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[54] **COATED ROOF SURFACE**
1 Claim, 6 Drawing Figs.

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117/2, 117/30, 117/75, 117/76 P, 117/76 FB,
117/92, 117/102 R, 117/104 R

[51] Int. Cl. **B44d 1/14,**
E04d 11/02

[50] Field of Search **117/92, 72,**
70, 2, 76 FE, 76 P

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ABSTRACT: A method of resurfacing a roof and the coated roof are disclosed in which a roof surface is coated in sequence with a subbase coating comprising mineral wool insulation, perlite, clay, gypsum and aluminum sulfate, a waterproof coating additionally containing asphalt, and a top coating additionally containing polyvinyl acetate and titanium dioxide.

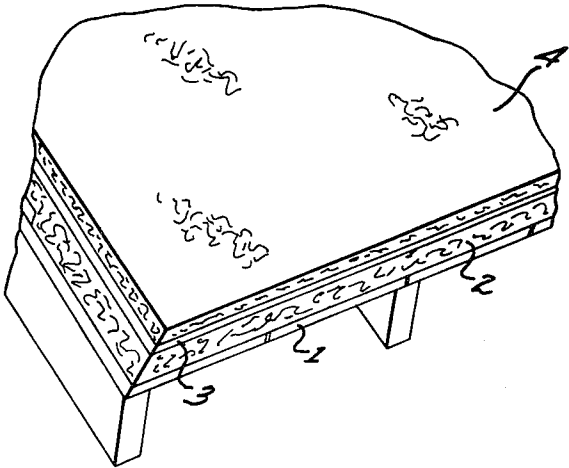


FIG. 1

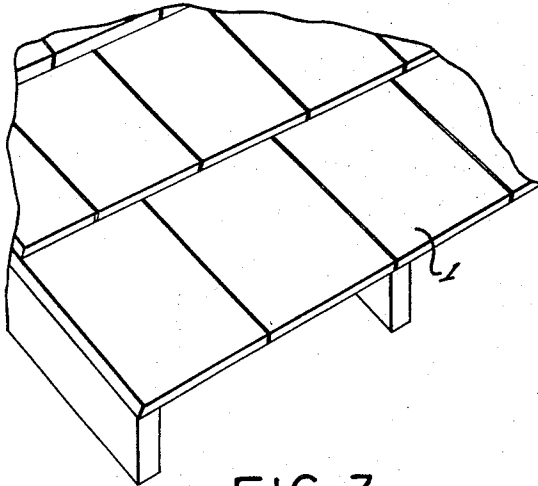


FIG. 2

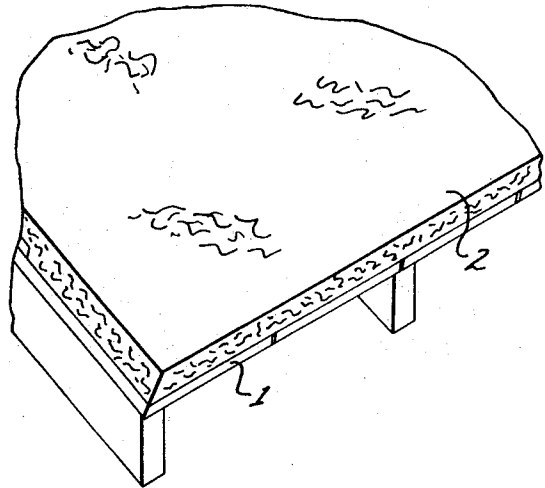


FIG. 3

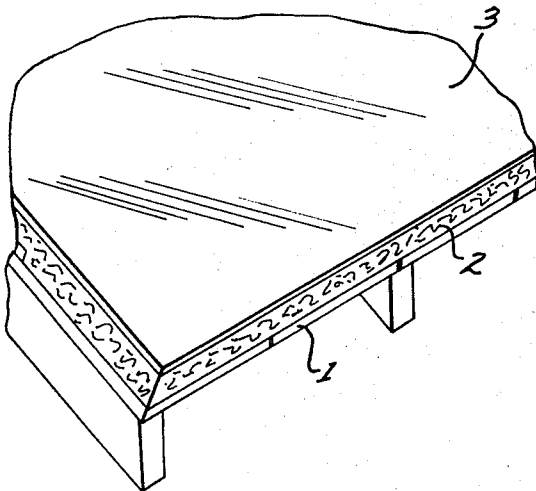


FIG. 4

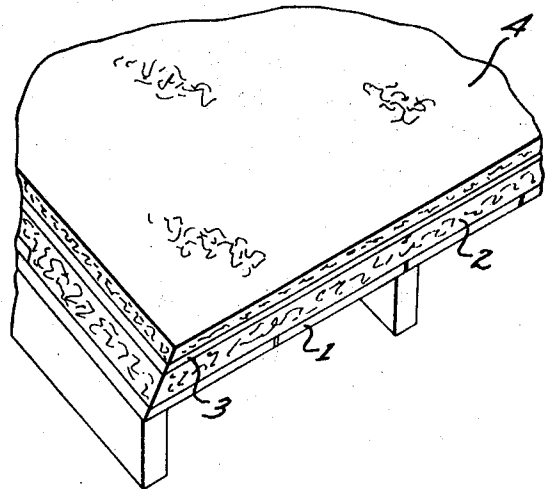


FIG. 5

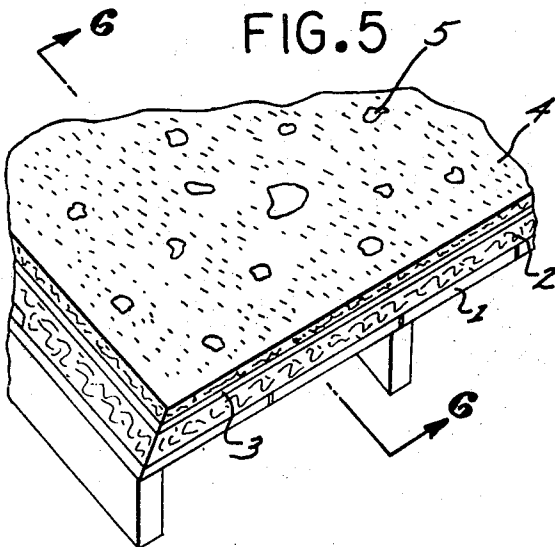
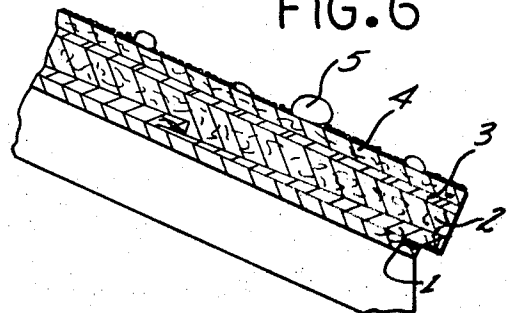


FIG. 6



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COATED ROOF SURFACE

An object of my invention is to provide a novel method and material for resurfacing roofs which is sprayed through a nozzle under pressure and is conveyed by an air stream, thus quickly and easily covering large roof areas.

Another object of my invention is to provide a method and material of the character stated which will dry rapidly and which will not crack or dry out over long periods of time.

Another feature of my invention is that the material can be applied either by means of a hand trowel or by a nozzle under air pressure.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detailed description and the appended claims.

IN THE DRAWING

FIG. 1 is a fragmentary perspective view of a roof to which my material will be applied.

FIG. 2 is a fragmentary perspective view showing the sub-base coat in position.

FIG. 3 is a fragmentary perspective view of the subbase and waterproof coats in position.

FIG. 4 is a fragmentary perspective view of the subbase waterproof and topcoats all in position.

FIG. 5 is a fragmentary perspective view of the completed resurfaced roof showing gravel or rock spread thereon.

FIG. 6 is a fragmentary sectional view taken on line 6—6 of FIG. 5.

Referring more particularly to the drawing, the numeral 1 indicates a roof which may be old or new and which may be either wood or plastic shingles, or paper, felt, or metal surfacing of any usual and well known type. An old roof particularly becomes unsightly or leaks after a long period of time and a renewal method if then necessary.

The first step in resurfacing a roof is to apply a subbase coat. The subbase coat is produced as follows:

QUANTITIES TO MAKE 70 GALLONS

SubBase Coat	
Mineral Wool Insulation	15-40 lbs.
Perlite	15-40 lbs.
Montmorillonite Clay (Bentonite)	15-40 lbs.
Gypsum	75-125 lbs.
Aluminum Sulfate	0.5-5 lbs.
Water to make 70 gallons.	

When mixing the subbase coat as well as the subsequent two coats, the following procedure is followed:

Base.

The mineral wool and perlite are mixed together in excess water with a shear type propeller or dispenser.

The excess water is pressed off until a minimum of water is left. This is the base to which all the other ingredients are added.

The subbase coat 2 is now sprayed or trowelled onto the roof 1 to the required or desired thickness. This coat covers the entire roof and after application is permitted to partly dry. If the roof material is placed by means of a pressure gun or nozzle, the nozzle is modified slightly to accept the aluminum sulfate solution. This aluminum sulfate accelerates the setting

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of the completed roof to about 10 to 30 minutes in time. The gypsum is added for a thickening and antishrinking agent, and also prevents reticulation. After the subbase coat is in position a waterproof coat 3 is applied to the entire upper surface. This waterproof coat consists of the following:

Waterproof Coat	
Mineral Wool Insulation	15-40 lbs.
Perlite	15-40 lbs.
Montmorillonite Clay (Bentonite)	15-40 lbs.
Emulsified Asphalt	10-30 gal.
X Gypsum	75-125 lbs.
Aluminum Sulfate	0.5-5 lbs.
Water to make 70 gallons.	

After the waterproof coat has been allowed to set briefly, the topcoat 4 is applied, which can be white or any other coloring desired. The topcoat 4 is formulated as follows:

Top Coat	
Mineral Wool Insulation	15-40 lbs.
Perlite	15-40 lbs.
Montmorillonite Clay (Bentonite)	15-40 lbs.
Polyvinyl Acetate Emulsion	5-15 gal.
Titanium Dioxide	20-50 lbs.
Gypsum	75-125 lbs.
Aluminum Sulfate	0.5-5 lbs.
Water to make 70 gallons.	

This topcoat is also sprayed over the entire surface of the roof, and the entire coating is allowed to dry or set for 10 to 30 minutes, more or less.

Finally, if desired, a coat of gravel or crushed rock 5 can be applied to the top coat merely for ornamentation.

When the mineral wool and perlite are mixed together as stated above, the subbase coat is formed by adding water and the montmorillonite clay according to the formulation recited above. Similarly, when producing the waterproof coat, water is added to the subbase coat material as well as emulsified asphalt, and these elements are mixed in a ribbon-type blender or similar machine. The top coat is mixed by adding to the base coat as recited above, the quantities of latex and titanium dioxide according to the formulation recited above, and this mixing is also accomplished in a ribbon-type blender or similar-type machine. The amount of water which is added to each of the coat formulations recited above will be the amount necessary to provide the necessary flow through a nozzle, or it can be a thicker consistency if the resurfacing material is trowelled in place.

Having described my invention, I claim:

1. A roof surface coated in sequence with subbase coating comprising the dried residue of 15-40 lbs. mineral wool insulation, 15-40 lbs. perlite, 15-40 lbs. clay, 75-125 lbs. gypsum, 0.5-5 lbs. aluminum sulfate; sufficient water to make a 70 gallon batch; a waterproof coating comprising the dried residue of 15-40 lbs. mineral wool insulation, 15-40 lbs. perlite, 15-40 lbs. clay, 10-30 gals. emulsified asphalt, 72-125 lbs. gypsum, 0.5-5 lbs. aluminum sulfate and sufficient water to make a 70 gallon batch, and a top coating comprising the dried residue of 15-40 lbs. mineral wool insulation, 15-40 lbs. perlite, 15-40 lbs. clay, 5-15 gals. polyvinyl acetate emulsion, 20-50 lbs. titanium dioxide, 75-125 lbs. gypsum, 0.5-5 lbs. aluminum sulfate, and sufficient water to make a 70 gallon batch.