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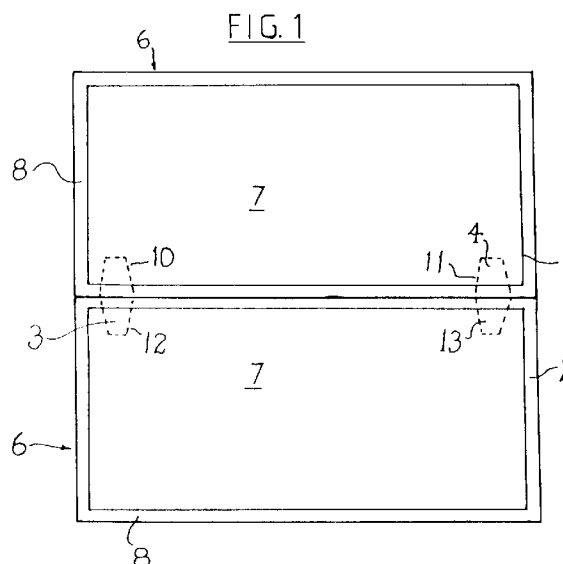
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(54) **Floor mat system.**

(57) A floor mat system comprises at least two floor mats (1, 2), each having a rubber or plastics backing (6) and optionally provided with a pile (7). Horizontally extending slots (10, 11, 12, 13) are formed in the backing of contiguous mats and the mats are linked together by means of plates (3, 4) located in adjacent slots (10, 12 or 11, 13).



The present invention relates to a floor mat system.

It is well known to provide dust control floor mats at the entrance of, or within, buildings. These dust control mats conventionally comprise an upper fabric pile and a backing of rubber or plastics material. As people walk across the dust control mat, dirt etc. is removed from their shoes to control the bringing of dirt contamination into or the movement of dirt contamination within the building.

Another form of floor mat which it is known to provide is an antistatic floor mat. Antistatic floor mats are mats which are able to dissipate the static charge generated by a person walking on them, as a result of being sufficiently conductive and properly earthed. They are particularly useful in computer rooms, micro-circuit assembly areas and the like where static build-up can affect operations but they may also be used to prevent people receiving shocks when touching metal in furniture, door knobs and the like. A known antistatic floor mat has a sheetlike rubber or plastics backing optionally provided with a pile over at least part of its upper surface and has sufficient electrical conductivity to dissipate any static build-up on it if earthed. In GB-A-2144324 there is described an antistatic floor mat comprising a rubber or plastics backing and optionally a pile thereover, and having an electrically conductive earthing member being receivable within a slot extending inwardly from a side face of the backing.

Dust control and antistatic floor mats are generally provided as standard size. Where it is needed to have a floor mat coverage greater than that provided by a single mat naturally two or more mats are used. Preferably patterned mat designs are such that the pattern is substantially continuous when mats are laid side-by-side or end-to-end. However, as people walk across the mats, the mats tend to move apart and any continuous mat pattern is lost and parts of the floor lose dirt and dust control protection.

According to the present invention, there is provided a floor mat system comprising at least two floor mats, each having a rubber or plastics backing and optionally provided with a pile extending over at least part of its upper surface, and means for linking the mats together to prevent relative movement between them, wherein the linking means comprises a plate located in adjacent horizontally extending slots formed in the backing of contiguous mats. Preferably contiguous mats are linked by at least two plates, each plate being located in adjacent horizontally extending slots formed in the backing of the contiguous mats.

Each floor mat used in the floor mat system of the present invention will have at least one slot in a side face of the mat, each such slot corresponding to a slot in the side face of the contiguous mat. The preferred floor mat for use in the floor mat system in the present

invention comprises at least two slots in each of four sides of the mat so that each mat can be linked to more than one other mat and in order that the direction of linking of the mats can be varied according to particular requirements.

The slots are preferably incorporated in the backing during its manufacture, for example by insertion of an appropriately shaped former which does not adhere to the backing material during curing and which can be removed after curing is complete, for example a polytetrafluoroethylene sheet former. The slots are preferably so sized and shaped that the linking plate forms a tight fit when inserted. Suitably the elongate slot may taper inwards of the mat and conveniently extends perpendicularly from the mat side face.

The floor mats used according to the present invention can be of conventional construction and formulation, with or without a pile surface, and can be of conventional size and shape. The present invention is more suitably applied to patterned floor mats having designs such that the pattern is substantially continuous across adjacent mats laid side-by-side and/or end-to-end and the continuous pattern may be retained using the floor mat system according to the present invention since the tendency of the mats to move apart is reduced.

The linking plates used to link contiguous mats can be of any suitable material having sufficient strength to withstand the conditions of use. The plates may be in the form of metal, suitably stainless steel, blades. The plates may be provided with a friction, e.g. rubber, coating to give a good hold within the slots formed in the mat backing. Solid rubber or plastics blades as well as non-ferrous blades may also be used.

For assembly of a floor mat system according to the present invention the floor mats to be linked are placed with the sides to be joined alongside one another and a linking plate is inserted into each adjacent set of horizontally extending slots in the backing of the contiguous mats.

The invention is further described, for example, with reference to the accompanying drawings, wherein:

Figure 1 is a plan view of a floor mat system according to the present invention comprising two linked floor mats, and

Figure 2 is a view, on an enlarged scale, of the slot area of one of the floor mats of the floor mat system of Figure 1.

Referring to the accompanying drawings, the floor mat system comprises two dust control floor mats, 1, 2, joined along a contiguous edge by means of a pair of metal plates 3, 4. Each of floor mats 1, 2 comprises a rectangular mat having a rubber or plastics backing 6, a fabric pile 7 on the top surface with the exception of a border area 8.

In each of the contiguous side faces of the floor mats 1, 2, there are provided two slots 10, 11, 12, 13. Each slot extends inwardly in a tapering fashion parallel to the top and bottom surfaces of its respective mat. The slots are so positioned that, when the floor mats 1, 2 are laid with the faces to be joined contiguous, slot 10 in floor mat 1 is adjacent slot 12 in floor mat 2 and slot 11 in floor mat 1 is adjacent slot 13 in floor mat 2.

The floor mats 1 and 2 are joined by means of metal plates 3 and 4, metal plate 3 being located, in tightly-fitting fashion, within adjacent slots 10 and 12 and metal plate 4 (only part of which is shown in Figure 2) being, in tightly-fitting fashion, within slots 11 and 13.

In Figure 1, in the floor mats 1, 2, only the slots within the side faces linked in the floor mat system shown are illustrated. It should however be appreciated, that each of the floor mats 1, 2 will preferably also contain a pair of corresponding slots along each of the other three side faces to provide the floor mat with greater adaptability as regards the configuration of the floor mat system.

Claims

1. A floor mat system comprising at least two floor mats (1,2), each mat having a rubber or plastics backing (6) and being optionally provided with a fibrous pile (7) extending over at least part of its upper surface, and linking means for linking the mats together in use on a floor so as to hinder relative movement between them, characterised in that the mats are each formed in a side edge with at least one slot (10, 11, 12, 13) having walls extending back from said edge towards the interior of the mats such that when two mats are laid side by side on a floor a pair of slots (10, 12; 11, 13) in said two mats are contiguous, and in that the linking means comprises a plate (3,4) locatable in the pair of contiguous slots so as to be in frictional engagement with the walls of said slots.
2. A floor mat system as claimed in claim 1, characterised in that the mats are provided with two slots (10, 11, 12, 13) in the same side edge so that when laid side by side on a floor they can be linked by two plates (3, 4) located in two pairs of contiguous slots.
3. A floor mat system as claimed in claim 1 or 2, characterised in that each mat is of regular four-sided shape and is provided with at least one of said slots in each of its four side edges.
4. A floor mat system as claimed in any of claims 1

to 3, characterised in that the slots taper inwardly as they extend towards the interior of the mats and the plate has a taper which matches the taper of the slots.

5. A floor mat system as claimed in any of claims 1 to 4, characterised in that the slots extend generally perpendicular to the side edge out of which they open.
6. A floor mat system as claimed in any of claims 1 to 5, characterised in that the mats have a pattern on their upper surface which extends across more than one mat when they are laid side-by-side.
7. A floor mat system as claimed in any of claims 1 to 6, characterised in that the plate is in frictional contact with the sides and base of the slots when located therein, so as to be a tight fit.
8. A floor mat system as claimed in any of claims 1 to 7, characterised in that the plate is coated with a friction coating to give improved hold within the slots.
9. A floor mat system as claimed in any of claims 1 to 8, characterised in that the plate is a metal blade.

FIG. 1

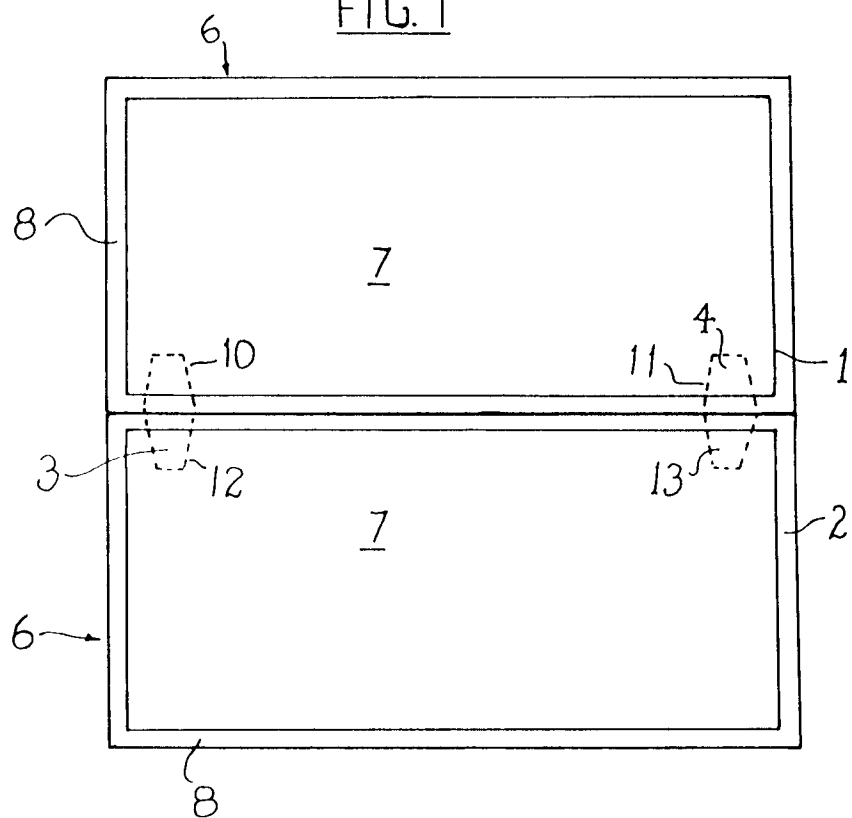


FIG. 2

