May 7, 1935. E. J. BUCZKOWSKI 2,000,557

SHINGLE METHOD

Original Filed Dec. 23, 1930

Fig. 1.

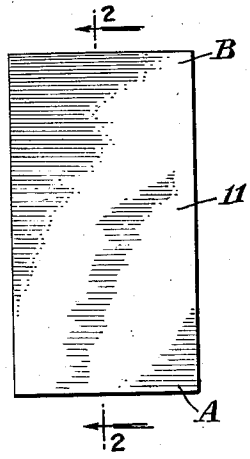


Fig. 2.



Fig. 3.

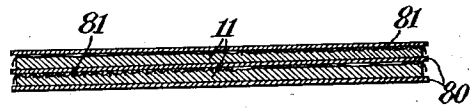


Fig. 4.

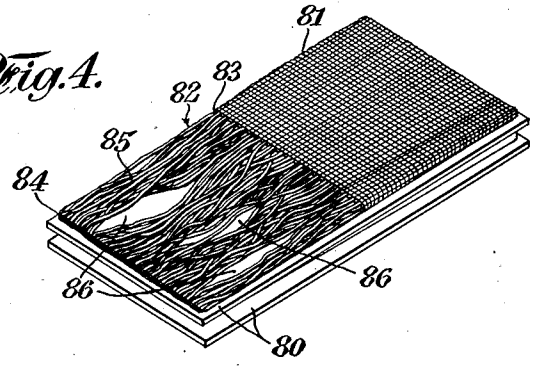
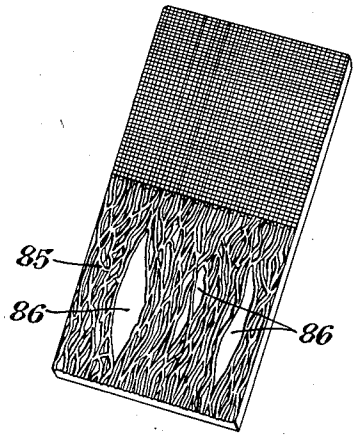


Fig. 5.



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SHINGLE METHOD

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3 Claims. (Cl. 18—60)

This invention relates to the formation of tapered articles, particularly shingles from asbestos-cement composition.

The object of the invention is to provide a composition article that will be inexpensive to manufacture and attractive in appearance and strong and durable in use.

In the accompanying drawing illustrating the invention

Fig. 1 is a plan view of a shingle formed in accordance with this invention,

Fig. 2 is a sectional view of the same on line 2—2 of Fig. 1,

Fig. 3 is a diagrammatic sectional view showing the method of decorating the shingle surfaces,

Fig. 4 is a perspective view of a shingle with the decorating layer positioned on its surface, and

Fig. 5 is a perspective view of the completed shingle.

In the specific embodiments of the invention shown in the drawing, the shingle 11 of Fig. 1 is of asbestos-cement material of generally oblong form and preferably has its portion A thicker than the remainder B. The upper surface of this shingle may be either plane or otherwise shaped with any desired contour giving the generally tapered form with the thick portion A and thinner portion B.

In such a shingle the thinner portion tends to be the weaker, and the thicker portion has ample strength, and in order to more nearly apportion the strength of the shingle the portions of it may be varied in composition to have stronger material at its thinner portion B than at its thicker portion A. For instance, the proportion of cement in the thinner portion B may be greater than that in the thicker portion A.

The shingles may be made in any desired form of apparatus producing them in oblong form and delivering them in plastic state and before initial set of the cement. While thus plastic the shingles are pressed between surfaces conforming to their final shape; then they are cured by being kept moist during the remainder of the setting and are then ready for use.

I have found it advantageous to provide a decorative surface by pressure after the formation of the shingle and while or before it is undergoing its initial set. This decoration may be applied to either shingles of tapered form or flat shingles of even thickness throughout. Each shingle 11, for instance, as it is removed from the machine on its steel plate 80 (Fig. 4) has a heavy fabric layer 81 placed over it and pressed against its surface by the under surface of the plate 80 above it in the final pile in which the shingles with the interposed plates between them are assembled for pressing. The fabric strip 81 is woven of heavy threads or yarns, and portions of these threads are removed to interrupt the surface of the fabric and give a decorative design effect that may be very widely variable.

For instance by removing all of the horizontal lengths from the portion of the fabric piece as indicated at 82 only the vertical threads or yarns will remain. Consequently, when the fabric pieces are placed on the shingles and with the portions 82 on the thickened portions of the shingles to be exposed on the roofing, the threads or yarns during the pressing will form deep lines in highly variable manner in the surface of the shingle. The particular effect of these lines is to give an appearance corresponding to weathered shingles.

Other means such as wires, dies and the like, may be used to give the lined effect but with the flexible fabric material the free lengths of the strands between the end portions 83, 84 will arrange themselves in infinitely variable manner as the strips are placed on the shingles. Consequently, no two shingles will be the same in appearance, and the striped areas 85 and blank areas 86 will be distributed and entwined in different manner in each case. At the same time the characteristic line effect will be shown by all of the shingles thus marked.

When the deep closely spaced lining extends longitudinally as shown, it is positioned substantially in vertical planes on the roof and is particularly effective in giving a weathered appearance. As the direction of lighting changes during the day the shadows shift, but the line effect is permanent and characteristic, and adds depth and softness to the coloring.

Where a "moss" effect is desired the shingle will preferably be made with a dark under color such as black, for instance by coloring the material with a black pigment distributed through it or by depositing the black on the surface of the strip on the belt. Then over this dark coloring is superposed a green coloring and the lining gives the final moss appearance as of a weathered wood shingle.

In laying the shingles these are simply arranged in usual manner in overlapping rows with the thickened or decorated portions A overlying the thinner or undecorated portions B of the shingles underneath. Where these shingles are decorated, as shown in Fig. 5, the markings will

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give depth and variability to the exposed portions of the shingles and avoid monotonous flat effects. It is obvious that the marking resulting from the process illustrated in Figs. 3 and 4 may be widely varied depending upon the way in which the flexible decorating layer is formed; the lining instead of being vertical may be horizontal or diagonal, or both, and may be interrupted by narrow or wide cross marks positioned as desired, the particular form of fabric marker being merely illustrative of one specific application.

I claim:

1. The method of manufacturing decorated shingles comprising forming the shingle of asbestos-cement material in plastic form and with its surfaces preformed, positioning a sheet of molding material on a preformed face of the shingle supported on a flat surface, assembling a number of said superposed shingles and molding means and subjecting the assembly while unheated to pressure to mold the surface of each shingle in correspondence with its molding member holding said pressure during a predetermined initial set and relieving said pressure and said molding means after said initial set and then later completing the setting of said molded cement.

2. The process of forming shingles of asbestos-cement material comprising producing the shingle in plastic form before setting and with its surfaces preformed, then spreading a flexible marking strip on a preformed surface of the shingle, the strip having loose strands adapted to arrange themselves in a variable manner, and then pressing said shingle with said strip between unheated plates to force the material of the strip into the surface of the shingle, then permitting the shingle to initially set as marked by these strands of said strip, and then later completing the setting of said molded shingle.

3. The process of forming shingles of asbestos-cement material comprising producing the shingle in plastic form before setting and with its surfaces preformed with a dark under-color and a different surface color, then spreading a flexible marking strip on a preformed surface of the shingle, the strip having loose strands adapted to arrange themselves in a variable manner, and then pressing said shingle with said strip between unheated plates to force the material of the strip into the surface of the shingle, then permitting the shingle to initially set as marked by these strands of said strip, and then later completing the setting of said molded shingle.

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