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PATENT SPECIFICATION (11)

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(10)

(54) A FLOOR FOR SPORTS ACTIVITIES

(71) We, ROLL-RINK S.A., a Swiss company, of chemin de Ballallaz 14, Montreux, Switzerland, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention relates to floors for sports activities and in particular, although not so restricted, to floors for roller skating.

15 Special flooring for indoor and outdoor sports activities especially for roller skating has been proposed. Such flooring has been formed from a variety of materials including linoleum, wood, plastics and concrete. Among the drawbacks of such flooring is its relatively high initial cost, permanency of installation, and the fact that it must be made and installed on the spot, rather than being prefabricated and carried to an assembly location. Furthermore, such flooring does not wear evenly, resulting in the necessity of repairing relatively large local areas.

25 The present invention, therefore, seeks to provide a prefabricated, easily transportable sectional floor for sports activities such as roller skating which floor can be relatively quickly assembled and installed in a variety of environments.

30 According to the present invention there is provided a floor for sports activities comprising a plurality of parallel deck sections, 35 and a plurality of adjacent plates or tiles formed of plastics material, each deck section consisting of an elongate member having a base and a flat face portion which has a plurality of parallel channels or grooves 40 therein, each of said plates or tiles having a floor forming first face and a plurality of connector studs depending from a second face longitudinally spaced along and lockingly engaged in each of said channels or 45 grooves.

Each plate or tile may have a corrugated edge.

Preferably each connector stud has a longitudinal split therein.

50 The first face of each plate or tile may be smooth, granular or formed as artificial grass.

Each plate or tile may be substantially square or polygonal.

55 The invention is illustrated, merely by way of example, in the accompanying drawings, in which:—

Figure 1 is a perspective view, from underneath, of a plate or tile of a floor according to the present invention; and 60

Figure 2 is a fragmentary perspective view of a deck section of a floor according to the present invention.

Referring to the drawings in detail, an elongate floor or deck section 10 includes 65 vertical webs 11 having horizontal feet 12 which may be placed on any stable base, such as a bed of sand or gravel. The deck section has a flat level upper plate portion 13 interrupted by a plurality (three shown) 70 of spaced parallel longitudinal grooves or channels 14, 15 and 16.

75 Preferably square floor plates or tiles 18 formed of moulded or injected plastics material are used in conjunction with a plurality of adjacent deck sections 10 for producing a floor, as shown in Figure 4. Instead of being square, the plates or tiles may be polygonal. Each plate or tile 18 has a flat plate body portion 19 which is adapted to lie on 80 top of the plate portion 13, and which is of the same width as the latter. On its under face only, each plate or tile 18 has a plurality (three shown) of spaced parallel rows of connector studs 20 depending therefrom. 85 These studs 20 are preferably equidistantly spaced in rows and each has a central split 21 to give it resiliency and a tapered arrow-like head 22 for entry into the grooves or channels 14, 15 and 16 for interlocking engagement therein, as shown clearly by Figure 3. The studs 20 are easily caused to snap 90 into the grooves or channels 14, 15, 16 by a slight tapping or pressing on the plates or tiles. 95

Individual plates or tiles are easily replaceable after wear or damage.

The plates or tiles 18 have modulating

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edges 24 which interfit snugly with adjacent plates or tiles.

5 The floor surface produced by the plates or tiles 18 may be perfectly smooth or may possess a granular texture. The plates or tiles can be processed to provide an artificial grass surface for sports such as tennis and football.

10 Briefly, the floor is assembled by placing the deck sections 10 in spaced parallel relation on a suitable base, such as sand or gravel. The plates or tiles 18 are attached to the deck sections by tapping or pressing the studs 20 into the grooves or channels 14, 15, 16 of the deck sections. Once assembled, the floor can be carried as a unit or in separate sections to the surface which has been prepared for it.

20 The floor shown in the drawings can be rapidly dismantled should it be necessary to remove it for use elsewhere. The floor is weather-resistant, and water is not retained but flows away beneath the deck sections. Likewise, the floor is indifferent to humidity changes, and the influences of expansion and contraction due to temperature changes are minimal. This is in contradistinction to known flooring and skating rinks which have been constructed from sections of plastics glued onto plywood plates. In addition to being very expensive, such known flooring is highly sensitive to temperature and humidity changes and is damaged by the weather. Cracks form during cold weather and curling occurs at the joints in hot weather and water infiltrating the joints causes irreparable damage. In the invention, no adhesives are employed and the materials used inherently resist these factors.

40 The portability of the floor illustrated in the drawings allows it to be installed in any convenient location at a relatively very low cost. For example, the deck sections 10 may be placed over and across a swimming pool.

45 Having regard to the provisions of Section 8 of the Patents Act 1949 we direct attention

to the claims of our co-pending Application No. 57540/73 (Serial No. 1,468,024).

WHAT WE CLAIM IS:—

1. A floor for sports activities comprising a plurality of parallel deck sections, and a plurality of adjacent plates or tiles formed of plastics material, each deck section consisting of an elongate member having a base and a flat face portion which has a plurality of parallel channels or grooves therein, each of said plates or tiles having a floor forming first face and a plurality of connector studs depending from a second face longitudinally spaced along and lockingly engaged in each of said channels or grooves.

2. A floor as claimed in claim 1 in which each plate or tile has a corrugated edge.

3. A floor as claimed in claim 1 in which each connector stud has a longitudinal split therein.

4. A floor as claimed in any preceding claim in which the first face of each plate or tile is smooth.

5. A floor as claimed in any of claims 1 to 3 in which the first face of each plate or tile is granular.

6. A floor as claimed in any of claims 1 to 3 in which the first face of each plate or tile is formed as artificial grass.

7. A floor as claimed in any preceding claim in which each plate or tile is substantially square.

8. A floor as claimed in any of claims 1 to 6 in which each plate or tile is polygonal.

9. A floor for sports activities substantially as herein described with reference to and as shown in the accompanying drawings.

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edges 24 which interfit snugly with adjacent plates or tiles.

The floor surface produced by the plates or tiles 18 may be perfectly smooth or may possess a granular texture. The plates or tiles can be processed to provide an artificial grass surface for sports such as tennis and football.

Briefly, the floor is assembled by placing the deck sections 10 in spaced parallel relation on a suitable base, such as sand or gravel. The plates or tiles 18 are attached to the deck sections by tapping or pressing the studs 20 into the grooves or channels 14, 15, 16 of the deck sections. Once assembled, the floor can be carried as a unit or in separate sections to the surface which has been prepared for it.

The floor shown in the drawings can be rapidly dismantled should it be necessary to remove it for use elsewhere. The floor is weather-resistant, and water is not retained but flows away beneath the deck sections. Likewise, the floor is indifferent to humidity changes, and the influences of expansion and contraction due to temperature changes are minimal. This is in contradistinction to known flooring and skating rinks which have been constructed from sections of plastics glued onto plywood plates. In addition to being very expensive, such known flooring is highly sensitive to temperature and humidity changes and is damaged by the weather. Cracks form during cold weather and curling occurs at the joints in hot weather and water infiltrating the joints causes irreparable damage. In the invention, no adhesives are employed and the materials used inherently resist these factors.

The portability of the floor illustrated in the drawings allows it to be installed in any convenient location at a relatively very low cost. For example, the deck sections 10 may be placed over and across a swimming pool.

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2. A floor as claimed in claim 1 in which each plate or tile has a corrugated edge.

3. A floor as claimed in claim 1 in which each connector stud has a longitudinal split therein.

4. A floor as claimed in any preceding claim in which the first face of each plate or tile is smooth.

5. A floor as claimed in any of claims 1 to 3 in which the first face of each plate or tile is granular.

6. A floor as claimed in any of claims 1 to 3 in which the first face of each plate or tile is formed as artificial grass.

7. A floor as claimed in any preceding claim in which each plate or tile is substantially square.

8. A floor as claimed in any of claims 1 to 6 in which each plate or tile is polygonal.

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