June 13, 1933. N. P. HARSHBERGER 1,913,666

METHOD OF PRODUCING VARIED EFFECTS ON BUILDING MATERIAL WITH ONE BASIC STONE

Filed April 11, 1930

Fig. 1.



Fig. 2.



Fig. 3.

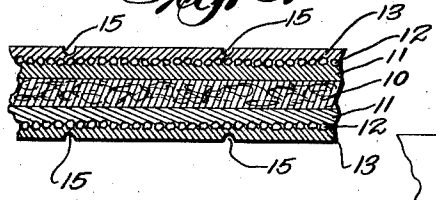


Fig. 4.

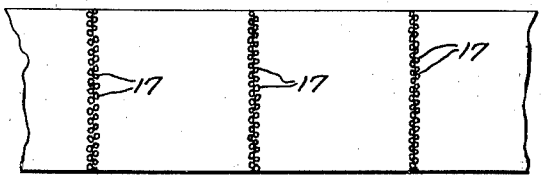


Fig. 5.



Fig. 7.

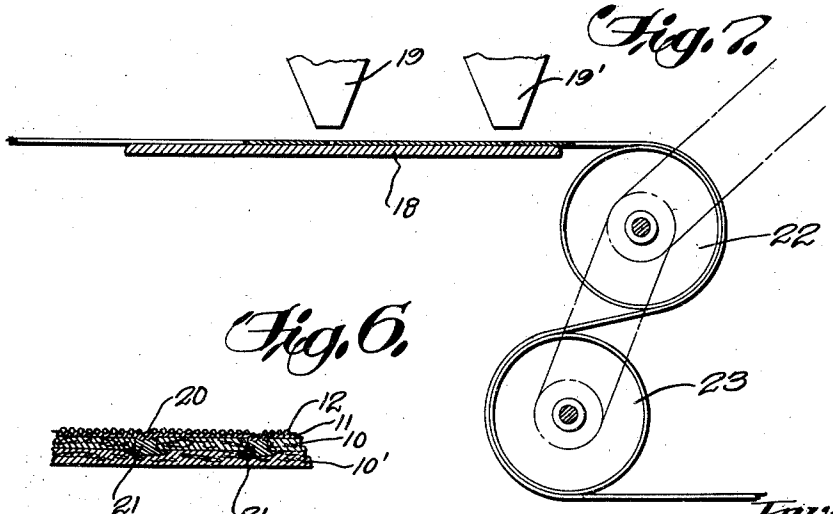


Fig. 6.

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Patented June 13, 1933 1,913,666

UNITED STATES PATENT OFFICE

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METHOD OF PRODUCING VARIED EFFECTS ON BUILDING MATERIAL WITH ONE BASIC STONE

Application filed April 11, 1930. Serial No. 443,603.

This invention relates to improvements in method of producing varied effects on building material with one basic stone.

It is one of the objects of this invention to provide an improved method of producing building material such as is used for roofing and siding purposes, said method resulting in an article which is weatherproof, fireproof, durable, and otherwise well adapted for building purposes.

A further object of this invention is to provide an improved method of producing building material by means of which various design effects and lines of demarcation can be created with but one basic stone. Heretofore, it has been common practice to produce designs by employing several groups of stone or mineral surfacing material of different colors to produce the desired effect.

With the above and other objects in view, the invention consists of the improved method and all its parts and combinations, as set forth in the claims, and all equivalents thereof.

In the accompanying drawing, in which the same reference numerals designate the same parts in all of the views:

Fig. 1 is a sectional view of a portion of material produced by the improved method;

Fig. 2 is a similar view showing a modification;

Fig. 3 is a view similar to Fig. 1 on an enlarged scale showing material which is surfaced on both sides and which has surface depressions to form lines of demarcation;

Fig. 4 is a plan view of a strip of material constructed in accordance with the method illustrated in Fig. 5;

Fig. 5 is a sectional view of a portion of material showing an additional modification;

Fig. 6 is a sectional view of a portion of material showing another modification; and

Fig. 7 is a diagrammatic view of the apparatus used in producing the material shown in Fig. 6.

In carrying out the improved method, an ordinary web comprising a fabric base 10 having a coating of bituminous material 11 is employed. The bituminous material is preferably covered with a layer of mineral surfacing 12, such as crushed slate. Next, a coating 13 of Portland cement is applied over the mineral surfacing to completely cover the same. The said cement may be mixed with asbestos fibers or the like. This method results in a very durable article, as the cement grips the mineral surfacing and bituminous material and is firmly anchored in place. Even if the cement, in the course of time, cracks, the waterproof fabric base will hold the sections together and will protect the roof.

As a modification of the method illustrated in Fig. 1, the mineral coated surface may be formed with a plurality of indentations 14, as shown in Fig. 2. When the cement coating is applied, it will fill in said indentations and the cement coating will be still more firmly held in place.

The method above described makes it possible to obtain various design effects or to produce lines of demarcation without using mineral surfacing of different colors as is now the common practice. As shown in Fig. 3, the cement coating may be indented along desired lines as at 15 to create individual unit effects, the indentations producing shadow lines. Fig. 3, it will be noted, shows further, a fabric base which is surfaced on both sides.

In Figs. 4 and 5 an additional method of creating design effects is illustrated. In this form, before the concrete coating is applied, a plurality of offset perforations 16 are made which extend through the entire web. The said perforations are made along desired lines or in desired areas to produce various effects. In Fig. 4, the lines extend transversely of the strip to create an effect of a plurality of individual shingles. Next, the concrete mixture is applied to the web and said concrete flows into the perforations to create surface depressions 17. The product is then mounted on an additional fabric base 10'.

In Fig. 6 an additional modification is shown. In this form, the web which has already been or is to be covered with a layer of crushed mineral, is perforated as in Figs. 4 and 5, and the web is run over a platform

18 (see Fig. 7), the rear of the web facing upwardly. A hopper 19 then deposits crushed mineral material 20 of a different color from that used or to be used on the face of the web into the rear of the perforations. Another hopper 19' deposits a cement and asphalt mixture 21 into the perforations to hold the grit in place. The web then travels around rollers 22 and 23 which press the material into place. Next, the web is mounted on an additional fabric base 10'. If desired, only one hopper may be employed, said hopper delivering a mixture of the crushed mineral, cement, and asphalt to the rear of the perforations.

From the foregoing description, it may be seen that the improved method makes it possible to produce a very durable article in a simple manner, and to create various effects on the outer surface of said finished article.

What I claim is:

1. The method of producing designs on building material consisting of pre-forming a plurality of apertures in desired areas in a sheet of composition material, and coating said material with cement, said cement flowing into the pre-formed apertures to only partially fill the same and thereby leave surface depressions.

2. The method of producing designs on building material consisting of pre-forming a plurality of apertures in desired areas in a sheet of fabric based material, and coating said material with a weather resisting substance, said substance flowing into the pre-formed apertures to only partially fill the same and thereby leave surface depressions.

3. The method of producing designs on building material consisting of pre-forming a plurality of apertures in desired areas in a sheet of fabric based material, coating said material with cement, said cement flowing into the pre-formed apertures to only partially fill the same and thereby leave surface depressions, and mounting the apertured material on a base.

4. The method of producing designs on building material consisting of pre-forming a plurality of apertures in desired areas in a sheet of fabric based material, coating said material with a weather resisting substance, said substance flowing into the pre-formed apertures to only partially fill the same and thereby leave surface depressions, and mounting the apertured material on a base.

5. The method of producing shingle elements consisting of applying to a moving fibrous base a layer comprising a multiplicity of individual mineral pieces, applying during manufacture in a plane above the mineral layer a coating comprising hydraulic cement, cutting into shingle sizes, and permitting the coating to set after it has been applied, said mineral pieces serving as the principal means of bonding said coating in place, and said coating having a thickness greater than the total thickness of said mineral pieces.

6. The method of producing shingle elements consisting of applying to a moving waterproofed fibrous base a layer comprising a multiplicity of individual mineral pieces, and applying during manufacture in a plane above the mineral layer a coating comprising hydraulic cement, permitting the coating to set after it has been applied and cutting into shingle sizes, said mineral pieces serving as the principal means of bonding said coating in place, and said coating having a thickness greater than the total thickness of said mineral pieces.

7. The method of producing building material consisting of uniting a fabric base with mineral particles and then coating said particles with cement and creating depressions in said cement coating to produce shadow effects for creating a desired design, said cement being capable of chemically reacting to cause permanent setting thereof.

8. The method of producing shingle elements consisting in the steps of applying to the surface of a moving web, mineral particles, and then coating said mineral particles with a layer of hydraulic cement, said cement layer having a thickness greater than the thickness of said mineral particles, and being anchored to said shingle element through the medium of said mineral particles only.

9. The method of producing shingle elements consisting in the steps of applying to the surface of a moving web, mineral particles, and then coating said mineral particles with a layer of hydraulic cement and fibres, said cement layer having a thickness greater than the thickness of said mineral particles, and being anchored to said shingle element through the medium of said mineral particles only.

10. The method of producing shingle elements consisting of applying to a moving fabric base a layer of material which will form a rough surface thereon and applying during manufacture a coating of hydraulic cement over said rough surface, said cement coating having a thickness greater than the thickness of said rough surface, the latter serving as the principal means of bonding the cement in place.

11. As a new article of manufacture, a shingle element cut from a moving fibrous web comprising a fibrous base, a layer of mineral particles fixed to said base and a thick layer of hydraulic cement, covering and having its uppermost surface wholly above, said mineral layer and anchored in place by said mineral particles.

12. As a new article of manufacture, a shingle element comprising a flat wholly flexible fibrous base, a layer of crushed slate

fixed to said base, and a layer of hydraulic cement covering and having its uppermost surface wholly above said slate layer and anchored in place by the latter.

13. As a new article of manufacture, a shingle element cut from a moving fibrous web comprising a fibrous base, a layer of mineral particles fixed to said base and a layer of hydraulic cement with an aggregate applied as a wash, covering and having its uppermost surface wholly above said mineral layer and anchored in place by said mineral particles.

14. The method of producing designs on building material comprising the steps of preforming a plurality of apertures in desired areas in a sheet of mineral surfaced composition roofing and coating said material with cement, said cement flowing into the preformed apertures to only partially fill the same and thereby leave surface depressions.

In testimony whereof I affix my signature.

NORMAN P. HARSHBERGER.