upper edge, an outer horizontal recess adjacent its lower edge and an outer vertical recess adjacent one of its vertical edges, a weather-resistant covering sheet applied to the outer side of the base with one end projecting beyond the vertical edge of the base remote from said vertical recess, said sheet having its upper edge portion pressed into the upper outer horizontal recess of the base, its remaining vertical edge pressed into the vertical recess of the base and its lower edge portion disposed to overlie the lower horizontal recess of the base to form an outer wall therefor.

6. A section of siding material, as claimed in claim 5, in which the depth of both the upper outer horizontal recess and the vertical recess is substantially equal to the thickness of the covering sheet and in which the depth of the upper inner horizontal recess is approximately equal to the thickness of the lower portion of the base which forms the inner wall of said lower horizontal recess.

7. A section of siding material comprising a base formed with an outer horizontal recess adjacent its upper edge and an outer vertical recess adjacent one of its vertical edges, a covering sheet applied to the outer side of the base with its upper edge depressed into said horizontal recess and one of its vertical edges depressed into said vertical recess, the remaining edges of said sheet being arranged to afford weatherproof flaps adapted to overlie the depressed edges of the covering sheets of adjacent sections when a plurality of said sections are assembled, in a predetermined manner, on the surface to be covered.

8. A section of siding material, as claimed in claim 7, including a layer of granular particles applied to the outer side of said covering sheet to form a weather-resisting surface thereon, narrow transversely extending areas of the granular surface being depressed below the general plane of said surface, said depressed areas extending from the lower edge of the sheet to a point below the upper edge of the sheet coinciding substantially with the bottom wall of the upper outer horizontal recess formed in the base.

9. Covering material comprising a plurality of sections assembled one above the other on the surface to be covered, each section comprising a stiff base member having its upper and lower edges reduced in thickness and assembled in lapping relation with the meeting edges of adjacent base members and a covering sheet of water resistant material secured to the outer surface of each base member, said sheet having its upper edge portion depressed into an outwardly facing recess adjacent the upper edge of said base member, the lower edge of said sheet being disposed to overlap the depressed upper edge portion of the next lower sheet and one end of said sheet being extended beyond the corresponding edge of the associated base to overlap the base member of an adjoining section contained in the same row.

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