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FIG-1



FIG-2

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# ALIEN PROPERTY CUSTODIAN

## FLOOR COVERING

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in the Alien Property Custodian

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My invention relates to a floor covering and a process of producing same. It has particular reference to a floor covering which consists of several layers and comprises an upper layer of rubber and an underlayer of felt paper or similar material which is protected against the influences of moisture by being impregnated with an easily liquefiable substance such as bitumen.

The drawings affixed to this specification and forming part thereof illustrate diagrammatically by way of example in an enlarged scale two modifications of my invention.

In the drawings

Fig. 1 is a sectional view of a floor covering made according to my invention and

Fig. 2 is a sectional view of another modification of such floor covering.

Although it is known that rubber possesses properties which make it apt as a floor covering, the use of rubber floor coverings is very limited in practice mainly because of the high price. For in order to obtain a good and permanent layer on the floor, a rather thick layer of about 5 mms. rubber is required, and in many cases it has been found necessary to also glue this layer to the floor.

It has already been suggested to employ a somewhat thinner layer of rubber and to connect it with an underlayer of some cheap material like felt paper. Such underlayers show however the drawback not to prevent the penetrating of moisture and they must therefore be protected by an impregnation for instance with asphalt. It is however very difficult to connect such an impregnated underlayer with a rubber layer.

In the British patent specifications No. 275,685 and No. 308,504 a method has been disclosed to make such connection by vulcanizing the rubber layer after it has been united with said underlayer. This method has however been proved impracticable since the impregnating substance liquefies at the temperature, which is required for the vulcanization, and separates therefore from the underlayer so that the homogeneity of the impregnation gets lost.

According to the proposal suggested in British patent specification No. 246,927 a sticking substance is applied between the rubber layer and the underlayer. A special glue must be used in this case which at a relatively low temperature attaches to the already vulcanized rubber and to the impregnated underlayer. Thus the process of manufacturing is rather complicated and expensive. In addition thereto the process shows the same drawback which appears also in the case, that a vulcanized rubber layer should be connected under high pressure with an impregnated underlayer. The thickness of the rubber layer cannot sufficiently be reduced in these cases so as to secure an end product as cheap as required. If a rubber layer of less than 2 mms. is

employed, the surface does not appear sufficiently smooth, but shows even in the presence of only slight irregularities so-called shrunk parts which are clearly visible.

5 According to my invention the thickness of the rubber layer can be as small as 1 mm. or still smaller. I connect the vulcanized rubber layer by vulcanization with another layer, which in the final product acts as an intermediate layer and to which the homogeneously impregnated underlayer can also be attached. The intermediate layer may be made of any material which can be affixed to the rubber layer as well as to the underlayer and which is adapted to impart to the rubber some solidity of shape so that irregularities however little are avoided. Thin fabrics, preferably of jute, have been found particularly suitable as materials for the intermediate layer. Since this intermediate layer, when connected with the rubber, can be made to adhere to the underlayer of felt paper already by a slight increase of pressure and by a small raise of temperature, the application of a sticking or adhesive substance can be dispensed with, so that the floor covering and the process of manufacturing same is simpler and cheaper than hitherto possible.

The fabric layer may be attached or affixed to the lower side of the rubber layer in any known manner, for instance by connecting the fabric layer with the aid of glue to the not yet vulcanized rubber layer and subsequently vulcanizing the two layers together.

Immediately after the manufacture of the layer of vulcanized rubber, provided with the fabric layer, the underlayer may be united therewith in one operation by leading the layers together between a pair of rolls. One of these rolls, viz. that to which the impregnated layer of felt paper is guided, may be sufficiently heated in order to soften the impregnating substance of the felt paper layer in such a degree that the connection with the intermediate layer is effected without the impregnating substance being capable of flowing off.

The paper layer also may be connected at both sides with a rubber layer with an intermediate fabric layer so that not only protection against moisture but also against other influences and damages is secured.

In the drawings 1 are layers consisting of vulcanized rubber and having a thickness of about 1 mm. 2 are the intermediate layers employed in accordance with my invention, while 3 is a layer of felt paper homogeneously impregnated with a substance such as bitumen.

Various changes may be made in the details disclosed in the foregoing specification without departing from the invention or sacrificing the advantages thereof.

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