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METHOD FOR ROOFING MANUFACTURE

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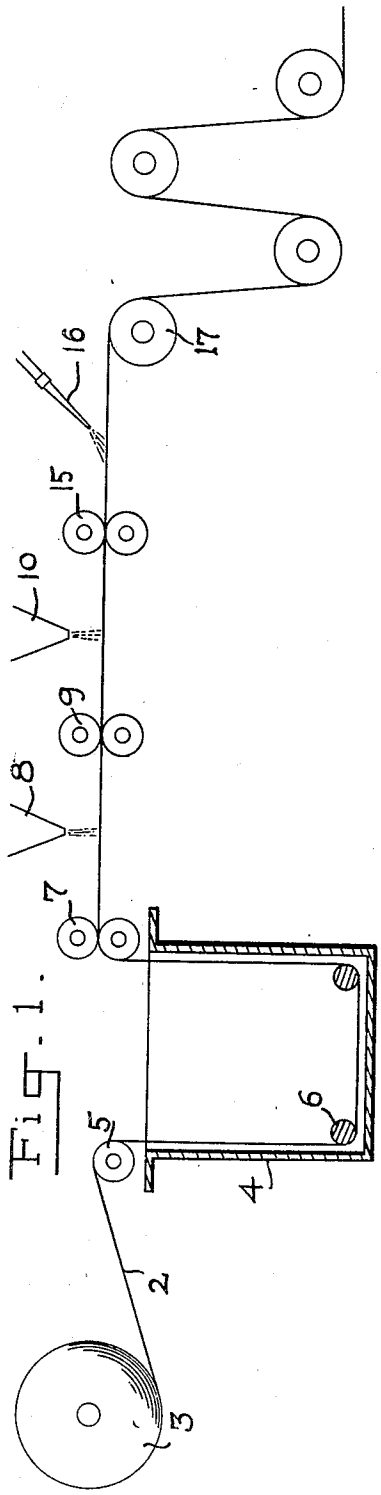


Fig. 1.

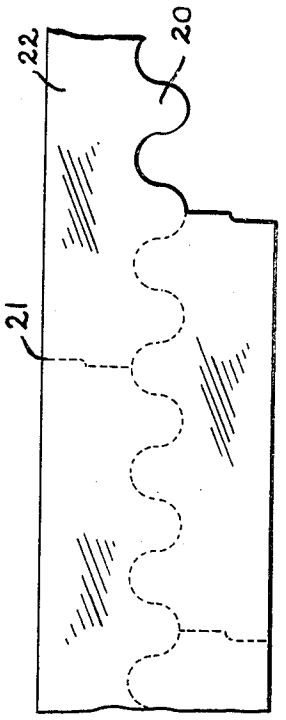


Fig. 3.

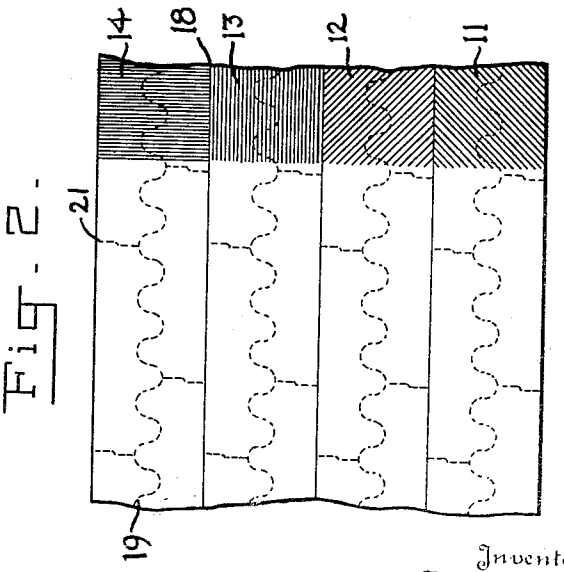


Fig. 2.

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UNITED STATES PATENT OFFICE

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METHOD FOR ROOFING MANUFACTURE

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This invention relates to the manufacture of roofing and the like, and aims to provide a novel process and apparatus for producing an improved and superior product.

The invention consists in the features, combinations and arrangements hereinafter described or claimed, for carrying out the above stated objects and such other objects as will hereinafter appear.

The invention may be understood readily by reference to one illustrative embodiment thereof described in the following specification, such embodiment comprising a conventional apparatus for manufacturing prepared roofing which is coated with a mineral surfacing material. This apparatus is equipped with a hopper arranged transversely to the foundation sheet and divided into a plurality of compartments, each of which is adapted to contain differently colored mineral material which is deposited therefrom in parallel stripes upon the sheet. Thereafter, the mineral material of any or all of the colored stripes may be coated with an oil preparation before or after it has been partially embedded into the foundation sheet. Finally the sheet is severed longitudinally between the different colored areas and transversely to divide same into individual roofing elements. These elements when removed at the delivery end of the roofing machine can be immediately packaged into bundles of mixed colors.

In the accompanying drawings:

Fig. 1 is a diagrammatic view of a system employed in the practice of the invention;

Fig. 2 is a plan view showing a continuous web of prepared roofing severed longitudinally and transversely to divide the web into transverse rows of mixed colored individual elements.

Fig. 3 is an enlarged view of one colored strip.

The general characteristics of my improved apparatus are the same as those of machines now commonly employed for the production of prepared roofing of the variety involving a waterproofed foundation sheet upon which a layer of granular surfacing material is partially embedded, and therefore only those parts involving the novel features need be illustrated and described in detail. In the apparatus shown the sheet of material, as for example felt, which is to form the foundation sheet of the roofing, is represented at 2 and unwound from roll 3 in any suitable manner. As unrolled this sheet is directed into tank 4 over roll 5 and beneath rolls 6 journalled within and near the bottom of the tank, and then upwardly between squeeze rolls 7. Tank 5 is adapted to contain any suitable impregnating material which is of such character that it will be readily absorbed by the sheet. Usually the saturating material is asphaltum heated to such a degree as to give it a relatively thin consistency, thereby conditioning same to penetrate thoroughly into the sheet. The sheet emerges from the tank with an excess amount of asphalt adhering thereto which continues to penetrate into the sheet until same is thoroughly impregnated, after which any remaining excess is removed by roller 7 positioned to return it into the tank.

After being impregnated with thin asphaltum, the impregnated sheet is traversed beneath tank 8 which contains a suitable waterproofing coating of relatively thick consistency such as asphaltum. This coating is applied in a thin layer on the upper face of the sheet from tank 8 through an opening in the bottom thereof extending substantially the entire width of the strip so that the waterproofing material may fall over the entire width of the sheet. Rolls 9 cooperate to squeeze and smooth the coating over the surface of the sheet.

Thus prepared the sheet is adapted to receive a granular surfacing material which may be supplied from hopper 10 that is advantageously divided into a number of compartments, each compartment being adapted to contain different colored granular material. The hopper is typified in the present instance by four compartments from which the granular material is deposited in four bands 11, 12, 13 and 14, preferably of equal width.

Granular surfacing material such as slate is absorbent and subsequently attracts a quan-

tity of moisture from the atmosphere and draws it into the asphaltic coating where it causes blisters to appear. In order to prevent damage from this source the surfacing material may be made moisture repellent by coating the particles with an oil preparation or the like, and this is conveniently accomplished by spraying or otherwise coating said surfacing material before or after it has been partially embedded in the sheet by rolls 15. One means for effecting the waterproofing is illustrated by a row of nozzles 16 arranged transversely the sheet through which the oil or similar material is ejected upon the surfacing material. The nozzles may be positioned on either side of rolls 15 to apply the oil preparation to the surfacing material before or after it has been fixed to the roofing sheet. Ordinarily it is sufficient to coat merely the exposed portion of the partially embedded surfacing material but the nozzles may be positioned adjacent to hopper 10 to eject the oil preparation against the falling stream of slate thereby enveloping each particle of slate with the moisture repellent material.

The sheet is festooned over a plurality of rolls 17, severed longitudinally and transversely into individual elements so that successive transverse rows of different colored elements will be fed to the delivery end of the machine where they can be immediately arranged into bundles of mixed colors. One manner of dividing the sheet is illustrated by severing the sheet longitudinally along lines 18 between the colored bands into strips, and then bisecting each strip longitudinally on sinuous line 19 to provide ornamental rows of tabs 20 for each exposed edge of the roofing elements. Transverse slits 21 further divide the strips into individual strips 22 of similar design. Various other ways of cutting may be adopted to divide the strips into individual elements of the same or different design and yet deliver them in transverse rows for being arranged in mixed bundles.

Obviously the invention is not limited to the details of the illustrative apparatus and method of manufacture, all or any of which may be variously modified. Moreover, it is not indispensable that all features of the invention be used conjointly as certain features may be employed to advantage in various different combinations and sub-combinations.

Having thus described one embodiment of my invention, I claim:—

1. A method of making roofing elements which consists in affixing longitudinal stripes of different colored granular material on a foundation sheet of roofing, slitting the sheet between the stripes into a number of strips dividing the stripes in ornamental outline to form shingle strips of such outline, and then severing each strip transversely to form individual elements, each element being formed entirely of one color.

2. A method of making roofing elements which consists in depositing stripes of different colored granular material on a foundation sheet of roofing, applying pressure to said sheet to partially embed the material therein, slitting the sheet longitudinally between the stripes and then forming shingle slabs longitudinally of each stripe by dividing each stripe in ornamental outline and cutting the strips so formed transversely.

3. A method of making roofing elements which consists in depositing stripes of different colored granular material on a foundation sheet of roofing, applying pressure to said sheet to partially embed the material therein, slitting the sheet longitudinally between the stripes and then forming shingle slabs longitudinally of each stripe so that each slab is formed entirely of one color.

In testimony whereof, I affix my signature.

EMILE R. LOW.