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P. E. LUMBARD

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SHINGLE AND SHINGLE ROOFING

Filed April 23, 1928

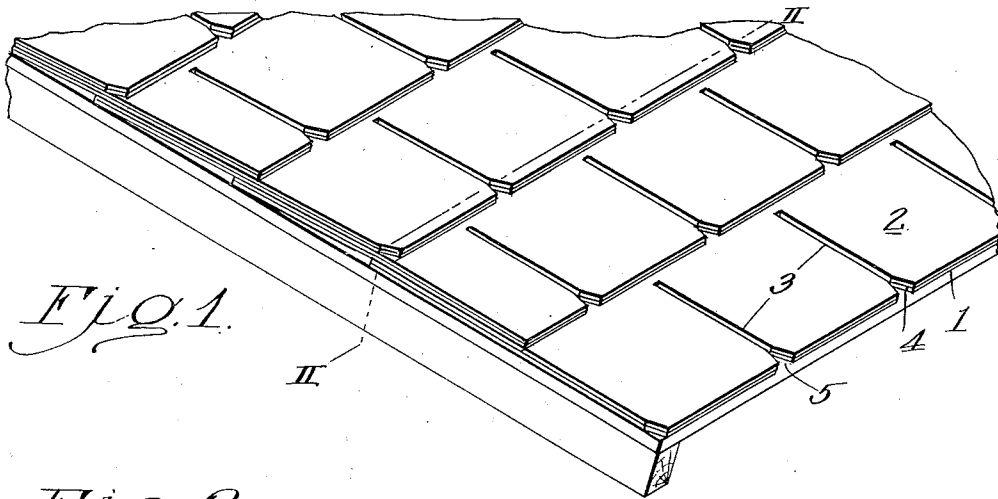


Fig. 1.

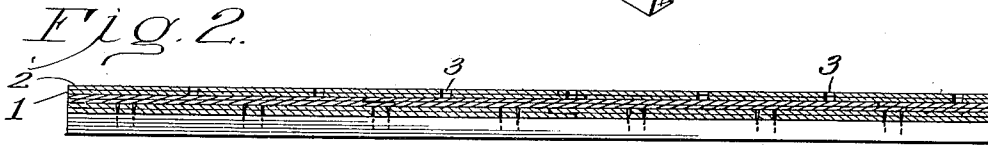


Fig. 2.

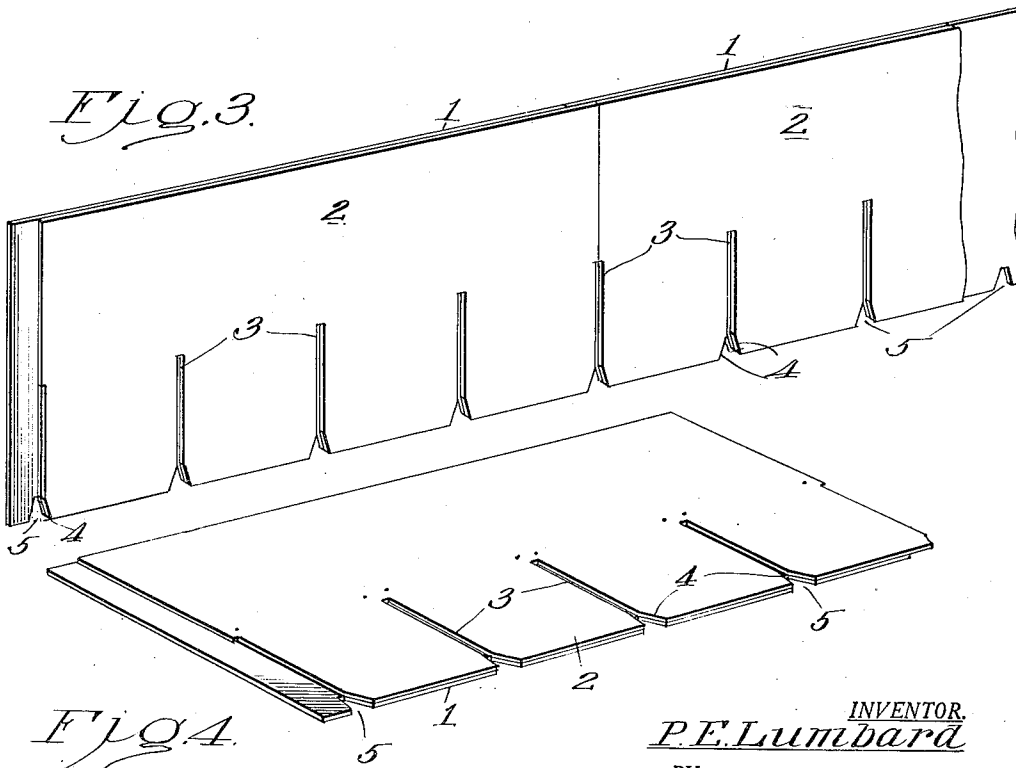


Fig. 3.

Fig. 4.

INVENTOR
P. E. Lumbard

BY

Thorpe & Thorpe ATTORNEYS.

UNITED STATES PATENT OFFICE

PHANETTE E. LUMBARD, OF KANSAS CITY, KANSAS

SHINGLE AND SHINGLE ROOFING

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This invention relates to roofing shingles of the composite type, and more especially to that class which, in operative position visually appear to be a plurality of similar shingles although of integral or unit construction, this appearance being secured by the provision of slots extending from the lower edge of each shingle to a point in proximity to the lower edge of the overlying shingle. Shingles of the type referred to when in operative position as a roofing, are objectionable as inefficient due to the fact that a strong wind against their lower edges has the effect of lifting them, and where such wind is accompanied with a driving rain, the water penetrates the roofing and leaks occur.

Accordingly it is my object to produce a roofing composed of shingles of the class mentioned which shall be unaffected in the matter stated by ordinary strong wind and rain storms, by providing a backing for each shingle which corresponds in area to the latter except that it bridges the slots of the shingle for fully or practically their full length, and by the provision of an overlapping or step-joint relation between the side edges or units to bridge and hence seal the joints between their abutting side edges and utilize one side of each unit to hold down the juxtaposed end of the adjacent unit and cooperate with the unit backings in resisting upward movement under heavy wind pressure.

Another object of the invention is to provide a roofing which not only will successfully resist the occurrence of roofing leaks and possesses greater durability and strength than the conventional roofing of the same general character, but which will cover a roofing area of considerably greater extent than an equal number of units of the same size of the conventional types as at least an inch less of each unit need be overlapped by the next unit above, without any chance of the parts of the units exposed to the weather, yielding upward under strong wind pressure.

With the objects mentioned in view, the invention consists in the novel and useful construction and combination of the individual units, as hereinafter described and claimed; and in order that it may be fully

understood, reference is to be had to the accompanying drawing, in which:

Figure 1 is a fragmental perspective view of a part of one of the lower corners of a roof covering embodying the invention.

Figure 2 is an enlarged section taken on the line II—II of Figure 1.

Figure 3 is a detail perspective view of one of the plural shingle units embodying the invention.

Figure 4 is a perspective view showing the abutting ends of a pair of juxtaposed shingles to bring out more clearly the overlapping relation existing between them.

Referring now to the drawing in detail, it will be noted that each shingle is represented as consisting of a backing sheet 1 and a facing or weather sheet 2, the sheets being of corresponding area and arranged in superposed relation with their upper and lower margins coincident but with their side margins in break-joint or spaced relation, so that at one side the backing sheet projects beyond the corresponding side of the facing sheet and at the other side or edge the facing sheet projects a corresponding distance beyond the side or edge of the backing sheet. In practice it is preferred that the two sheets related as explained shall be secured permanently together by any suitable means, preferably tar or some equivalent binder, but it is to be understood that the shingle may be formed of a single sheet recessed at its sides to cause the backing sheet to project at one side and the facing sheet at the other side.

The shingle is provided in its preferred construction, with a series of channels running from its lower edge to nearly half way to its upper edge, these channels dividing the facing sheet so that when in operative position as a part of a roof, each sheet presents the appearance of a plurality of shingles, the channels mentioned being preferably in the form of slots 3 cut through the facing sheets. At the lower edge the shingle channels are flared by preference as at 4, and coincidentally with said flared ends the backing sheet of the shingle is notched as at 5. This flaring of the channels enhances the appearance of the shingle so as to more prominently differ-

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entiate the weather portions of the shingles between the channels than would be accomplished without flaring the lower ends of the channels.

5 The notching of the backing sheet is to not only individualize adjacent portions of the shingle but to give such portions the appearance of thickness or depth as viewed from the ground. The relatively shallow notches provided in the backing sheet leave the major portions of the channels bridged and hence leave only narrow portions at the bottom of the shingles slightly weakened and the intervening parts subject to upward movement under wind pressure, as contrasted with the conventional shingle of this type in which the channels or slots extend completely through the entire shingle instead of part way through as here, it being obvious that where the shingle is slotted from top to bottom for a substantial distance upward from its lower edge, the wind may and in practice commonly does obtain considerable leverage tending to cause the portions of the shingle between the slots to rise and as a result rain blows under the lifted portions and roof leaks develop. Another advantage and a very material and practical one is that where only the upper portion of the shingle is slotted and the major portion of the slot is bridged in the manner explained, by the underlying portion, it is possible to expose a greater area of the shingle to the weather and as a result to cover a roof of a prescribed area with fewer shingles and hence with greater dispatch and at less cost for labor and material than with shingles of equal area having a smaller exposure to the weather. It has been found by tests that the exposure to the weather of shingles of the type of this invention can be increased at least twenty per cent and yet possess much greater wind resisting properties than the conventional type of shingle hereinbefore referred to.

45 It is preferred that at the abutting edges of the overlying portions of adjacent shingles of the same course, channels 3 shall occur, the channels at such ends being conjointly formed by half channels formed in the abutting edges of juxtaposed units of the course of channels, as appears most clearly in Figure 4. As the first or lower course of shingles is secured in place by conventional or other fastening means, the second course is applied, these being preferably arranged in break-joint relation to the first course as indicated in Figure 1, and it will be noted by reference to the last-named figure that the shingles are so proportioned and arranged that the lower edges of the second course are contiguous to the upper ends of the channels 3 of the shingles of the first course, and that the lower edge of the shingles of the third course bear the same relation to the channels of the second course of shingles and incidentally overlie

the upper edges of the first course so that beginning with the third course of shingles and running to the ridge of the roof the covering at spaced intervals is of three-ply thickness, considering each shingle a single ply, it being noted that by this arrangement the nails 6, preferably of the roofing nail type, employed to secure a course of shingles in position are covered by the next course, leaving no nails exposed in the entire roof.

The shingles may be made of any suitable material having requisite stiffness, strength and durability, and the weather portion will preferably have the customary adhering surface coating of grit or the like for enhancing the appearance and increasing the strength and durability, it being obvious of course that the coating may be of uniform or variegated coloring where it is desired that the roof shall present any particular design or appearance having an appeal to the user.

From the above description, it will be apparent that I have produced a shingle and roofing which embodies the features of advantage set forth as desirable in the statement of the objects of the invention, and may be modified in minor particulars within the principle of construction involved and the spirit and scope of the appended claim.

I claim:

A shingle course of uniform thickness for its full area, and consisting of a plurality of similar members abutted and step-jointed together sidewise, each member having a pair of recesses extending along the full extent of its side edges, the recess at one side being in the front face and the recess at the other side being in the rear face of the member; each member also having equi-distant full depth notches in its lower edge, one-half of two of the notches occurring in the recessed parts of the shingle, the shingle also having channels in its front or upper face corresponding in number to and communicating at their lower ends with the respective notches, the channels at the sides of the members being conjointly formed in the side edges of abutting members.

In testimony whereof I affix my signature.
PHANETTE E. LUMBARD.

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