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SPARKPROOF FLOORING AND THE LIKE

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Fig. 1.

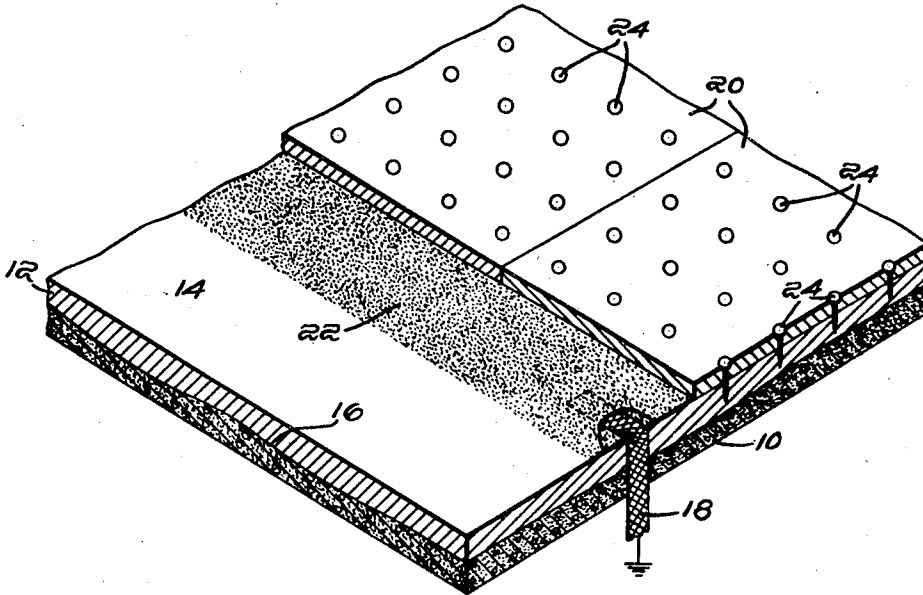
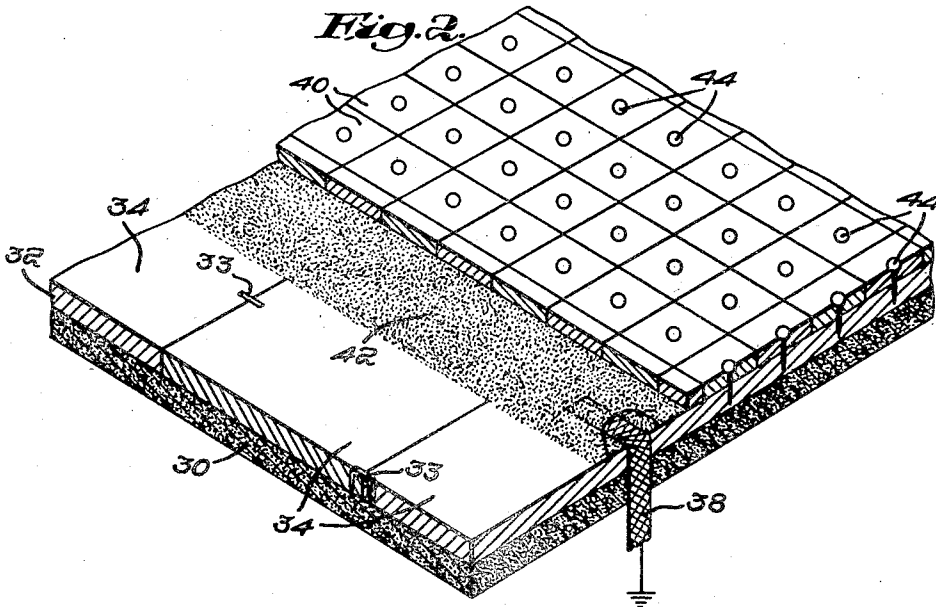


Fig. 2.



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SPARKPROOF FLOORING AND THE LIKE

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2 Claims. (Cl. 175-264)

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This invention relates to sparkproof flooring and the like particularly adapted to conduct to the ground static electrical charges from articles coming in contact with the flooring, thereby eliminating these charges and the dangers they present. A primary object of the invention resides in the production of an improved flooring of this nature at minimum cost which embodies these and other desirable characteristics.

Sparkproof flooring is employed for industrial purposes which require very extensive floor areas and the cost of production, in both material and labor, is therefore of prime importance as is also the character of the flooring to comply with various requirements. My invention embodies a novel flooring of this nature which can not only be produced with great economy but which is furthermore adapted to serve these several requirements most efficiently.

These floors embody a supporting sub-floor which can be newly constructed, but which frequently is an old and used floor, and very often such floors rest directly on or so adjacent to the ground that dampness would ordinarily seep through and deleteriously affect the top flooring. One embodiment of my invention contemplates the employment of a substantial layer of electro-conductive material on the sub-floor and of a nature to damp-proof the top flooring thereon in addition to serving as a ground conductor for electrostatic charges from the top flooring.

Furthermore, old and used floors are frequently so uneven that their top surfaces are not adapted to serve the requirements with any degree of satisfaction. My invention contemplates the employment of a conductive material which is also of a plastic nature that can be applied to these floors and the top surface smoothed to a flat and level contour.

The conductive layer can be in the nature of a plastic composition or it can be a pre-fabricated sheet of metal, conductive linoleum, rubber, etc. In any event it is adapted to receive thereonto, and preferably in bonded relation, a top flooring of material most suitable to serve the required purpose. The invention contemplates the employment of conductive nails to serve as conductors for directing static charges away from the top surface of the top flooring, the nails having shanks extending downwardly through the top flooring and into the conductive material and having the heads in contact with and exposed at the top face of the top flooring, and the nails being in such close relation that an object resting on the top flooring contacts with at least one

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of the nail heads. It will be apparent that the driving of such nails into the flooring provides a most convenient and economical means for serving these conductive functions. The production of an improved flooring embodying the above features comprises an object of the invention.

These and other features of the invention will be best understood and appreciated from the following description of preferred embodiments thereof selected for purposes of illustration and shown in the accompanying drawing wherein,

Fig. 1 is a fragmentary view of an electro-conductive flooring embodying my invention,

Fig. 2 is a like view of a modified construction.

In my Patent No. 2,323,461, dated July 6, 1943, I have disclosed sparkproof flooring of the same general nature as the invention herein described. My present invention, however, includes features of economy and utility hereinafter described and not contemplated or disclosed in flooring heretofore known.

In Fig. 1 of the drawing I have illustrated a sub-floor 10 on which is spread a layer 12 of plastic electro-conductive material which is also preferably of a waterproofing character. I have successfully employed asphalt and ground coke as the conductive composition in this improved flooring, the asphalt serving as a binder or vehicle for holding the conductive coke. It is also contemplated that other suitable vehicles as Portland cement and gypsum can be employed as well as other fillers such as ground coal, graphite, conductive carbon black, etc.

The conductive material 12 is applied to the sub-flooring 10 in plastic form and is leveled off as illustrated to provide a flat top surface 14 over the uneven top surface 16 of the sub-floor. The layer 12 is grounded by one or more conductive elements 18 and the top flooring 20 is laid on the top surface 14, a bonding coat 22 of cement preferably being provided therebetween. The top flooring can be of any desired character in strip or other form and of any desired color. This latter is of great importance since black powder and like explosive materials can be easily detected and removed from a floor of light or contrasting color, whereas the sparkproof floorings now in use are black and thus are not well adapted to serve this function.

The flooring is completed by driving conductive nails or studs through the top flooring 20 and into the conductive layer 12 to a position in which the nail heads contact with and are exposed at the top surface of the top flooring and the shanks serve as conductors to the conductive

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layer. The nails are disposed in such close relation that at least one of the heads is adapted to be contacted by a shoe or like article coming in contact with the top flooring.

The conductive layer of the flooring can be formed in place from plastic composition, as in Fig. 1, or it can be prefabricated and thereafter laid in place, as in Fig. 2. Such prefabricated sheets can be of metal or conductive linoleum, rubber, asphalt tile, etc., which include such filler materials as ground coke or coal, conductive rubber, graphite, conductive blacks, etc., in a binder of gum, asphalt or other suitable vehicle.

In Fig. 2 I have illustrated a sub-floor 30 having prefabricated conductive sheet strips 32 thereon and grounded at 38. A top flooring of tiles or blocks 40 of rubber or asphalt tiling or any suitable composition are bonded to the top face 34 by a layer of cement 42. Conductive nails 44 driven through the tiles and into the conductive sheet provide conductive paths for grounding static charges coming in contact with the nail heads at the top surface of the top flooring. Metal staples 33 can be driven into the strips 32 across the joints to assure grounding conductivity.

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It will be apparent that, since the top flooring need not be of a conducting character, it can be constructed from the material most suitable for the particular purpose required. For example, in some cases the flooring must be oil and grease proof, resistant to acids or alkalies, etc.

Having thus disclosed my invention and described in detail the best embodiment thereof now known to me I claim as new and desire to secure by Letters Patent:

1. A sparkproof flooring or the like comprising a sub-floor, a layer of conductive material thereon, a top flooring on and covering said layer, electro-conductive nails having sharpened shanks driven downwardly through the top flooring and into the conductive material and having heads driven into contact with and exposed at the top face of the top flooring, and means grounding the conductive material.

2. The flooring defined in claim 1 in which said layer of conductive material is formed from plastic waterproofing composition rendering the top flooring substantially free from dampness from beneath.

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