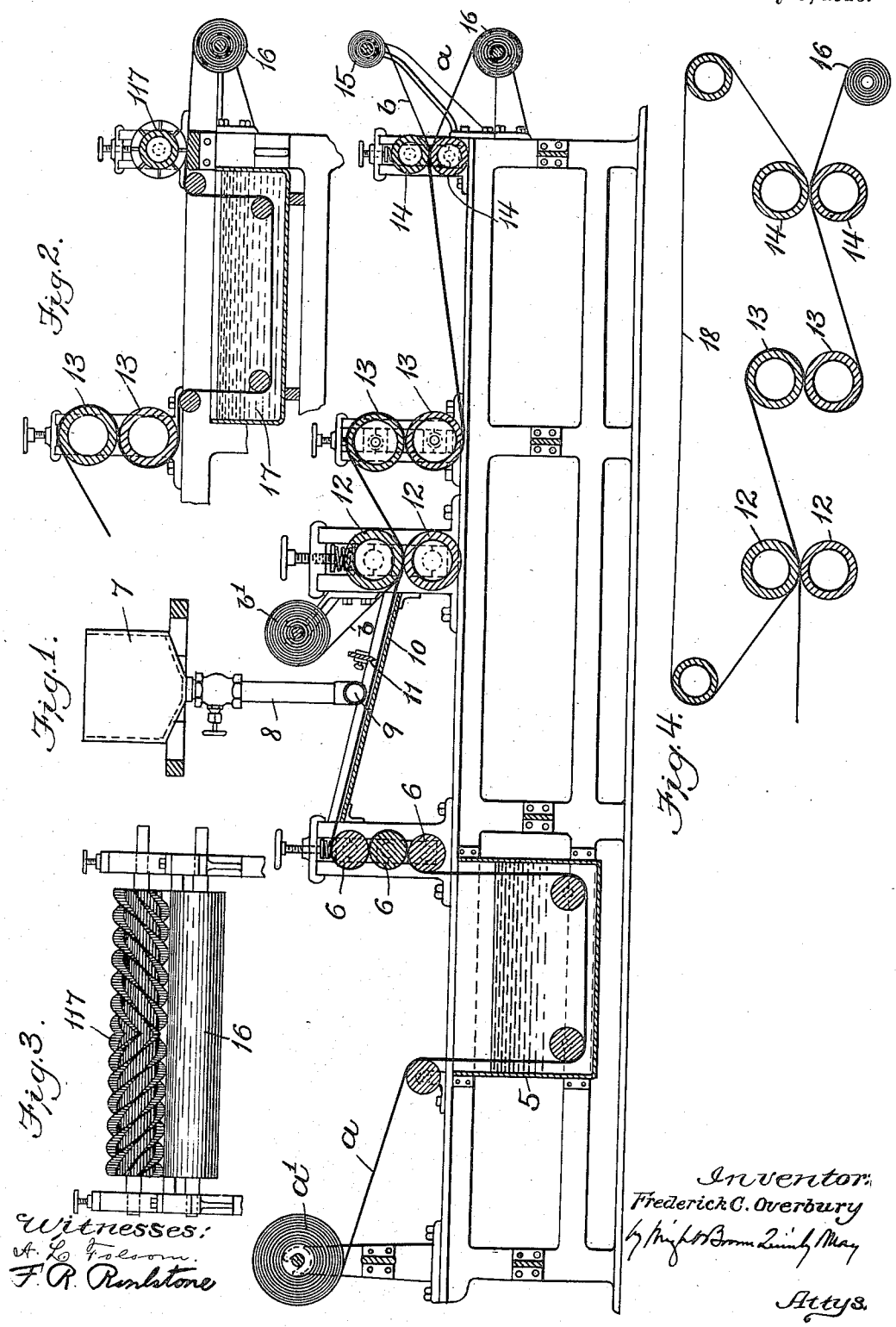


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 METHOD OF MAKING FLOORINGS, ROOFINGS, AND LIKE FABRICS.
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1,182,414.

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Witnesses:
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UNITED STATES PATENT OFFICE.

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METHOD OF MAKING FLOORINGS, ROOFINGS, AND LIKE FABRICS.

1,182,414.

Specification of Letters Patent.

Patented May 9, 1916.

Application filed July 2, 1912. Serial No. 707,179.

To all whom it may concern:

Be it known that I, FREDERICK C. OVERBURY, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Methods of Making Floorings, Roofings, and like Fabrics, of which the following is a specification.

This invention has relation to prepared flexible roofings, floorings or other like coverings in which a suitable foundation, such as fabric, felt or paper, is impregnated or saturated with a waterproofing compound and is coated with a water or weather-resisting coating or facing. Various compounds or mixtures have been practically employed in the impregnation or saturation of the foundation, such, for instance, as asphaltum, pitch or other hydrocarbon materials, the outer facing or coating usually comprising a relatively harder asphaltum or pitch so that it will not be melted by the heat of the sun. Such roofings, floorings or like coverings are also colored by the addition of a suitable pigment to the mixture or substance which forms the outer layer or facing.

In the practical manufacture of such articles, a sheet or foundation material is carried through a vat containing the impregnating mixture, and, after the surplus mixture has been removed by pressure rolls, the sheet is passed between rollers or scrapers which apply to one or both faces thereof the proper amount of the facing or coating substance or mixture. The coatings or facings of prepared roofings or floorings thus manufactured are always more or less uneven, rough or corrugated, and have a shiny appearance, particularly those which are colored other than black.

The object of the present invention is to provide a method of making roofings or floorings in which such characteristic machine marks do not appear on the surface of the goods and in which the surface is dull or "flat", that is, without the shiny effect that is ordinarily produced.

The invention has further for its object the ornamentation of such materials by printing thereon various designs.

I accomplish these objects by pressing temporary layers of suitable material, such

as paper, metal or the like, upon the outer facing or coating while it is still plastic, so that, when said layer is removed, the surface of the facing is smooth with what may be termed a dull or flat finish. The temporary layer may be removed immediately, or else it may be allowed to remain on the goods while they are in storage or in transit and be removed when the goods are to be removed.

On the accompanying drawing, Figure 1 illustrates conventionally instrumentalities which may be employed in carrying out my process. Fig. 2 illustrates another instrumentality which may be utilized in removing the temporary layer. Fig. 3 shows the scraper employed in the instrumentality shown in Fig. 2. Fig. 4 illustrates a temporary layer consisting of an endless band.

Referring to the drawings,—a sheet of felt, paper, fabric or other suitable material to form the base or foundation of the flooring or roofing, is indicated at *a*, and is drawn from a roll *a'* through a vat 5 which contains a molten hydrocarbon material, such as pitch, asphalt or a combination of the same or of oils, resins or other substances which will impregnate the sheet and make it waterproof. Any substance or substances for this purpose, which are now well known to those skilled in the art, may be employed. After leaving the vat, the impregnated sheet *a* may be passed through squeeze rolls 6 which remove the surplus impregnating material.

As previously stated, the impregnated sheet may be coated or faced on either one or both sides. As shown, the coating material is applied to but one side of the sheet and is contained in a tank 7 from which it flows through a pipe 8 to a slotted or perforated delivery pipe 9, whence it flows upon the sheet which is carried over a tray or table 10, a gage being indicated at 11 to regulate the thickness of the skin or surface coating. The sheet then passes through pressure rolls 12 12 and thence between cooling drums 13. *b* indicates the temporary layer which is delivered from a roll *b'* and passes with the coated sheet between the pressure rolls 12 around the cooling drum 13. The sheet, having the temporary layer, is then passed between rolls 14 14 and the

temporary layer is then stripped from the face of the coated material and is wound upon a roll 15, the sheet α being wound upon a roll 16. The skin coating or facing of the sheet may consist of any of the usual pitch like materials, such as asphaltum, pitch or the like, to render the sheet waterproof or weatherproof and is preferably applied in a hot plastic state, so that, when the temporary layer is pressed upon it, it adheres thereto until it is removed, and, as the sheets with the temporary facings pass between the rolls 12 12, 13 13, the said temporary layer is pressed with sufficient force upon the coating of facing material to flatten and smooth it and prevent the formation of any roughness, unevenness or corrugation upon the surface thereof. When the temporary layer is then removed, the skin coating or facing is perfectly smooth with a flat or dull finish.

I preferably employ as the temporary layer a sheet of sized or paraffined paper or other material which will not adhere so tenaciously to the skin coating as to prevent its removal or as to cause corrugations or unevennesses upon the surface of the skin coating when said layer is removed. Where a temporary layer of material which is not waterproof, such as ordinary paper, is utilized, it may be removed from the sheet of flooring by passing the latter through a tank 17 containing cooled water to soften the temporary layer so that it may be removed by a scraper 117, as indicated in Figs. 2 and 3, the scraper consisting of a roll for instance having oppositely extending helical blades of any suitable material such as bristles, felt, leather, compressed fiber or the like. These instrumentalities may be utilized where the paper has a tendency to stick to the surface of the coated fabric. If desirable, the temporary layer may remain upon the saturated and coated fabric and be rolled up with it and removed when the goods are ready to be used. Instead of employing a sheet of paper, as indicated in Fig. 1, I may employ an endless band as a temporary layer, as indicated in Fig. 4. The band in this instance may be sized or paraffined paper, or it may consist of a metallic belt as indicated at 18. This band passes with the impregnated and coated fabric between the pressure rolls 12 12, the cooling drums 13 13, and the rolls 14 14, all of which correspond to those represented by the same numerals in Fig. 1.

I have found that, by the method which I have described, the face of the prepared fabric may be ornamented by the employment of a colored or printed sheet of paper, coloring matter being deposited and left on the facing material.

While I preferably employ a facing material which is solved by heat, nevertheless I

would not consider it a departure from the invention if the facing material were applied cold and a suitable solvent employed for rendering it soft and plastic. If desired, the temporary layer may be oiled prior to its contact with the soft and plastic skin coating or other means may be utilized to prevent its sticking permanently to the facing or coating material.

I appreciate that the invention may be practised in a variety of ways and that various instrumentalities may be employed in carrying out the invention. So far as I am aware, however, I am the first to have provided a method of making flexible prepared roofing or flooring in which the surface or skin coating is smoothed by the employment of a temporary layer pressed thereon while the facing or coating is in a soft or plastic state.

Having thus explained the nature of my said invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, what I claim is:

1. The herein described method of making flexible roofing, flooring or the like, which consists in impregnating a sheet of fibrous material with a waterproofing compound, applying to said impregnated sheet a plaster coating of pitch, asphalt or equivalent weatherproof waterproof compound, pressing upon said coating while it is plastic a temporary removable layer of suitable material to form a smooth surface upon the said coating, and permitting said coating to set and harden.

2. The hereindescribed method of making flexible roofing, flooring or the like, which comprises applying to a sheet of waterproofed fibrous material a plastic coating of pitch or asphalt, pressing upon said coating while it is plastic a removable temporary layer of suitable material, permitting said coating to set and harden, and then removing said temporary layer, leaving said coating smooth and flat.

3. The hereindescribed method of making flexible roofing, flooring or the like, which comprises applying to a sheet of waterproofed fibrous material a plastic coating of pitch or asphalt, pressing upon said coating while it is plastic a removable temporary layer of suitable material, the surface of which is printed or colored, thereby to transfer the color to the said coating, and then removing said temporary layer leaving said coating smooth and printed or colored.

4. The herein described method of making weatherproof roofing, flooring or the like, which consists in applying to a suitable foundation a facing or coating of hot plastic weatherproof pitchlike material,

and, while said coating is plastic, pressing thereon a temporary removable sheet of material to smooth the surface of said facing or coating, chilling said coating to harden it, and then stripping said sheet therefrom.

5 5. The herein described method, which consists in applying a hot plastic waterproof material to a suitable foundation to form a layer or coating thereon, pressing
10 upon said coating while it is plastic a sheet of suitable material to form a smooth surface thereon, cooling said coating to harden it, stripping said sheet therefrom, and coiling the coated foundation in a marketable
15 mass.

6. The herein described method, which

consists in applying a hot plastic pitch-like waterproof material to a suitable waterproof foundation to form a layer or coating thereon, pressing upon said coating while it
20 is plastic a sheet of colored or printed material, cooling said coating to cause it to harden and set, stripping the said sheet therefrom, and leaving on the surface of
25 said coating the coloring or printed matter.

In testimony whereof I have affixed my signature in presence of two witnesses.

FREDERICK C. OVERBURY.

Witnesses:

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