

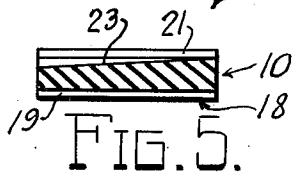
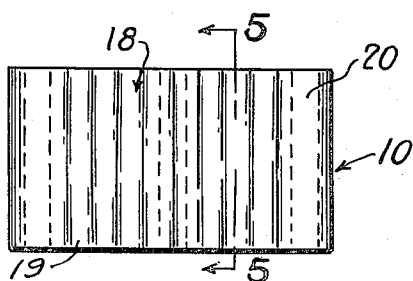
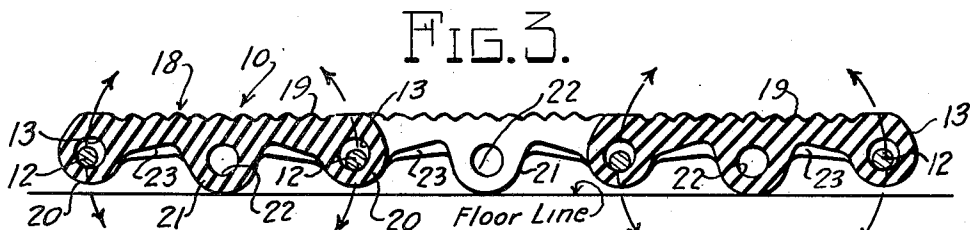
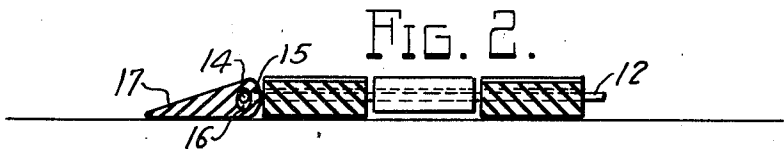
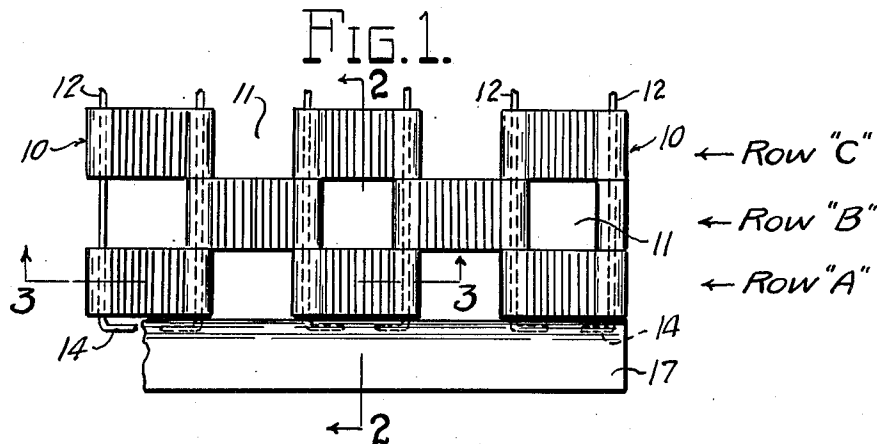
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FLOOR MAT

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FLOOR MAT

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This invention relates to floor mats and, more particularly, to floor mats of the so-called flexible link type in which a plurality of individual links are arranged in parallel rows, the links in each row being spaced and staggered with respect to the links in each adjacent row, and the rows of links are connected and articulated by transversely extending pivot wires.

In rubber mats of this type, as fabricated in accordance with the prior art, the upper surfaces of the links may be roughened to assist in scraping dirt and other substances off the feet of persons walking on the mats and the under surfaces of the mat may similarly be corrugated to permit water to drain from beneath the mat. In most prior art link type mats, however, whether their surfaces are corrugated or not, all of the corrugations or projections on the bottom surfaces of the mats and on the links from which the mats are made project, to the same plane so that both the mats and the individual component links lie flat on the surface of the floor on which the mat is used.

It is the principal object of this invention to provide a link type floor mat construction in which the individual links are not constrained to lie flat on the floor on which the mat is placed.

It is another object of this invention to provide a link-type mat in which each of the individual links thereof is securely connected to its neighbors to form a large mat yet is free to move relatively independently of its neighbors for the purpose of more effectively removing dirt and other foreign material from the shoe soles of persons walking on the mat.

It is, then, a more specific object of this invention to provide a link-type floor mat in which each of the links, though assembled into a complete floor mat, is relatively free to rock under the action of people walking over the mat.

It is another more specific object of this invention to provide a link type rubber mat which can be placed upon a floor with either of its two surfaces turned upwardly and in either case, which effectively drains water off the surface of the links of which the mat is made.

More specific objects and advantages will be apparent from the drawings, in which:

Fig. 1 is a fragmentary plan view of a section of a link-type mat embodying the invention.

Fig. 2 is a fragmentary vertical sectional view taken substantially on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged vertical sectional view taken on the line 3—3 of Fig. 1 and illustrating the action of the links constituting a mat em-

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bodying the invention under the pressure of the feet of persons walking on the mat.

Fig. 4 is a still further enlarged plan view of an individual link employed in the floor mat embodying the invention.

Fig. 5 is a vertical sectional view taken substantially on the line 5—5 of Fig. 4 but inverted to show the position assumed by one of the links when the mat is turned over; and

Fig. 6 is a still further enlarged perspective view of one of the links of which a mat embodying the invention is constructed.

A link-type mat embodying the invention comprises, among other parts, a very large number of individual links 10 which are arranged in parallel spaced rows as indicated in Fig. 1 by the legends "Row A," "Row B," "Row C." As is seen in Fig. 1 the links in each row are spaced longitudinally from each other and staggered with respect to the links in each adjacent row. The ends of the links in each row overlap the ends of the links in adjacent rows. This arrangement results in a "checkerboard" appearance in which the rectangular links 10 are spaced from each other by rectangular open spaces 11 through which debris and water can be passed from the upper surface of a floor mat to the floor on which the mat is placed.

The links 10 are connected together by a plurality of cross wires 12 which extend through transverse holes 13 (see also Fig. 3) formed in the ends of each of the links 10, the overlapping of the links lining up the holes 13 in links in adjacent rows. The cross wires 12 are of a diameter substantially less than the diameter of the holes 13. The word "wire" as used herein is not intended to be limited to metal but includes any material made in wire form and capable of functioning to retain adjacent links.

The ends of the cross wires 12 are turned over horizontally forming engaging hooks 14 which are inserted through side openings 15 into a longitudinally extending opening 16 in a beveled edge piece 17. The hooks 14, when engaged in the opening 16 of the beveled edge piece 17, prevent the wires 12 from being pulled free of the edge piece 17 and thus retain the links 10 and the edge piece 17 in an assembled mat of definite dimensions. The construction so far described is, in general, conventional in the art of link mat fabrication but a link mat embodying the invention has additional features from which its superior qualities result and which consist in the cooperation between the links 10 and the cross wires 12 as will now be described.

Each of the links 10 has an upper surface 18

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which consists in a plurality of transversely extending ribs 19. At each end of each of the links 10 there is formed an enlarged boss 20 through which the transverse holes 13 are formed and through which the cross wires 12 extend. At the center of each of the links 10 a still further enlarged boss 21 is formed and is pierced by an aperture 22 which "softens" the boss 21 by providing space into which the material of the link body may be deformed when the link is loaded as by persons walking upon it. As can be seen in Fig. 3 because the openings 13 through the bosses 20 are considerably larger in diameter than the diameters of the cross wires 12, and because the center bosses 21 are considerably larger than the end bosses 20, and thus the end bosses 20 normally do not rest on the floor, when a person walks over a mat embodying the invention each of the individual links 10 rocks with respect to its neighbors as is indicated by the arrows in that figure. This rocking action not only apparently softens the entire mat to the feet of a person walking upon it but also aids in the cleaning of the under surface of the person's shoes by scraping over the surface. The tilting action of each individual link and of adjacent links has the additional feature of assisting in draining water off the surface of the link by tipping the link and by actuating the link relative to the water.

When a link mat embodying the invention is to be used in a location where a rougher wearing surface is desired as, for example, where a large amount of debris and moisture may be carried onto the mat, the mat can be turned over, placing the surfaces 18 on the floor and turning the bosses 20 and 21 upwardly. When the mat is in this position each link is in the position as indicated in Fig. 5. It will be noted in Figs. 3 and 5 that the surfaces of the links which extend between the bosses 20 and 21 are angular in both the longitudinal and the transverse dimensions of each link. In Fig. 5 this surface 23 between a boss 20 and a boss 21 is shown as being inclined downwardly and to the left in the direction transverse to the greater length of the mat. This inclined surface 23 also is inclined in its direction extending between the bosses 21 and 20 as can be seen by reference to Fig. 3. Thus when a mat embodying the invention is placed on the floor with its enlarged bosses 20 and 21 up, water which gets on the surface of the mat links flows to the rectangular spaces 11 between the links by flowing down the surfaces 23 toward the center bosses 21 and then along the surfaces 23 to the lower edges of the links 10.

The openings 22 in the center bosses 21, by "softening" the material in the bosses 21 make the mat more resilient to the feet of a walker when these bosses are turned upwardly just as they do when the bosses are turned downwardly. When the irregular surfaces of the links are turned upwardly, they assist in providing traction for the feet of persons walking thereon, especially when a mat is placed on an inclined surface.

Having described my invention, I claim:

1. A link type floor mat comprising a plurality of rows of substantially rectangular, individual links, the links in each row being spaced longitudinally and overlapped in alternating relation with the links in adjacent rows, there being a

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transverse aperture through each end of each link; and a plurality of transverse cross wires, each cross wire extending through the apertures in the ends of a series of adjacent staggered links, the diameters of the apertures being substantially larger than the diameters of the cross wires, each of said links having an irregular under surface with a generally centrally located transverse and downwardly extending protuberance which projects from the body of said link a distance greater than any other portion of said body and thereby supports said link and said mat on the surface on which it rests.

2. A link for a mat in accordance with claim 1 in which the upper surface of the link is relatively flat and smooth compared to its lower surface, all protruding portions of the upper surface lying in substantially the same plane.

3. A link for an articulated, link type floor mat, said link having a generally rectangular body with a first ribbed side, the ribs on said side being small and all protruding from the body thereof the same distance, said link having a second side formed of a smaller number of larger ribs all extending generally transversely of said link and of the mat in which said links are assembled, one of said ribs on the second side of said link being generally centrally located and protruding from the body of said link to a point beyond the others of said ribs; the surface of the body of said link between the ribs on the second side of said link being inclined relative to the horizontal whereby when said second side of said link is turned upwardly water thereon drains off such surfaces.

4. A link type floor mat adapted to be placed on a generally flat surface with either of its sides turned upwardly and comprising a plurality of parallel rows of generally rectangular links, the links in each of said rows of links being longitudinally spaced and staggered with respect to the links in adjacent rows of links, the ends of all of said links being overlapped with the ends of said links in adjacent rows, there being transverse apertures through each end of each of said links, such apertures being generally in line transversely across said mat; and a plurality of transversely extending wires passing through said apertures and linking said links together; each of said links having one relatively smooth side in which all protruding portions lie generally in the same plane and an opposed irregular side, the opposed irregular side of said link consisting in end ribs through which said transverse apertures pass and a generally centrally located pressure rib, said pressure rib protruding a distance beyond any other portion of said link; the transverse apertures in each of said links having diameters larger than the diameters of said cross wires.

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