

(19)



(11)

**EP 2 388 052 B1**

(12)

**EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention  
of the grant of the patent:  
**31.10.2012 Bulletin 2012/44**

(51) Int Cl.:  
**A63C 19/02 (2006.01) E01C 13/08 (2006.01)**

(21) Application number: **11425083.0**

(22) Date of filing: **31.03.2011**

(54) **Base for a playing field**

Boden für ein Spielfeld

Base pour terrain de jeux

(84) Designated Contracting States:  
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB  
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO  
PL PT RO RS SE SI SK SM TR**  
Designated Extension States:  
**BA ME**

(30) Priority: **01.04.2010 IT MI20100557**

(43) Date of publication of application:  
**23.11.2011 Bulletin 2011/47**

(73) Proprietor: **New Tennis System S.r.l.**  
**28074 Ghemme, Novara (IT)**

(72) Inventors:  
• **Corsiero, Michele**  
**28074 Ghemme, Novara (IT)**  
• **Corsiero, Davide**  
**28074 Ghemme, Novara (IT)**  
• **Corsiero, Simone**  
**28074 Ghemme, Novara (IT)**

(74) Representative: **Mozzi, Matteo et al**  
**Jacobacci & Partners S.p.A.**  
**Via Senato, 8**  
**20121 Milano (IT)**

(56) References cited:  
**EP-A1- 2 039 831 WO-A1-2009/118388**  
**US-A- 5 678 951**

**EP 2 388 052 B1**

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

## Description

**[0001]** The present invention concerns a base for a playing field, the method for preparing it and a playing field made with such a base. The described playing field is particularly suitable for playing tennis.

### DESCRIPTION OF THE PRIOR ART

**[0002]** There are known traditional tennis courts commonly called "clay". They are prepared by digging to about half a metre deep, on the base of which a bed of about 35 cm of selected quarry scree is formed, the granule size of which is about 40-70 mm, which has a layer of fine gravel having average dimensions of about 3-15 mm laid over it. The layer closest to the surface comprises about 3 cm of tile granules, with low clay content having a drainage function, on which a sub-layer sits consisting of a granulate (0-2 mm) of tiles and raw clay and which is finally covered with a final layer of very fine ground brick (<1 mm in diameter), which gives the tennis court its characteristic colour.

**[0003]** In making the court substantial amounts of water are used, in order to allow the layers of the base to bed in. Moreover, the normal maintenance of such a base requires frequent and constant irrigation whilst also avoiding the formation of puddles: up to 15' even 4 times per day with a flow rate of 80/100 litres per minute. Therefore, it is clear that substantial amounts of water are needed.

**[0004]** A base prepared in this way has optimal characteristics in terms of the bounce of the ball and the possibility of sliding, these being properties that make such a surface highly esteemed.

**[0005]** Unfortunately, clay courts require continuous and careful, as well as expensive, upkeep. During the course of normal playing activity mounds and holes can form that must be quickly filled or flattened by using special levelling mats so that the surface goes back to being as flat and smooth as possible. When it rains, moreover, the court must be immediately covered with special covers so as to prevent it from being soaked. When located in open air they can only be used for a few months of the year and before the start of the sports season special upkeep must be carried out, with which the surface of the court is firstly cleaned of possible vegetable material through the use of an iron rasp and then the stiff top layer that forms over time due to the clay nature of the sub-surface must be tilled. Then the sub-surface itself needs to be restored and new red earth, i.e. ground brick, needs to be added. Then the court lines are marked out.

**[0006]** The fact that the court may be located indoors like in a fixed or inflatable structure does not avoid such drawbacks that, on the contrary, can be accelerated by the stagnation of air and humidity, which can also cause the formation of an unpleasant mouldy smell. Moreover, heating causes faster hardening of the surface of the base.

**[0007]** The optimal properties of conventional clay bases, therefore, can easily alter over time and cause it to lose its elasticity, softness and slowness of play. Therefore, it becomes necessary to restore the ideal characteristics of the base.

**[0008]** It should also not be underestimated that all of the aforementioned maintenance activities require the intervention of specialised workers and involve substantial costs to keep the playing field operational. The cost of these activities is not therefore negligible.

**[0009]** The purpose of the present invention is therefore to provide a base for a playing field, which reproduces the advantageous properties of a conventional clay base, but that does not involve the aforementioned drawbacks relative to the costs and maintenance times.

**[0010]** Document US 5 678 951 discloses a base for a playing field according to the preamble of claim 1.

**[0011]** Such purposes are accomplished by the base for a playing field in accordance with claims 1-10 attached to the present patent application and obtained according to the method of claims 11-17.

**[0012]** Figures 1 to 4 show bases for a playing field made according to the present invention and called Solution 1, Solution 2, Solution 3 and Solution 4 as will be shown hereafter.

**[0013]** More specifically, the base 1 for a playing field comprises a support 2 with wire-like formations or fibres 3 that is completely filled with filling material 4.

**[0014]** The wire-like formations or fibres 3 joined to the support 2 constitute the so-called "synthetic grass", obtained with methods known in the field and that as far as possible simulates a natural grass surface.

**[0015]** In particular, they can be obtained by weaving onto a support material made from polypropylene or felt and then proceeding to cut the weaves themselves.

**[0016]** The material of which the fibres 3 consist is usually a polymeric material chosen, for example, from polyethylene, polypropylene, polyamide and polyester. In particular, polypropylene is the preferred material, whereas polyethylene, being softer, is less preferred since the fibres thus obtained tend to bend too easily.

**[0017]** The same fibres 3 can also be of the single type, if made up of a single whole filament or else fibrillated, in the case in which the filament, from a certain height, has longitudinal cuts of different length, creating a sort of tuft of finer filaments. Fibrillated fibres have the advantage of forming a denser mesh, thus capable of holding the filling material 4 more effectively, preventing it from moving and increasing its stability.

**[0018]** The height of the fibres can also be about 10-30 mm according to requirements and, to make a tennis court, preferably it is about 20 mm.

**[0019]** By filling material, on the other hand, we mean a solid material, generally in granular form, which is made to infiltrate between the wire-like formations or fibres 3 thus filling the void that separates each wire-like formation 3 from the other and keeping them uniformly spaced and in a substantially vertical position and perpendicular

to the support 2.

**[0020]** The filling material, 4 in turn consists of a bottom filling layer 5 in contact with the support 2 and a top filling layer 6.

**[0021]** For the purposes of the present invention, the bottom layer 5 is a layer of sand of the quartziferous type, having a quartz percentage of at least 99%.

**[0022]** In the case in which it is necessary to fill fibres about 20 cm high, the bottom layer of sand is made using about 1.8-2.2 Kg/m<sup>2</sup> of support and, preferably, about 2 kg/m<sup>2</sup>.

**[0023]** The amount of sand used for filling will be proportionally higher or lower according to the height of the filament-shaped formations or fibres 3.

**[0024]** The composition of the top filling layer 6, on the other hand, can be made differently according to the type of Solution.

**[0025]** Figure 1 represents a cross section of a structure for a base of a playing field in accordance with Solution 1 of the present invention. In detail, such a structure 1 comprises the primary support 2 from which the wire-like formations or fibres 3 project, which are at least partially, preferably completely, i.e. for their entire height, filled with the filling material 4.

**[0026]** In particular, the filling comprises the bottom layer of sand 5 and a top filling layer 6 made with highly-baked brick material in granular form, for example ground brick, the granules of which have a diameter of approximately 0.05-2 mm.

**[0027]** In particular, such a brick material is clay-free.

**[0028]** The amount of granulated brick used for filling is about 20 kg/m<sup>2</sup> of support.

**[0029]** In accordance with a second aspect, represented in Figure 2, the base for a tennis court according to the invention comprises the support 2 with the fibres 3 on which a first filling layer 5 of quartziferous sand is made as described above and a second filling layer 6 represented by a composition consisting of a highly baked granulated brick and a thermoplastic material in granular form. In particular, in the filling layer 6 the granulated brick has the characteristics described above and does not contain clay.

**[0030]** With regard to the thermoplastic material in granular form in the layer 6, it is polyurethane-based, characterised by a hardness defined in Sh.A (15 sec; ASTM D2240) comprised between 50 and 80, preferably 67.

**[0031]** According to a preferred aspect, to make the top filling layer 6 the thermoplastic material in granular form is mixed with the brick granulate in a percentage comprised between 5 and 20%, preferably 10%.

**[0032]** The filling material thus obtained is arranged in a quantity such as to completely cover the fibres, which, therefore, will not project from the filling remaining invisible and unnoticeable.

**[0033]** In accordance with a further aspect of the present invention, a base for a tennis court can be as represented in Figure 3 (Solution 3).

**[0034]** In particular, on the support 2 a first filling layer 5 is made consisting of quartziferous sand as indicated earlier. Above this layer 5 the top filling layer 6 is arranged, which, in turn, comprises a bottom layer 6' of thermoplastic material and a top filling layer 6'' consisting of highly-baked brick material.

**[0035]** The thermoplastic material of the filling layer 6'' and the brick granulate of the filling layer 6' have the characteristics described for Solutions 1 and 2. In particular, the brick granulate is clay-free.

**[0036]** Therefore, with respect to Solution 2 described above, in Solution 3 the thermoplastic polymer and the brick granulate are not mixed together, but each represent a different layer.

**[0037]** Thanks to the particular filling of the fibres according to the present invention, the base of the playing field has surprisingly proven to reproduce the characteristics of clay bases. In particular, it is advantageously soft, allowing players to play their sport at any level.

**[0038]** Moreover, such characteristics of softness allow the base itself to absorb the banging of the limbs during play optimally and better than other bases known in the field. In this way, the stresses to the joints, muscles and tendons are lower, advantageously reducing the possibility of dangerous injuries. Players can manage to play for longer, even for many hours.

**[0039]** According to a further aspect of the present invention, a base for a tennis court according to what has been described (Solution 1, Solution 2 and Solution 3), can be made on a shock-pad 7, as shown in Figure 4 according to the Solution 4 described hereafter.

**[0040]** For example, said pad can consist of the drainage geocomposite Enkadrain®5006H (SEIC), comprising a three-dimensional core of monofilaments of polypropylene inside two geotextiles of unwoven filtering polypropylene welded together and fixedly connected with the core.

**[0041]** When it is being made, the shock-absorbing and drainage pad 7 is rested on a surface and the support 2 carrying the fibres 3 is placed on it, without it being necessary to use glues; thereafter, the fibres can be filled according to Solution 1, 2 or 3.

**[0042]** The purpose of the pad is to make it easier for water to drain, in particular horizontally. In this way, a base for a playing field according to the present invention can be advantageously made even on top of surfaces that do not ensure vertical drainage, like for example cement or asphalt.

**[0043]** Moreover, the pad 7 gives even greater softness to the base of the playing field, increasing its tolerability.

**[0044]** The present invention concerns as well a playing field, in particular a tennis court, the base of which is made according to what is described in the present invention.

**[0045]** The preparation of such a playing field comprises the steps of:

laying out a support 2 on a flat surface characterised in that it comprises a plurality of fibres 3 attached to it and substantially vertical and perpendicular with respect to the support 2 itself;  
 partially filling said fibres 3 with a bottom layer of sand 5, preferably quartziferous;  
 completing the filling of the fibres 3 with a top filling layer 6 comprising a brick granulate or a mixture of brick granulate and a thermoplastic material or else with a filling layer 6' consisting of a thermoplastic material on which a filling layer 6" of brick granulate is then made.

[0046] In particular, in step a), the support 2 with the fibres 3 attached to it is represented by so-called "synthetic grass".

[0047] The step of filling with sand of step b), on the other hand, is obtained with an amount of sand comprised between 1.5 and 2.5 kg/m<sup>2</sup> of support, preferably 2 Kg/m<sup>2</sup> of sand.

[0048] In step c), on the other hand, preferably the top filling layer 6 comprising a mixture of brick granulate and of a thermoplastic material comprises about 5-15% by weight of thermoplastic material.

[0049] According to the present invention, said thermoplastic material is a polyurethane in granular form and, according to a preferred aspect, it is characterised by a hardness defined in Sh.A (15 sec; ASTM D2240) comprised between 50 and 80, preferably 67.

[0050] Moreover, in the top filling layer 6, the brick granules and the granules of polymeric material have a diameter of about 0.05-2 mm.

[0051] With respect to playing fields built according to the methods already known in the field, the field obtained in accordance with the present invention requires less upkeep, in terms of hours and particularly in terms of costs. Indeed, the restoration of the base at the start of the season does not, for example, comprise the operations that were described in reference to bases for traditional tennis courts, like the removal of the hardened surface layer that forms due to heat and humidity. Moreover, the formation of holes and depressions is less common and, therefore, the surface has to be levelled less frequently. Furthermore, the field thus prepared requires less frequent and abundant watering, advantageously helping to save up to 60% water. If the field is inside a closed structure, then the unpleasant smell of mould and wet does not develop.

[0052] Whilst it is structurally different from clay courts, it still surprisingly offers the same optimal playing characteristics.

[0053] Furthermore, as described above, the base for a playing field of the present invention can be tolerated for longer by players, who suffer from less stress to the joints and muscles.

[0054] Modifications to the structure of the base for a playing field as described above within the capabilities of the man skilled in the art should also be considered to

be covered by the present invention, limited by the scope of the appended claims.

## 5 Claims

1. A base for a playing field (1), comprising a support (2) to which a plurality of fibres (3) are attached in a substantially vertical position and perpendicular to said support (2) and a filling material (4) comprising a bottom layer of sand (5) in contact with the support (2) and a top filling layer (6), **characterised in that** such a filling layer (6) consists of a mixture of clay-free highly-baked brick granulate and a granulated thermoplastic material, or else a layer (6') of granulated thermoplastic material and a layer of clay-free highly-baked brick granulate (6").
2. The base for a playing field (1) according to claim 1, wherein said clay-free highly-baked brick granulate is used in a quantity of about 20 kg/m<sup>2</sup> of support (2).
3. The base for a playing field (1) according to claim 1 or 2, wherein said granulated thermoplastic material is polyurethane.
4. The base for a playing field (1) according to any one of claims 1 to 3, wherein said polyurethane is **characterised by** a hardness defined in Sh.A comprised between 50 and 80, preferably 67.
5. The base for a playing field (1) according to any one of claims 1 to 4, wherein the clay-free highly-baked brick granulate and the granulated thermoplastic material are **characterised by** a granule size of about 0.05-2 mm.
6. The base for a playing field (1) according to any one of claims 1 to 5, wherein in said mixture of brick granulate and thermoplastic material, the thermoplastic material is comprised in a quantity of between 5-20%, preferably 10% by weight of said layer (6).
7. The base for a playing field (1) according to claim 1, wherein said fibres have a height of between 10 and 30 mm, preferably 20 mm.
8. The base for a playing field (1) according to any one of the preceding claims, wherein the filling material covers the entire height of the fibres.
9. The base for a playing field according to any one of the preceding claims, wherein the amount of sand of the bottom filling layer (5) is proportional to the height of the fibres and it is comprised between 1.8 and 2.2 Kg/m<sup>2</sup> of support, preferably 2 Kg/m<sup>2</sup> if the fibres have a height of about 20 mm.

10. The base of a playing field according to any one of the previous claims further comprising a drainage and shock-absorbing structure (7) placed under the support (2).
11. A method for making a base for a playing field, comprising the steps of:
- a) laying out a support (2) on a flat surface, said support (2) being **characterised in that** it comprises a plurality of fibres (3) attached thereto, substantially vertical and perpendicular with respect to the support (2) itself;
  - b) partially filling said fibres (3) with a bottom layer of sand (5), preferably quartziferous;
  - c) filling the fibres (3) until they are completely covered with a top filling layer (6) consisting of:
    - i) a mixture of a thermoplastic material in granular form and of a brick granulate; or else of
    - ii) a layer (6') of thermoplastic material in granular form and a layer (6'') of a clay-free highly-baked brick granulate.
12. The method for making a base for a playing field according to claim 11, wherein said fibres have a height comprised between 10-30, preferably 20 mm.
13. The method for making a base for a playing field according to claim 12, wherein the filling with the layer of sand (5) of step b) is obtained with a quantity of sand comprised between 1.5 and 2.5 kg/m<sup>2</sup> of support, preferably 2 kg/m<sup>2</sup> of sand for fibres having a height of about 20 mm or proportionally more or less according to the greater or lesser height of the fibres (3).
14. The method for making a base for a playing field according to any one of claims 11 to 13, wherein in step c) the mixture i) of granulated thermoplastic material and of brick granulate of the top filling layer (6) comprises about 5-15% by weight, preferably about 10% by weight of granular thermoplastic material.
15. The method for making a base for a playing field according to any one of claims 11 to 14, wherein said thermoplastic material is polyurethane in granular form.
16. The method for making a base for a playing field according to any one of claims 11 to 15, wherein said thermoplastic material is **characterised by** a hardness defined in Sh.A comprised between 50 and 80, preferably 67.
17. The method for making a base for a playing field according to any one of claims 11 to 16, wherein in

the top filling layer (6), the brick granules and the granules of thermoplastic material have a diameter of about 0.05-2 mm.

5

### Patentansprüche

1. Boden für ein Spielfeld (1), umfassend eine Unterlage (2), an welche eine Mehrzahl von Fasern (3) in einer im Wesentlichen vertikalen Position und rechtwinklig zu der Unterlage (2) befestigt sind, und ein Füllmaterial (4), welches eine untere Schicht aus Sand (5), die mit der Unterlage (2) und einer oberen Füllschicht (6) in Kontakt steht, umfasst, **dadurch gekennzeichnet, dass** solch eine Füllschicht (6) aus einer Mischung von Ton-freiem hoch-gebranntem Ziegel-Granulat und einem granulierten thermoplastischen Material, oder aber aus einer Schicht (6') von granuliertem thermoplastischem Material und einer Schicht aus Ton-freiem hoch-gebranntem Ziegel-Granulat (6'') besteht.
2. Boden für ein Spielfeld (1) nach Anspruch 1, wobei das Ton-freie hoch-gebrannte Ziegel-Granulat in einer Menge von etwa 20 kg pro m<sup>2</sup> Unterlage (2) verwendet wird.
3. Boden für ein Spielfeld (1) nach Anspruch 1 oder 2, wobei das granuliert thermoplastische Material Polyurethan ist.
4. Boden für ein Spielfeld (1) nach einem der Ansprüche 1 bis 3, wobei das Polyurethan durch eine Härte, definiert in Sh.A, ein einem Bereich von 50 bis 80, vorzugsweise 67, gekennzeichnet ist.
5. Boden für ein Spielfeld (1) nach einem der Ansprüche 1 bis 4, wobei das Ton-freie hoch-gebrannte Ziegel-Granulat und das granuliert thermoplastische Material durch eine Korngröße von etwa 0,05 - 2 mm gekennzeichnet sind.
6. Boden für ein Spielfeld (1) nach einem der Ansprüche 1 bis 5, wobei in der Mischung von Ziegel-Granulat und thermoplastischem Material das thermoplastische Material in einer Menge von zwischen 5 - 20%, vorzugsweise 10%, des Gewichts der Schicht (6) vorliegt.
7. Boden für ein Spielfeld (1) nach Anspruch 1, wobei die Fasern eine Höhe von zwischen 10 und 30 mm, vorzugsweise 20 mm aufweisen.
8. Boden für ein Spielfeld (1) nach einem der vorhergehenden Ansprüche, wobei das Füllmaterial die gesamte Höhe der Fasern bedeckt.
9. Boden für ein Spielfeld nach einem der vorherge-

- henden Ansprüche, wobei die Menge an Sand der unteren Füllschicht (5) proportional zur Höhe der Fasern ist, und in einem Bereich zwischen 1,8 und 2,2 kg pro m<sup>2</sup> Unterlage, vorzugsweise 2 kg pro m<sup>2</sup> liegt, wenn die Fasern eine Höhe von etwa 20 mm haben.
- 5
10. Boden für ein Spielfeld nach einem der vorhergehenden Ansprüche, ferner umfassend eine Drainage und Stoß-absorbierende Struktur (7), die unter der Unterlage (2) angeordnet ist.
- 10
11. Verfahren zum Herstellen eines Bodens für ein Spielfeld, umfassend die Schritte:
- 15
- a) Auslegen einer Unterlage (2) auf eine flache Oberfläche, wobei die Unterlage (2) **dadurch gekennzeichnet ist, dass** sie eine Mehrzahl von Fasern (3) umfasst, welche daran im Wesentlichen vertikal und rechtwinklig zu der Unterlage (2) selbst befestigt sind;
- 20
- b) teilweises Beschütten der Fasern (3) mit einer unteren Lage aus bevorzugt Sand (5), welcher vorzugsweise quarzhaltig ist;
- 25
- c) Beschütten der Fasern (3) mit einer oberen Füllschicht (6) bis sie komplett bedeckt sind, bestehend aus:
- 30
- i) einer Mischung aus einem thermoplastischen Material in granularer Form und aus einem Ziegel-Granulat; oder aus
- 30
- ii) einer Schicht (6') aus thermoplastischem Material in granularer Form und einer Schicht (6'') eines Ton-freien hoch-gebakkenen Ziegel-Granulats.
- 35
12. Verfahren zum Herstellen eines Bodens für ein Spielfeld nach Anspruch 11, wobei die Fasern eine Höhe im Bereich von 10 - 30, vorzugsweise 20 mm aufweisen.
- 40
13. Verfahren zum Herstellen eines Bodens für ein Spielfeld nach Anspruch 12, wobei die Füllung mit einer Schicht aus Sand (5) aus Schritt b) erzielt wird mit einer Menge Sand im Bereich von 1,5 bis 2,5 kg pro m<sup>2</sup> Unterlage, vorzugsweise 2 kg Sand pro m<sup>2</sup>, für Fasern, welche eine Höhe von etwa 20 mm aufweisen, oder proportional mehr oder weniger gemäß der größeren oder kleineren Höhe der Fasern (3).
- 45
14. Verfahren zum Herstellen eines Bodens für ein Spielfeld gemäß einem der Ansprüche 11 bis 13, wobei in Schritt c) die Mischung i) von granuliertem thermoplastischem Material und Ziegel-Granulat der oberen Füllschicht (6) das thermoplastische Material in einer Menge von zwischen 5 - 15%, vorzugsweise 10%, des Gewichts der des thermoplastischen Materials vorliegt.
- 50
- 55
15. Verfahren zum Herstellen eines Bodens für ein Spielfeld nach einem der Ansprüche 11 bis 14, wobei das thermoplastische Material Polyurethan in granularer Form ist.
16. Verfahren zum Herstellen eines Bodens für ein Spielfeld nach einem der Ansprüche 11 bis 15, wobei das thermoplastische Material durch eine Härte, definiert in Sh.A, in einem Bereich von 50 bis 80, vorzugsweise 67, gekennzeichnet ist.
17. Verfahren zum Herstellen eines Bodens für ein Spielfeld nach einem der Ansprüche 11 bis 16, wobei in der oberen Füllschicht (6) die Ziegel-Granule und die Granule aus thermoplastischem Material einen Durchmesser von etwa 0,05 - 2 mm aufweisen.

### Revendications

1. Base pour un terrain de jeu (1), comprenant un support (2) auquel une pluralité de fibres (3) sont fixées dans une position sensiblement verticale et perpendiculaire audit support (2) et une matière de remplissage (4) comprenant une couche inférieure de sable (5) en contact avec le support (2) et une couche de remplissage supérieure (6), **caractérisée en ce qu'**une couche de remplissage (6) se compose d'un mélange de granulés de brique à haute cuisson et dépourvu d'argile et une matière thermoplastique en granulés, ou bien une couche (6') de matière thermoplastique granulée et une couche de granulés de brique à cuisson élevée et dépourvue d' argile (6'').
2. Base pour un terrain de jeu (1) selon la revendication 1, dans laquelle ledit granulé de brique à cuisson élevée dépourvu d'argile est utilisé selon une quantité d'environ 20 kg/m<sup>2</sup> du support (2).
3. Base pour un terrain de jeu (1) selon la revendication 1 ou 2, dans laquelle ladite matière thermoplastique granulée est du polyuréthane.
4. Base pour un terrain de jeu (1) selon l'une quelconque des revendications 1 à 3, dans laquelle ledit polyuréthane est **caractérisé par** une dureté définie en Shore A comprise entre 50 et 80, de préférence 67.
5. Base pour un terrain de jeu (1) selon l'une quelconque des revendications 1 à 4, dans laquelle le granulé de brique à cuisson élevée dépourvu d'argile et la matière thermoplastique granulée sont **caractérisés par** une taille de grain d'environ 0,05 - 2 mm.
6. Base pour un terrain de jeu (1) selon l'une quelconque des revendications 1 à 5, dans laquelle, dans ledit mélange de granulés de brique et de matière

- thermoplastique, la matière thermoplastique présente une quantité comprise entre 5 - 20 %, de préférence 10 % en poids de ladite couche (6).
7. Base pour un terrain de jeu (1) selon la revendication 1, dans laquelle lesdites fibres ont une hauteur comprise entre 10 et 30 mm, de préférence 20 mm. 5
8. Base pour un terrain de jeu (1) selon l'une quelconque des revendications précédentes, dans laquelle la matière de remplissage recouvre toute la hauteur des fibres. 10
9. Base pour un terrain de jeu selon l'une quelconque des revendications précédentes, dans laquelle la quantité de sable de la couche de remplissage inférieure (5) est proportionnelle à la hauteur des fibres et est comprise entre 1,8 et 2,2 kg/m<sup>2</sup> du support, de préférence 2 kg/m<sup>2</sup> si les fibres ont une hauteur d'environ 20 mm. 15
10. Base pour un terrain de jeu selon l'une quelconque des revendications précédentes, comprenant en outre une structure de drainage et d'amortissement (7) placée sous le support (2). 20
11. Procédé pour fabriquer une base pour un terrain de jeu, comprenant les étapes consistant à : 25
- a) déposer un support (2) sur une surface plate, ledit support (2) étant **caractérisé en ce qu'il** comprend une pluralité de fibres (3) fixées à ce dernier, sensiblement verticales et perpendiculaires par rapport au support (2) lui-même ; 30
  - b) remplir partiellement lesdites fibres (3) avec une couche inférieure de sable (5), de préférence quartzifère ; 35
  - c) remplir les fibres (3) jusqu'à ce qu'elles soient complètement recouvertes avec une couche de remplissage supérieure (6) se composant de : 40
    - i) un mélange composé d'une matière thermoplastique sous forme granulaire et d'un granulé de brique ; ou bien de : 45
    - ii) une couche (6') de matière thermoplastique sous forme granulaire et une couche (6'') d'un granulé de brique à cuisson élevée dépourvue d'argile. 50
12. Procédé pour fabriquer une base pour un terrain de jeu selon la revendication 11, dans lequel lesdites fibres ont une hauteur comprise entre 10 - 30, de préférence 20 mm. 50
13. Procédé pour fabriquer une base pour un terrain de jeu selon la revendication 12, dans lequel le remplissage avec la couche de sable (5) de l'étape (b) est obtenu avec une quantité de sable comprise entre 1,5 et 2,5 kg/m<sup>2</sup> du support, de préférence 2 kg/m<sup>2</sup> de sable pour les fibres ayant une hauteur d'environ 20 mm ou proportionnellement plus ou moins selon la hauteur plus ou moins importante des fibres (3). 55
14. Procédé pour fabriquer une base pour un terrain de jeu selon l'une quelconque des revendications 11 à 13, dans lequel à l'étape c), le mélange i) de matière thermoplastique granulée et de granulés de brique de la couche de remplissage supérieure (6) comprend environ 5 - 15 % en poids, de préférence environ 10 % en poids de matière thermoplastique granulaire. 55
15. Procédé pour fabriquer une base pour un terrain de jeu selon l'une quelconque des revendications 11 à 14, dans lequel ladite matière thermoplastique est du polyuréthane sous forme granulaire. 60
16. Procédé pour fabriquer une base pour un terrain de jeu selon l'une quelconque des revendications 11 à 15, dans lequel ladite matière thermoplastique est **caractérisée par** une dureté définie en Shore A comprise entre 50 et 80, de préférence 67. 65
17. Procédé pour fabriquer une base pour un terrain de jeu selon l'une quelconque des revendications 11 à 16, dans lequel, dans la couche de remplissage supérieure (6), les granulés de brique et les granulés de matière thermoplastique ont un diamètre d'environ 0,05 - 2 mm. 70

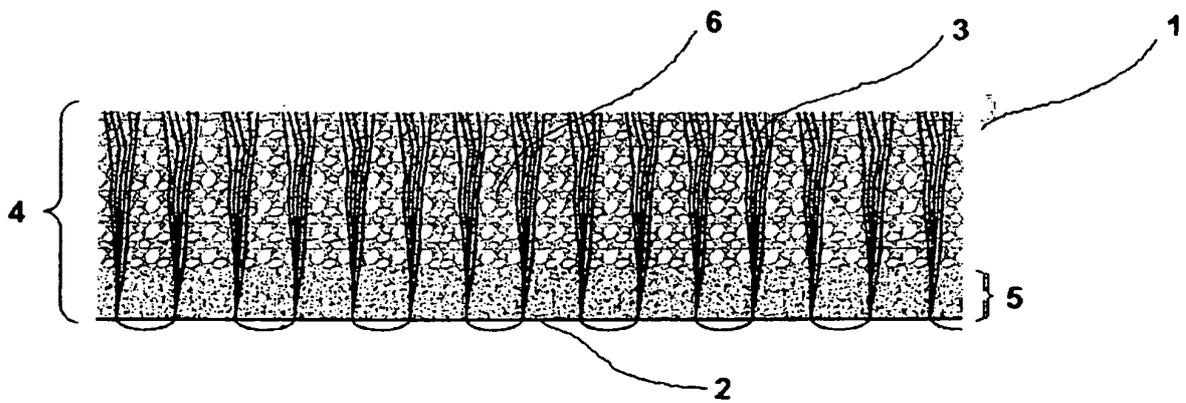


FIG. 1

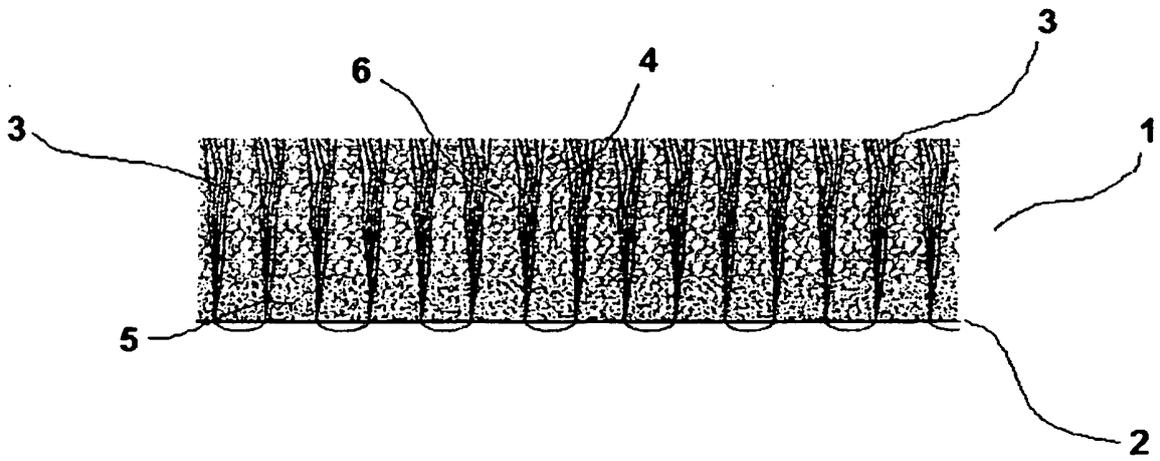


FIG. 2

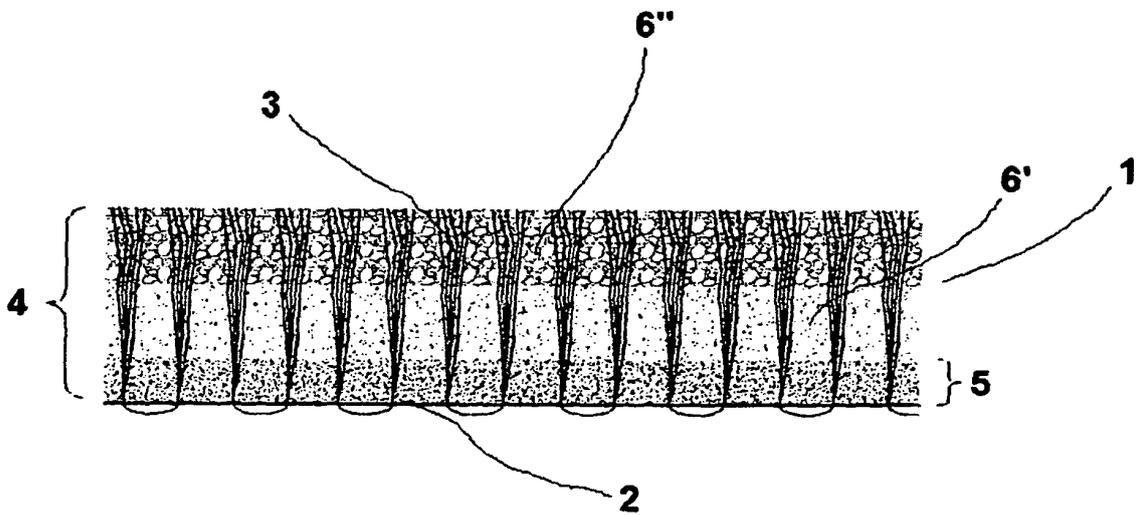


FIG. 3

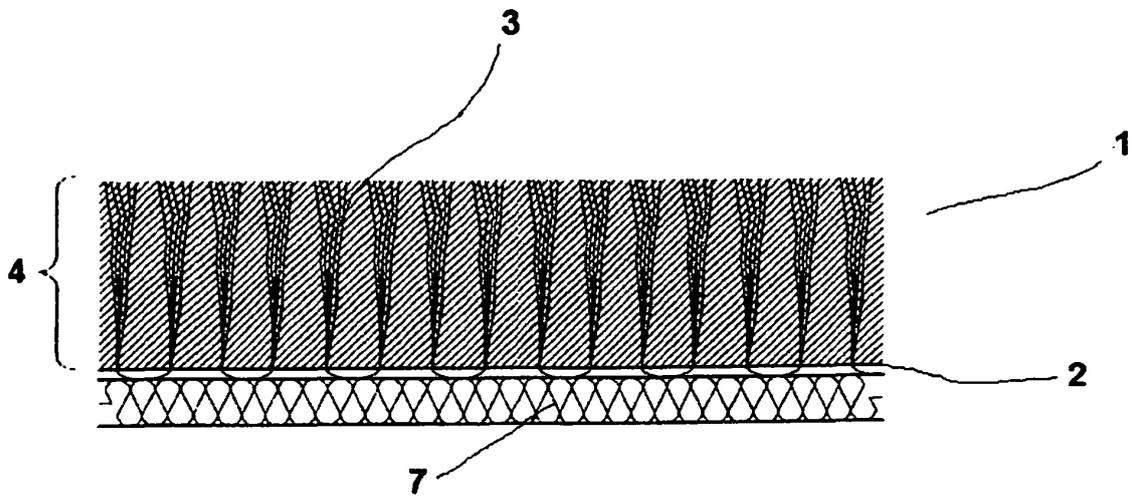


FIG. 4

**REFERENCES CITED IN THE DESCRIPTION**

*This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.*

**Patent documents cited in the description**

- US 5678951 A [0010]