Oct. 30, 1928. 1,689,290

G. W. MILLS, JR

SHINGLE

Filed May 16, 1922

Fig. 1.

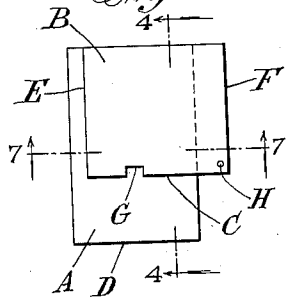


Fig. 3.

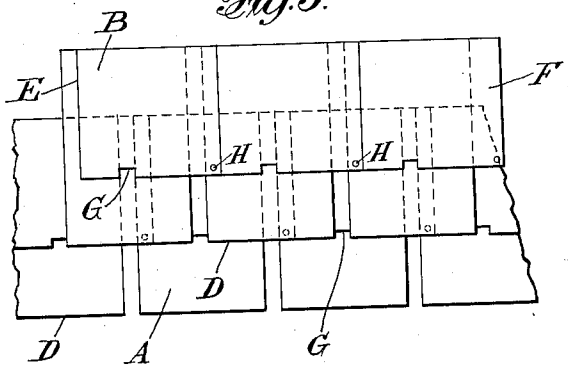


Fig. 2.

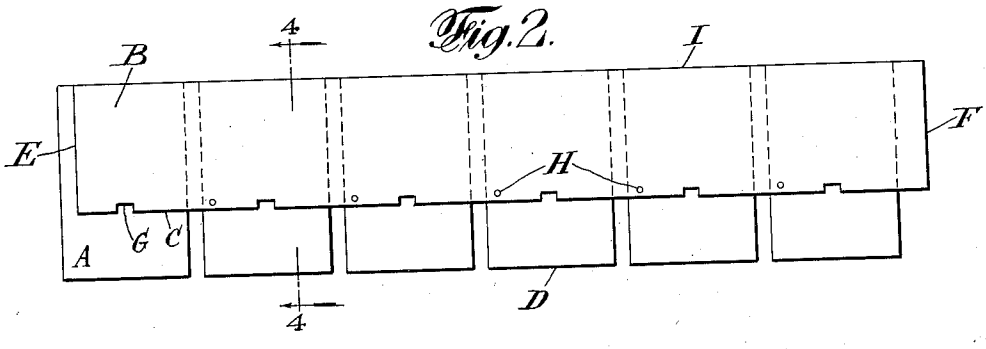


Fig. 4.

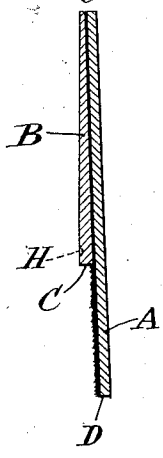


Fig. 5.

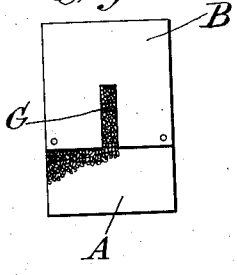


Fig. 6.

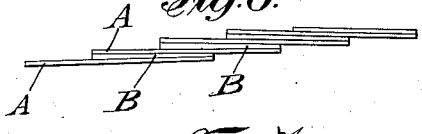


Fig. 7.



Inventor



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UNITED STATES PATENT OFFICE.

GEORGE W. MILLS, JR., OF CINCINNATI, OHIO, ASSIGNOR TO THE PHILIP CAREY MANUFACTURING COMPANY, A CORPORATION OF OHIO.

SHINGLE.

Application filed May 16, 1922. Serial No. 561,405.

My invention relates to an improvement in roofing shingles, both individual and strip. It is more especially addressed to shingles of the prepared type in which the shingles are made of a ply, or plies, of felt, paper or other suitable material saturated with a bituminous saturant, coated with a bituminous coating and surfaced with a mineral surfacing. I do not however limit my invention to shingles or strip shingles of this type as my invention is also adapted for asbestos cement and other types of shingles.

My invention provides a shingle or shingle strip that overcomes one of the objections heretofore made to the flat appearance of a prepared shingle or shingle strip by providing a greater thickness, at the shingle edge, exposed to view.

My invention facilitates the laying of shingles and strip shingles by providing a guide which determines the amount of the shingle that is to be exposed to view. It also provides a spacing guide which determines the amount of space between shingles. It also provides means for designating the location of the nails used to hold the shingles in place.

My invention also provides a shingle which in laying requires but one nail to each shingle thereby reducing the number of nails used in laying a roof to a minimum.

My invention provides a strip shingle which may be made of any number of individual shingles attached to each other so as to be folded, if desired, for packing, for transportation, etc.

In the drawings:

Fig. 1 is a plan view of an individual shingle embodying my invention.

Fig. 2 is a plan view of a shingle strip embodying my invention.

Fig. 3 is a plan view of a plurality of individual shingles laid in place.

Fig. 4 is a longitudinal section on the line 4—4 of Figures 1 and 2.

Fig. 5 is an individual shingle showing a modification of my invention.

Fig. 6 is a section through a portion of a roof formed of shingles embodying my invention.

Fig. 7 is a section through Fig. 1 on the line 7—7.

In the drawing Fig. 1 is an individual shingle having the shingle end portion A, which is to be exposed when in place on a building, and a body portion B, which portion is covered in part, or in whole, by the next above overlying shingles. In the preferred form of my invention I form the body portion B thicker than the shingle end portion A having the thick body portion begin at a line C which will register with the edge D of the shingle end portion of the next above shingle. I provide the shingle with a recess E on one side and a corresponding tongue F on the opposite side. I proportion the tongue and recess so that when the tongue is in the recess, as shown in Fig. 3, it will space adjacent shingles, in the same row the proper distance apart. This I preferably do by forming the tongue so that it is of a length equal to the distance the shingles are to be spaced apart plus the depth of the recess. I prefer also to form the tongue so that it will project out and overlie a portion of the next adjacent shingle. In the body portion of the shingle I also provide along the lower edge C a recess G for registering with the space between the next above overlapping shingles. In the modification shown in Fig. 5 this recess G extends for a distance equal to the amount of overlap of the next above shingles.

In the body portion I place markings H of any desirable kind, to represent the location of the nails to be used to hold shingles in place. By having the body B thicker than the shingle end A, I can countersink holes in the body B, without weakening the shingle, for purpose of marking same to indicate nail portions. I can also indent, emboss or otherwise mark the surface of the body B with marks to identify the manufacturer of the shingle.

I prefer, although it is not essential to my invention, to make the body B tapering toward the upper end of the shingle. By upper end I refer to that portion of the shingle body that is at the end of the shingle opposite the exposed shingle end A.

In forming strip shingles I prefer to use individual shingles of the desired size and of uniform thickness throughout. These individual shingles I attach to each other by

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a strip I (see Fig. 2) of suitable material extending over the face of the body of the shingles and affixed thereto by a suitable adhesive or by other suitable means. In making strip shingles, embodying my invention, from prepared roofing shingles which are usually made with a saturated flexible base, coated with a bituminous material and surfaced with mineral particles, I take a strip of the same or similar flexible saturated material of preferably a width equal to the unexposed portion of a shingle, and of the desired length depending on the number of shingles to form a strip, and cement the strip to the shingles so that they are fixedly held at the desired distance apart. In cementing the strip I to the shingles I so locate the strip with relation to the end shingles that it will form a recess E at one end of the strip and a tongue F at the opposite end. If desired the mineral surfacing could be omitted from all that portion of the shingles which are under the strip I. The strip I, I prefer not to surface with mineral but if desired it could be surfaced with mineral without departing from my invention.

In making individual prepared roofing shingles embodying my invention I apply to the surface of an individual shingle a piece of flexible saturated material such as roofing felt preferably of a size that is, in one direction equal to the length of that portion of a shingle which is not exposed, and in the other direction is greater than the width of the shingle, as shown in Fig. 1, so as to provide for the tongue and recess. This piece of material is so placed and cemented to the shingle that it projects beyond one side of the shingle to form the tongue F and does not cover a portion of the opposite side whereby the recess E is formed.

My invention is also adapted to shingles such as asbestos cement, and other forms and more especially to individual shingles of those other forms.

In the manufacture of prepared roofing shingles and strip shingles embodying my invention I prefer to cut the shingle proper longitudinally of the lay of the fibre of the roofing felt or other material and to cut the strip or piece which is cemented thereto, and forms the extra thickness for the body, so that when this strip or piece is cemented in place on the shingle proper the fibres of the material will be at right angles to the fibres of the shingle exposed end.

Fig. 5 when embodied in a prepared shingle would have the body portion B made thicker by the application of a piece of saturated material of a size to cover, except for the recess G, the entire body portion. In this type of shingle the tongue and recess is not shown.

My invention may be embodied in asbestos cement or other forms of manufactured shingles by forming the shingle with the tongue and groove arrangement, and with the relative thick and thin portions, as shown in the drawings either in the formation of the shingle or after it is formed by cutting the cement or other material.

Claims:

1. In a shingle of varying thickness so arranged as to form upper surfaces in different planes, a surface connecting said upper surfaces and forming an edge on the upper side of said shingle substantially parallel to the butt edge of said shingle, one of said upper surfaces of said shingle adapted to be covered by overlapping shingles whose butt edges overlie the edge on the upper side of said shingle, and means arranged in the edge on the upper side of said shingle to space apart overlapping shingles.

2. A roofing element having a substantially plane under surface, said element having an elevated portion on its upper surface provided with means adapted when brought into register with the next above shingle to properly locate same in position, the next above shingle adapted to overlie said elevated portion.

3. A shingle having a substantially plane under surface, said shingle having an elevated portion on the upper surface arranged inward from the butt end thereof, and means in said elevated portion adapted to register with and space the next above shingles, the next above shingles adapted to overlie said elevated portion.

4. In a roofing element an exposable end portion, a portion of greater thickness than said end portion having its upper surface arranged in a different plane than the upper surface of the exposable portion, the said thicker portion provided with means adapted to overlap an adjacent shingle in the same row.

5. In a roofing element an exposable end portion and a portion arranged longitudinally throughout the shingle both having surfaces in the same plane, a portion thicker than the said end portion having a surface elevated above the plane of said end portion, and means extending out from said thicker portion having an under surface in substantially the same plane with the surface of said longitudinal portion.

6. A shingle composed of a bituminous saturated material, a layer of bituminous saturated material on a portion only of the surface thereof, said layer of bituminous material terminating short of the exposed end of said shingle to form a shingle having an exposable end thinner than the overlaid portion.

7. In a roofing element a plurality of shingles, a flexible strip of waterproofed material overlying said shingles and holding them in fixed spaced relation to each other, an edge of said strip being arranged intermedi-

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ate the ends of said shingles and provided with means adapted to register with spaces between shingles on a similar element.

8. In a shingle of varying thickness so arranged as to form upper surfaces in different planes, one of said upper surfaces being parallel to the under surface and another of said upper surfaces being at an angle to said parallel surfaces, such angular surface adapted to be covered by overlapping shingles.

In testimony whereof, I have signed my name to this specification.

GEO. W. MILLS, JR.

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