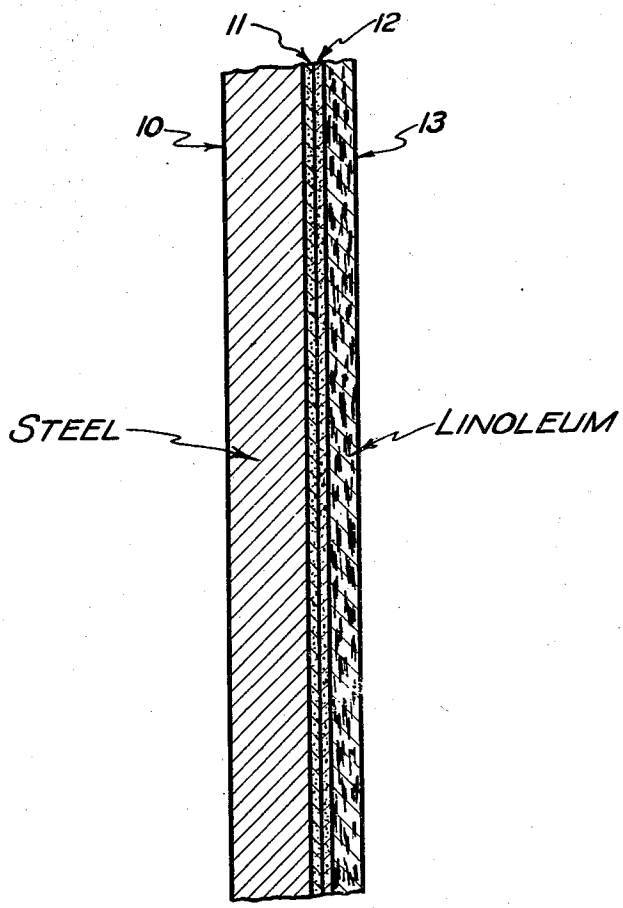
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LINOLEUM INSTALLATION

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LINOLEUM INSTALLATION

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The present invention relates to a method of uniting linoleum or similar decorative or wear-resisting surface covering, to a base of a material such as steel, glass, polished marble, glazed tile, or the like, having a smooth, non-porous surface, and to the construction obtained by such method.

The product linoleum has been known and used for many years. It comprises essentially an intimate mixture of an oxidized drying oil, resin, wood or cork flour, mineral fillers, and pigment, this mixture being pressed onto a suitable backing, usually a woven fabric of jute or cotton. In this form it has been widely used as a decorative and wear-resisting surface covering, particularly for floors but also for walls, table-tops, etc. To provide a truly satisfactory installation of linoleum, it is necessary to securely bond the covering over substantially the entire area of the sub-surface. This may be readily accomplished when the sub-surface is porous and not too smooth. Thus, wood, concrete, felt, etc., form excellent sub-surfaces to which linoleum may be firmly united. On the other hand, when it is desired to apply linoleum to smooth, non-porous surfaces, such as steel, glass, glazed tile, or the like, it is found that none of the conventional practices are adequate to secure satisfactory results. There are two principal reasons for this failure. First, such surfaces afford practically no mechanical grip or key for adhesives which are suitable for use in bonding linoleum. Secondly, when adhesives of the non-aqueous solvent type are employed, the non-porous character of the sub-surface, by retarding the evaporation or absorption of the solvent, permits such solvent by its continued presence to attack the linoleum, causing it to swell and form blisters. Furthermore, the adhesives commonly used in adhering other materials to steel or the like, cannot be employed in connection with linoleum because of their generally deleterious action on the linoleum. Thus, adhesives of the caseinate type being strongly alkaline quickly soften the linoleum composition, while adhesives comprising a non-aqueous solvent likewise dissolve or soften the oil binder and so partially or wholly destroy the fabric.

The object of my invention is to provide a satisfactory method and construction for properly bonding linoleum, or similar decorative or wear-resisting surface covering, to smooth, non-porous surfaces. In the drawing is shown a cross-section of a wall construction embodying the invention and the following is a description of such construction and the preferred method of obtaining it.

The reference numeral 10 designates a base member, in this case a steel plate having a smooth, non-porous surface. Examples of other surfaces with which this invention is particularly concerned, are glass, glazed tile, polished marble, etc. To the surface of the plate 10, to which the linoleum covering is to be united, I first apply a base coating 11. This base coating is characterized by having a strong affinity for the smooth, non-porous surface but, itself, forming a rough textured layer or film adapted to provide a mechanical key for the superposed adhesive coating. The base coating is further characterized as being non-alkaline non-thermo-plastic and substantially unaffected by the solvent of the adhesive cement subsequently used to bond the surface covering. Such base coating comprises as its essential components, a vehicle, which is non-thermo-plastic after hardening, and adapted to provide adhesion of the coating thereof to the smooth sub-surface, a solvent for such vehicle, and a fibrous filler, preferably a fibrous vegetable filler material of such coarseness as to give the coating a rough textured finish. A preferred composition for such base coating is:—

	Parts
Blown linseed oil	6
Nitro-cellulose	2
Rosin	2
Ester gum	2
Wood flour (40 mesh)	3
Ethyl acetate	15

Another suitable composition for use as the base coating is:—

	Parts
Chinawood oil	8
Amberol resin	2
White lead	2
Ground cork (40 mesh)	2
Varnoline	5
Hi-flash naphtha	5

This base coating is applied either by brush, trowel, or spray, brushing being the preferred method. After application it is permitted to thoroughly harden by air drying, thus becoming integral with the base member 10.

A layer 12 of bonding adhesive or cement is next applied. Usually this adhesive is spread uniformly over the rough textured base coating but, if more convenient or desirable, it may be applied to the back of the linoleum covering or in some cases may be applied to both the rough base coating and the linoleum. Preferably, the adhesive

is of the aqueous-solvent type, a preferred composition being:—

	Parts
Lignin	3
Clay	4
Water	3

The term "lignin" refers to the concentrated water-soluble derivative of spent sulphite cellulose liquor. Another suitable adhesive is:—

	Parts
Dextrine	3
Talc	1
Water	2

The linoleum, or equivalent decorative or wear-resisting surface covering 13 is finally pressed onto the adhesive coating and thoroughly rolled to secure uniform and intimate contact between the layer of adhesive 12 and the covering, and also between the base coating 11 and the adhesive.

It will be observed that the important and novel element of the construction is the interliner or rough textured base coating 11. It is to be further noted that this base coating is non-alkaline in character and that the coarse filler material is a fibrous vegetable substance, i. e., ground wood or ground cork which is inherently porous. This coating is not affected by changes in temperature or humidity and provides an efficient mechanical key for the layer of adhesive. The coarse filler material being of a fibrous vegetable character facilitates the setting of the adhesive by partially absorbing the aqueous solvent. When setting is complete the construction becomes permanent and integral, with the base coating tightly adhering to the smooth, non-porous surface of the steel plate, and the adhesive layer forming a perfect bond between such base coating and the linoleum covering.

I claim:

1. A construction comprising a base member of steel or the like having a smooth non-porous surface, a rough textured coating integral therewith comprising fibrous vegetable particles carried therein, and a surface covering of linoleum bonded to said coating by means of an aqueous-solvent adhesive.

2. A construction comprising a base member of steel or the like having a smooth non-porous surface, a rough textured coating integral with said smooth non-porous surface and comprising a non-alkaline adhesive vehicle and a fibrous vegetable filler material of such a coarseness as to provide said rough texture, and a surface covering of linoleum bonded to said coating.

3. A construction comprising a base member of steel or the like having a smooth non-porous surface, a rough textured coating integral with said smooth non-porous surface, said coating comprising a non-alkaline non-thermo-plastic vehicle and a coarse fibrous vegetable filler material, and a surface covering of linoleum bonded to said coating with an aqueous-solvent adhesive.

4. A construction comprising a base member of steel or the like, having a smooth, non-porous surface, a rough textured coating integral with said smooth, non-porous surface, comprising fibrous particles carried by a non-alkaline adhesive vehicle, and a surface covering of linoleum bonded to said rough textured coating by means of an aqueous-solvent adhesive.

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