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ROOFING MATERIAL AND PROCESS OF PREPARING THE SAME.
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Fig. I.

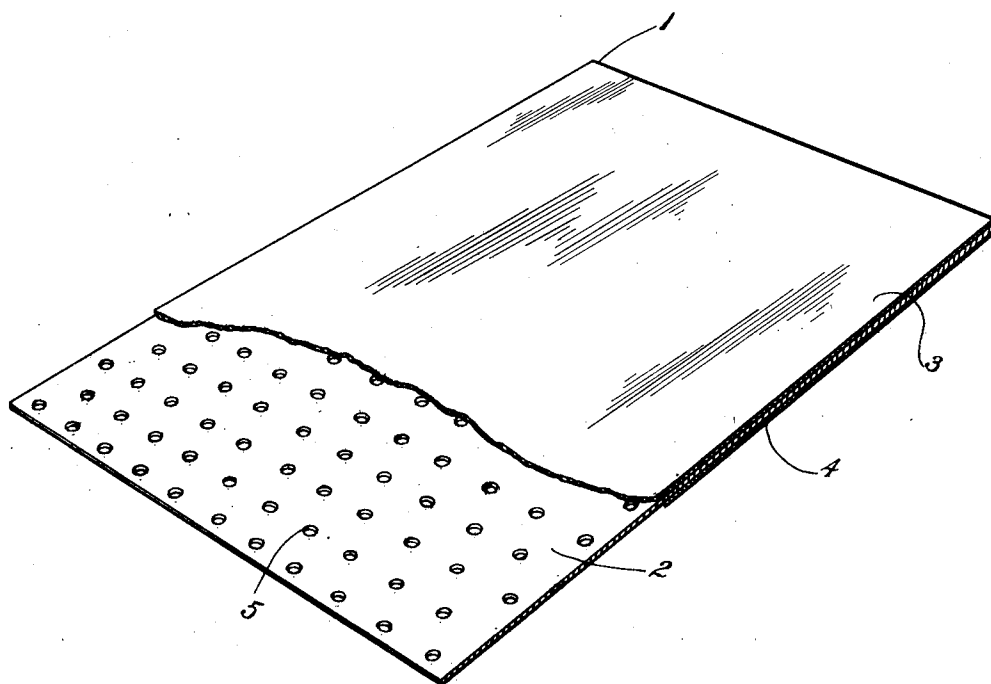
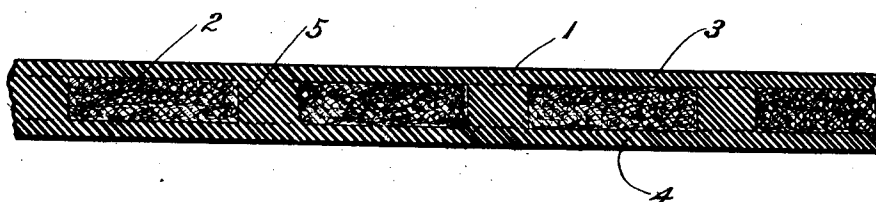


Fig. II.



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ROOFING MATERIAL AND PROCESS OF PREPARING THE SAME.

1,348,259.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HUGH L. WILBER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Roofing Materials and Processes of Preparing the Same; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to roofing materials and process of preparing the same, and more particularly to a roofing strip of a fibrous body, web coated with a compound, such as asphalt, pitch, tar or other equivalent substance, to render it water proof.

To those familiar with such roofing material it is known that a body strip of a fibrous and absorbent nature is essential in order to present a surface to which the coating compound will readily adhere and which is more or less porous so that it will absorb a certain percentage of the coating compound. At the same time the body strip must have sufficient tensile strength to resist the ordinary wear and tear to which it is subject.

In order to provide a web body that will absorb the preservative coating, rag or wool felt is usually employed, which during its preparation is sufficiently pressed or rolled to give it the desired strength. Such pressing, while necessary to produce the strength of material desired, to a certain extent lessens the absorbent properties of the material and decreases the efficiency of the product.

It is also known that coated roofing material of this character is very sensitive to temperature changes, and that as the interior web acts to a certain extent as a non-conductor of heat, there is a tendency to produce unequal contraction or expansion of the coating, causing buckling or warping of the roofing sheets which not only detracts from the appearance of the product, but is injurious to joints and causes cracking of the coating.

It is, therefore, the object of the present

invention to provide a roofing material of this character, wherein the body strips have a greater absorbing property than is ordinarily possible, and wherein the method employed to increase the per cent. of absorption will lessen the cost of production by permitting a body of lesser thickness and surface area without impairing the strength of the material.

It is also an object of the present invention to provide roofing strips or sheets wherein the coatings are bonded together through the body web, thereby taking a relatively greater percentage of coating compound as compared to the web material, which makes the material more resistive to fire and provides means of conduction whereby temperature changes are effective to both surface coatings and thereby practically eliminating the buckling or warping tendency of the material.

In accomplishing the objects of the present invention I have provided improved details of structure the preferred forms of which are illustrated in the accompanying drawings, wherein:—

Figure I is a perspective view of a sheet of roofing material constructed according to my invention, a portion of the body web being exposed to illustrate the perforations.

Fig. II is an enlarged cross section of the same.

Referring more in detail to the drawings:—

1 designates a sheet of roofing material constructed according to the present invention, and which comprises a central body web 2, of an absorbent fibrous quality preferably of rag or wool felt to which is applied the surface coatings 3—4 of a waterproofing compound, consisting chiefly of asphaltum, tar, or an equivalent substance which is applied while in a liquid state to the web to render it water proof.

In preparing the body strip or web 2, it is provided throughout its entire surface with closely spaced perforations 5 which are preferably arranged in staggered rows, so as not to impair the strength of the web material, and which are preferably punched from the material to leave the perforations entirely open to more readily receive the liquid coating.

Before applying the surface coatings to

the web material, the latter is first drawn through a liquid preservative compound so that not only the surfaces become saturated, but the compound enters the perforations where it comes in contact with the ends of the web fiber and permits a more thorough saturation of the interior of the web.

After saturating the web, it is drawn from the liquid and carried through a press where all the liquid possible is squeezed therefrom.

After receiving the first saturation, the web is then passed through successive vats of coating compound to cover the surfaces to a sufficient thickness; the coating material not only covering the surfaces, but extending through each of the perforations to bond the opposite surface coatings together.

In this manner of preparing the roofing it will be seen that a greater percentage of coating may be used than is ordinarily possible, permitting a lesser amount of the body material, thereby rendering the material more resistive to fire and more durable.

While the web would be saturated to a certain extent from the surfaces, the perforations permit a much greater percentage of saturation due to the fact that the liquid comes in contact with the ends of the web fiber and is admitted into the web pores to provide a more thorough and much quicker saturation of the interior of the web.

It will also be seen that by so preparing the web, a greater quantity of the coating compound is used in saturating the web, but the increase in cost of additional coating compound is more than met by permitting a web of lesser thickness, and having a lesser surface area, and moreover the lasting quality and efficiency of the material is substantially increased.

It is apparent that by providing the bonding between the two surface coats an absolute uniformity of expansion and contrac-

tion is provided, and buckling, or warping of the material is eliminated.

It is also apparent that roofing of this character may be given a surface coating of gravel, slate or other substance to withstand wear and weather and may be made up in strips of any desirable length to be rolled for shipment, or may be cut in small squares to be used as shingles.

Having thus described my invention what I claim as new therein and desire to secure by Letters Patent, is:—

1. The process of preparing roofing material consisting of perforating a sheet of absorbent material, subjecting the treated sheet to a bath of preservative fluid and subjecting the treated sheet to a bath of bituminous material to coat the sides of the sheet and bond the side coats through the perforation of the inclosed sheet.

2. As an improved article of manufacture, an article composed in whole or in part of fibrous material whose surfaces are normally compact and resistive to penetration by a relatively thick saturant and which are provided with artificial perforations of relatively small area, and surface layers of relative hard asphalt affixed to the opposite surfaces of said article and joined together by bonds of asphalt filling the artificial perforations.

3. As an improved article of manufacture, an article composed in whole or in part of fibrous material whose surfaces are normally compact and resistive to penetration by a relatively thick saturant and having one of its surfaces provided with artificial perforations of relatively small area which extend into the interior of said article, and relatively thick bituminous material applied to the perforated surface and filling the said perforations.

In testimony whereof I affix my signature.

HUGH L. WILBER.