April 24, 1934. N. P. HARSHBERGER 1,956,285

METHOD OF CUTTING SHINGLES

Filed April 18, 1931

Fig. 1.

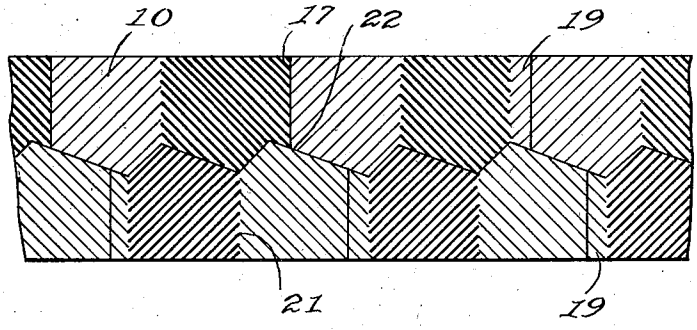
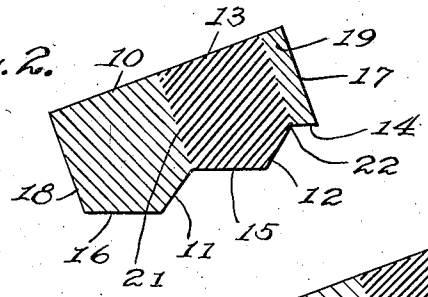


Fig. 2.



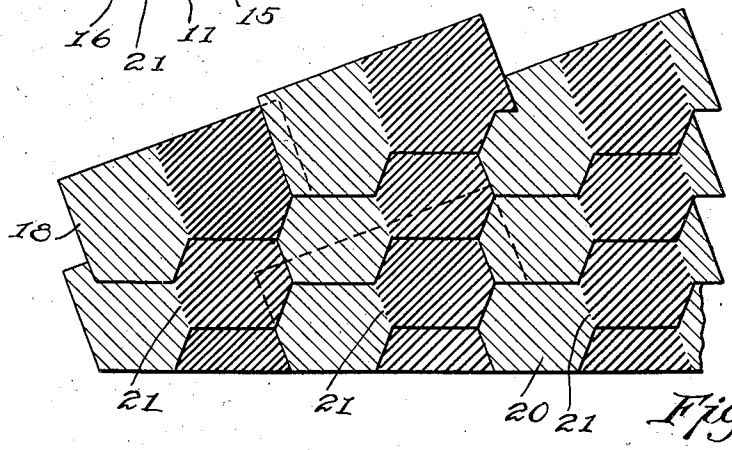


Fig. 3.

Inventor

Norman P. Harshberger

By Fay, Oberlin & Fay

Attorneys

Patented Apr. 24, 1934 1,956,285

UNITED STATES PATENT OFFICE

1,956,285

METHOD OF CUTTING SHINGLES

Norman P. Harshberger, Scarsdale, N. Y., assignor to Bakelite Building Products Co. Inc., New York, N. Y., a corporation of Delaware

Application April 18, 1931, Serial No. 531,176

8 Claims. (Cl. 164—17)

This invention is a continuation in part of my copending applications, Ser. No. 176,013 filed March 17, 1927, and Ser. No. 220,302 filed September 19, 1927, and relates to shingles and particularly to composition shingles which are coated with slate of various colors or which in any manner are colored in various ways. One of the objects of the invention is to shape and color shingles so that they may be assembled in such a manner as to form pleasing figures on the roof. A further and most important object is to provide a novel method of cutting a shingle expeditiously, to produce a novel design and without incurring any waste. Other objects of the invention will be apparent from a consideration of the accompanying drawing and the following description thereof.

Of the drawing Fig. 1 is a plan view illustrating how shingles which embody features of my invention may be cut from the web; Fig. 2 is a plan view of an individual strip shingle, slightly enlarged, after it has been completed; Fig. 3 is a plan view of these shingles as they appear when assembled on the roof.

The shingles 10 have one edge serrated or of zigzag shape, the edges however are more or less of non-uniform length. Although variations in these edges may be made yet I prefer to form the edges 11 and 12 of substantially the same length and forming substantially equal angles with a perpendicular drawn from the edge 13. The edge 14 I prefer shorter than the edges 11 and 12, and the edges 15 and 16 longer than the other edges but each is preferably of substantially the same length as the other. The ends 17 and 18 are still longer but each of these is substantially the same length as the other.

As will be seen by Fig. 1 these shingles are cut from the web without waste and a lapping portion 19 is formed. As will be seen by Fig. 3, they are of such shape that hexagonal shaped figures are formed on the roof when the shingles are properly colored and assembled. Inasmuch as the edge 17 when formed is spaced somewhat from the corner 22, the edge 18, when properly positioned to form the hexagon figures will project above the edge 13. Thus offsets are formed owing to the manner of cutting the shingles. This offset assists in laying the shingles by clearly defining the ends of the individual shingles, and also assists in properly positioning the shingles to form uniform hexagonal figures.

In order to form well defined figures 20, which in this instance are hexagonal in shape, strip shingles of this nature require some line of demarcation between the main body portions. For this purpose I cover the main body portions with coats of colored substance so that one portion is materially darker than the other. This coloring may be produced in any suitable manner such as by the use of suitable paints or different colored granulated slates, or otherwise. As a consequence of this manner of coloring or decorating the shingles, not only are the hexagonal portions clearly outlined but also the horizontal alternate hexagonal portions are of the same color and the intermediate ones of a lighter or darker color as the case may be. At the same time continuous alternate light and dark rows of hexagonal figures are formed running up and down the roof. In this manner a very artistic and pleasing appearance is produced. It will be understood that the line 21 in each case is defined by the adjacent edges of the light and dark portions. When viewed from a distance this method clearly defines the two hexagonal portions.

One manner in which my novel method may be performed is to first cut a longitudinal web of roof material as shown in Fig. 1. This web will have various areas colored in contrasting appearance so that alternate figures result. A zigzag median line extends substantially in the center of the web. However, it is to be noted that this is not exactly in the center, as the figure on the lower side of the line will be seen to have a greater depth than those above the line. This zigzag median line is formed with four components which comprise a first component consisting of the edges 16 and 14, a second component edge 11; a third component edge 15 and a fourth component edge 12. Obviously, the line is composed of a series of these components in the relation named. It is to be noted that of these four components, the edges 11 and 12 are substantially of the same length so that it may be said that the zigzag median line consists of four components, three of which have different lengths.

After cutting the zigzag median line, intersecting slits are cut inwardly from the outside edges of the web and these slits extend approximately in parallel relation and spaced one with respect to the other. In other words, the slits extend from one edge and staggered with respect to the slits extending from the other edge. In each instance, the distance along the edge of the web between the slits will be equal on both sides of the median line.

A most important result from this manner of cutting a shingle is that symmetrical figures are

obtained with an overlap. It will be noted in Fig. 3 that these shingles may be laid diagonally and yet produce a series of hexagonal figures, and that these figures may extend in vertical rows. Of course, the shingles illustrated herein may be laid in horizontal rows as well as in diagonal or inclined rows, if it should be so desired, this being due to the novel manner of cutting the shingles from the web.

What I claim is:

1. The method of cutting strip shingles without waste from a strip of material, each shingle having like pointed tabs defined by intersecting sides of unequal length at obtuse angles to each other, adjacent sides of adjoining tabs also forming obtuse angles to each other, and one transverse edge of the shingle being formed with a fractional tab which comprises cutting a series of slits intermediate the sides of the strip of material of a length greater than the length of the longer edge of the tab, cutting a second series of slits parallel to the first mentioned slits of a length equal to and defining the longer edge of the tabs, cutting a third series of slits intersecting the ends of said parallel slits, and, intersecting said first mentioned slits at points from its ends spaced a distance equal to the extent of the fractional tab by slits extending from opposite sides of said strip.

2. A method of cutting strip shingles with a zigzag median line substantially lengthwise of the direction of travel of the web, said zigzag line comprising two series of parallel cuts extending in the same direction, the cuts of one series being of one length and the cuts of the second series being of a length different from the first, there being alternating figures defined by said zigzag line, every other alternating figure being of different size, there resulting when the shingles are applied in the same course a surface presenting symmetrical figured outlines.

3. The method of cutting strip shingles from a web of roofing material which comprises the steps of cutting a zigzag median line having three different components, said components comprising a long cut, a shorter cut substantially parallel to the long cut and a third cut connecting said long short cut, then cutting transverse slits from the opposite edges of said web to said median line, said transverse slits being parallel and spaced from each other.

4. The method of cutting strip shingles from a web of roofing material which consists in the steps of cutting a zigzag median line, having three different components, said components comprising a long cut, a shorter cut substantially parallel to the long cut and a third cut connecting the ends of said long and short cut, and cutting transverse slits from the edge of said web to said median line.

5. The method of cutting strip shingles to form courses of regular shingle patterns upon a roof, from a web of roofing material which comprises the steps of cutting a zigzag median line having three different components per shingle element said components comprising a long cut, a shorter cut and a third cut connecting said long and short cuts, and cutting transverse slits from the opposite edges of said web to said median line, said transverse slits being parallel and spaced from each other, and extending substantially perpendicularly to the edges of said web.

6. The method of cutting strip shingles from a web of roofing material to form double shingles, which consists in the steps of cutting a zigzag median line having four components, said components comprising a long cut, a shorter cut substantially parallel to the long cut and a third and fourth cut of substantially equal length connecting the ends of said long and short cuts, and cutting transverse slits from the edges of said web inwardly to said median line.

7. The method of cutting strip shingles from a web of roofing material to form double shingles, which comprises the steps of cutting a zigzag median line having four components per shingle element, two of which are equal in length and the other two being of other lengths and cutting transverse slits from the edges of said web inwardly to said median line, the slits extending from one edge being staggered with respect to those extending from the opposite edge.

8. The method of cutting strip shingles from a web of roofing material to form double shingles, which consists in the steps of cutting a zigzag median line having four components per single element, two of which are equal in length and the other two being of other lengths and cutting transverse slits from the edges of said web inwardly to said median line, the slits extending from one edge being substantially equal to those extending from an opposite edge, said shingle strips forming diagonal courses of symmetrical figures when applied to a surface.

NORMAN P. HARSHBERGER.