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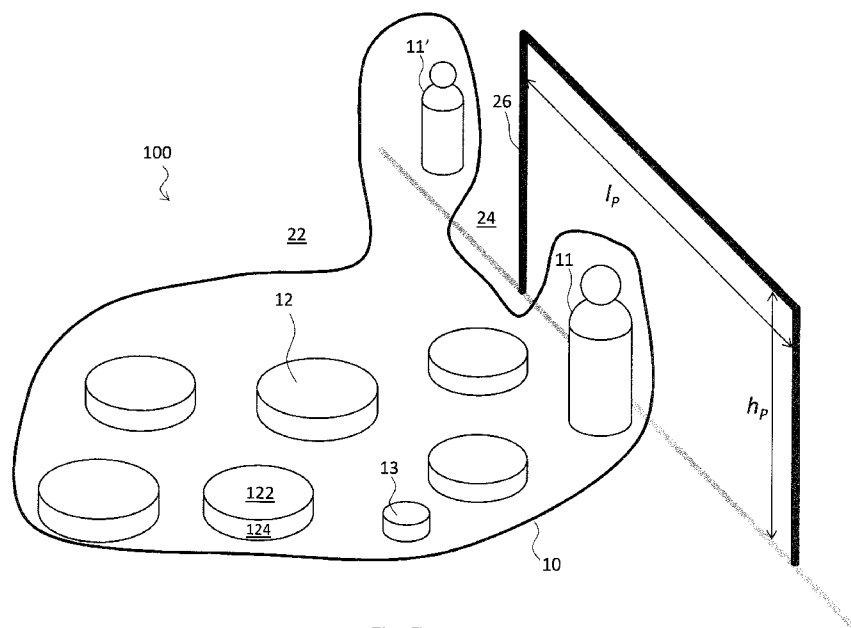


Fig. 7

(57) Abstract: The present invention relates to a set of playing pieces designed to represent a team in a table game which simulates the game of football. The set (10) comprises a regular goalkeeper playing piece (11) and a plurality of outfield player pieces (12), in which at least one outfield player piece has a diameter and/or weight and/or sliding characteristics different from those of the other outfield player pieces. The invention also relates to a game kit (100) comprising two sets (10) and an additional ball piece (13) having an at least partially cylindrical shape (130) with a diameter and height smaller than those of the outfield player pieces.



### Title

Kit for a table football game

### Description

The present invention relates to a set of playing pieces and a kit for a table game, in particular a game based on the game of football and called Tulitt.

Football, which is a popular game followed by broad sectors of the population, has given rise to numerous attempts to reproduce the dynamics and excitement thereof on a small scale, by typically confining the action of the game to a table.

A first attempt to simulate football has resulted in a game which is commonly known as "table football". This game, while it reproduces the fast dynamics of the playing action, has a major drawback due to the fact that the person playing the game is unable to position at all his playing pieces on the playing field, said pieces instead being provided in a rigid arrangement right from the time of manufacture of the table.

Other simulation attempts have been based on the use of playing pieces which represent the players of a team and are intended to be moved over a playing surface representing the standard playing field, either by means of shaped sticks or by means of the fingers which are used to strike the prechosen piece.

For example, British patent No. 486047, granted in 1938, describes a team of no more than five players, represented by cylindrical discs which are all identical to each other, while the ball disc is also cylindrical and has dimensions which are markedly smaller than those of the player discs. The goalkeeper disc appears to be different in that it has a recess in the visible surface intended to contain the ball disc. The main drawback of this solution is that it is not possible to reproduce the situations and the dynamics of the real game of football.

Another example which may be mentioned is European patent application published in 1980 under No. 54342 and describing a team of players consisting of a substantially semi-spherical base which has, projecting from the bottom thereof, a resiliently mounted ball and which is intended to allow the movement of the playing piece on which a statuette representing a player is mounted. This solution also has the same drawbacks and problems as those of the solution described in the aforementioned British patent.

British patent No. 634857 granted in 1950 describes a solution which provides a team of players which are substantially identical to each other and consist of a frustoconical base on which a statuette representing a player is mounted, while the ball is represented by a flat disc which is moved by pressing against its edge the edge of the player's base so that the ball piece jumps in the same way as in the well-known game of Tiddlywinks.

In this case also the playing places are all identical to each other.

A second attempt at simulating the game of football gave rise to the game called Subbuteo<sup>®</sup>, a trademark belonging to Hasbro Inc. in Pawtucket, Rhode Island, USA. Subbuteo uses as playing area a cloth which has, marked on it, the lines of the playing field and must be arranged on a suitable flat surface, for example a table. The football players are represented by so-called miniatures consisting a fairly realistic human figure mounted on a base having a substantially semi-spherical shape. Differently, the miniature of the goalkeeper, which is also realistic, is mounted on a rod which is passed underneath the goal net. This rod allows the person playing the game to move the goalkeeper from behind the goal. Finally, in Subbuteo a real ball is used. The possibility of tilting the miniatures by means of the semi-spherical base and the possibility of making the ball roll are required in order to compensate for the roughness of the cloth and any irregularities in its laid-out arrangement. The form of the miniatures and the ball are such as to be able to reproduce reality in a effective manner, also owing to the graphical and colour solutions used.

While being very popular, Subbuteo also has a number of drawbacks. Firstly, the tilting form of the miniatures and the spherical shape of the ball, while being necessary, reduce significantly the possibility for mechanical/dynamic control by the person playing the game. This aspect negatively affects the strategies employed in the game.

Moreover, the particular structure of the goalkeeper is particularly unrealistic. The arrangement of the rod underneath the goal means that the goal structure is very unstable. It may also happen that the ball is stopped from entering the goal by the rod rather than by the actual goalkeeper and/or that the entire goal structure is raised when the person playing moves the goalkeeper.

The object of the present invention is to overcome at least partly the drawbacks mentioned above with reference to the prior art.

More specifically, a task of the invention is to allow an as accurate as possible simulation of that which occurs in reality during a football match, in particular from the point of view of strategy and dynamics.

Another task of the invention is to provide a kit which is able to reproduce different playing conditions which may arise during a game of football, including, in particular, as already mentioned, the tactical and strategic aspects which become crucial as during the real game of football.

The aforementioned objects and tasks are achieved by a set of playing pieces according to Claim 1 and by a game kit according to Claim 4. Further advantageous characteristic features

are indicated in the dependent claims.

The characteristic features and further advantages of the invention will become clear from the description, provided hereinbelow, of a number of examples of embodiment provided by way of a non-limiting example with reference to the attached drawings.

- Figure 1 shows a perspective view, from above, of a regular goalkeeper playing piece according to the invention;
- Figure 2 shows a perspective view, from above, of a substitute goalkeeper playing piece according to the invention;
- Figure 3.a shows a cross-sectional view of the goalkeeper playing piece shown in the embodiment of Figure 1, the cross-section being perpendicular to the axis of the goalkeeper playing piece, along the line indicated by III in Figure 1;
- Figures 3.b and 3c show cross-sectional views of the goalkeeper playing piece in two possible embodiments which are an alternative to that shown in Figure 1;
- Figure 4 shows a perspective view, from above, of an outfield player piece according to the invention;
- Figure 5 shows a perspective view, from above, of a ball piece according to the invention;
- Figure 6.a shows a perspective view, from below, of the outfield player piece according to the Figure 4, sectioned along the line indicated by VI in Figure 4;
- Figure 6.b shows a view similar to that of Figure 6.a of a possible embodiment which is an alternative to that shown in Figure 4;
- Figure 7 shows a perspective view of both a set of playing pieces and a kit according to the invention; and
- Figure 8 shows a plan view of a playing surface according to the invention.

With reference to the attached drawings, 10 denotes a set of playing pieces designed to represent a team in a table game which simulates the game of football, where all the playing pieces must slide in contact with the playing surface and are moved by the person playing the game using two fingers (usually the thumb and another finger) joined together and partially superimposed so that one of the ends of a finger strikes the outfield player piece, directing it towards the ball piece.

The set 10 according to the invention comprises:

- a regular goalkeeper playing piece 11 with an at least partially cylindrical or prismatic shape comprising a support base 111 with a respective radius or circumradius  $R$  greater than or equal to 9 mm and preferably ranging between 9 mm and 12 mm; the regular goalkeeper playing piece 11 also having a height greater than or equal to 50 mm and preferably ranging

between 50 mm and 60 mm and a weight greater than or equal to 30 g and preferably ranging between 30 g and 40 g; and

- a plurality of outfield player pieces 12 with an at least partially cylindrical shape, comprising a circular support base 121 with a diameter greater than or equal to 20 mm and preferably ranging between 20 mm and 35 mm, and a cylindrical side wall 124 with a height greater than or equal to 4 mm and preferably ranging between 4 mm and 10 mm.

In the regular goalkeeper playing piece 11 the cylindrical or prismatic portion is the bottom portion 110, intended to come into contact with the ball piece 13, as will be described below in greater detail. Differently, the top portion 112 may be formed in a different manner. For example, in accordance with the embodiments shown in the attached figures, a portion 112 which is tapered and then assumes a substantially spherical shape is arranged on top of the cylindrical portion 110.

In the case where the bottom portion 110 is cylindrical, the support base 111 is circular and the definition of the radius  $R$  is evident for the person skilled in the art. In the case where the bottom portion 110 is instead prismatic, the support base 111 is generally polygonal. In this case reference will be made here and below to the radius of the smallest circle which includes the polygon (if the latter is irregular) or of the circle circumscribing the polygon (if the latter is regular). This radius is called circumradius and is also indicated by  $R$ .

For the manufacture of the regular goalkeeper playing piece 11 it is possible to use different materials, in order to give the said playing piece the desired characteristics in terms of rigidity and weight. For example, in accordance with a preferred embodiment, the bottom portion 110 is made of aluminium, while the top portion 112 is made at least partially of steel.

In accordance with some embodiments of the invention, the set 10 also comprises a substitute goalkeeper playing piece 11', which is entirely similar to the regular goalkeeper playing piece 11, but is smaller and lighter. In particular, the substitute goalkeeper playing piece 11' may have a height greater than or equal to 30 mm and preferably ranging between 30 mm and 40 mm and a weight greater than or equal to 10 g and preferably ranging between 10 g and 20 g.

Also in the case of the outfield player pieces 12, the cylindrical portion is the bottom portion 120, intended to come into contact with the other playing pieces and in particular with the ball piece 13. The top portion 122 may be formed in a different manner. For example, the top portion 122 may be shaped in forms 123 which are suitable for facilitating gripping thereof (see Figure 6.b) and may be formed so that interchangeable distinguishing marks or the like may be applied onto them. In accordance with the embodiments shown in the attached figures, the cylindrical portion 120 terminates in a simple flat base which constitutes the

simplest form of the top portion 122.

Both in the case of the goalkeeper playing piece (regular 11 and substitute 11') and in the case of the outfield player pieces 12, it is important for the support bases 111 and 121 to provide a stable support. In this connection it is not strictly necessary for the base to be flat, but it is sufficient for it to provide a level and not tilting supporting action. In this respect the support base may if necessary comprise reliefs or ribs 125. See for example the support base 121 in Figures 6.a and 6.b which comprise radial ribs 125 (Figure 6.b) and circumferential ribs (Figure 6.a).

As regards the outfield player pieces 12, it is important for the support bases to have predetermined sliding characteristics. For example, in a preferred embodiment of the set 10 according to the invention, the set 10 comprises outfield player pieces 12 with different sliding characteristics. More particularly, the outfield player pieces with a smaller diameter and/or weight have a greater sliding capacity and the outfield player pieces with a larger diameter and/or weight have a smaller sliding capacity.

While the comparison, or also the measurement, of the different diameters and weights is a simple operation well within the competence of the person skilled in the art, more problems may be encountered when comparing the different sliding characteristics. The sliding capacity of the single outfield player piece 12 is a fairly complex characteristic which depends on various factors. It depends on: the material from which the support base is made, the roughness of the support base, the effective support area on the playing surface, the roughness of the playing surface, the weight of the outfield player piece, etc. In practice, the sliding capacity determines the distance travelled by the outfield player piece 12 following a single impact imparted to it by the person playing the game. The greater the sliding capacity, the greater will be the distance travelled. The kit may have different kinds of outfield player pieces 12. The comparison of their different sliding characteristics may be performed by imparting to the playing pieces impacts of an identical intensity and comparing the distances travelled. This approach, however, is not very practical owing to the difficulty of controlling with precision the intensity of the impacts. Another system for comparing the different sliding characteristics of the outfield player pieces 12 may be that of inclining the playing surface and comparing the angle at which each playing piece 12 starts to slide. The smaller the angle, the greater the sliding capacity.

However a difference in the sliding capacity may be obtained in the outfield player pieces, for the same weight and/or diameter, by modifying the nature and/or the characteristics of the support base 121. For example, it is evident that, by making the surface of the support base

121 rougher, the outfield player piece will have a smaller sliding capacity. It is evident that in this way also it is possible to adjust the sliding action of the outfield player piece.

Owing to these differences between the various outfield player pieces 12 of the same set 10 it is possible to simulate the different physical characteristics of the footballers who have different roles within a football team. For example, an outfield player piece 12 with a diameter of about 25 mm and maximum sliding capacity simulates a footballer playing on the wings, a role where great mobility is required. An outfield player piece 12 with a diameter of about 28 mm and average sliding capacity simulates a midfield player with average characteristics. Finally an outfield player piece 12 with a diameter of about 32 mm and a minimum sliding capacity simulates a central defender or a striker, roles where a greater ability to withstand the attacking actions/tackles of the opponents is required.

In accordance with a preferred embodiment, the set 10 comprises, in addition to a regular goalkeeper playing piece 11 and, if necessary, a replacement goalkeeper playing piece, a plurality of outfield player pieces 12 with different weight, size and sliding characteristics as illustrated above.

Obviously, in order to be able to play, it is necessary to have a kit 100 comprising at least two sets 10 described above and a further ball piece 13. The ball piece 13 has an at least partially cylindrical shape comprising a circular support base with a diameter of between 10 mm and 20 mm, and a cylindrical side wall 134 with a height of between 4 mm and 6 mm.

As in the case of the outfield player pieces 12, also in the case of the ball piece 13, the cylindrical portion is the bottom portion 130. This portion is in fact intended to come into contact with the other playing pieces. The top portion 132 may be formed in a different manner. In accordance with the embodiments shown in the attached figures, the cylindrical portion 130 has, mounted on top, a simple flat base which constitutes the simplest form of the top portion 132. This form of the ball piece 13 is particularly advantageous because the orientation of the playing piece cannot be determined and therefore it is possible to continue playing even if the playing piece should flip over during a playing move.

In accordance with a preferred embodiment, the ball piece has a weight greater than or equal to 2 g and preferably ranging between 2 g and 4 g.

Even more preferably, it has a weight of about 3 g.

As the person skilled in the art may easily understand, the cylindrical shape is preferable for the bottom portion 110 of the regular goalkeeper playing piece 11 because it ensures a more uniform movement applied by the regular goalkeeper playing piece 11 to the ball piece 13. However, it is equally evident that other prismatic shapes will not differ greatly from the

cylindrical shape, in particular with an increase in the number of sides of the base polygon. It is also possible that, in the regular goalkeeper playing piece 11 and/or in the outfield player pieces 12, the cylindrical portion may not be complete about the axis of the playing piece, but that a circular segment intended to come into regular and controllable contact with the ball piece 13 - this segment therefore simulating the front of a real footballer player - may be combined with a segment which is more or less wide and which therefore results instead in an irregular and unpredictable contact with the ball piece 13 - this segment simulating therefore the rear of a real football player.

In accordance with some embodiments thereof, the kit 100 according to the invention further comprises a rigid and smooth surface 20 which has, marked out on it, a playing pitch 22 with length  $L_{RG}$  ranging between 130 cm and 145 cm and width  $l_{RG}$  ranging between 72 cm and 82 cm. More preferably, the playing pitch 22 has a length  $L_{RG}$  of about 137 cm and width  $l_{RG}$  of about 77 cm.

The playing pitch 22 marked out on the surface 20 is shown in Figure 8. As the person skilled in the art may easily understand, this playing pitch resembles a real playing field, with the sole addition of two transverse lines marked at about 20 centimetres from the halfway line and parallel thereto. These consist of the lines indicating the point from which a shot towards goal may be regarded as a valid goal should it enter. In this case also the simulation appears to be close to the reality of the game of football.

The surface 20 must be uniform and smooth so as to allow the playing pieces to slide easily. Suitable materials which may be used to make the surface may be, for example, laminated plastic and polycarbonate. In order to keep the playing surface as uniform as possible, the lines should also be preferably formed so as to avoid or keep to a minimum any thickness. The lines may be for example formed directly during manufacture of the surface, using different coloured materials, or may be silkscreen-printed subsequently on a uniformly coloured surface.

The surface 20 has preferably dimensions greater than the playing pitch 22 so as to define around the latter an intended playing field 24. The surface for example may have a length  $L_{CD}$  ranging between 160 cm and 200 cm and width  $l_{CD}$  ranging between 100 cm and 130 cm. Preferably, the surface has a length  $L_{CD}$  of about 181 cm and width  $l_{CD}$  of about 117 cm.

In accordance with a preferred embodiment, the rigid and smooth surface 20 has the pitch 22 marked on both its sides, the latter differing in terms of their surface roughness. Owing to this difference, different playing situations may be simulated, namely where the field is more or less slippery. For example, one of the two sides may represent a normal grass playing field



with standard conditions of the surface. Differently, the other smoother side may represent a snow-covered field or a field with a synthetic surface. This difference in surface roughness may be advantageously indicated by the different colouring of the two surfaces. For example, the grass-covered field may be represented by a green colour of the surface, while the snow-covered field may be represented by a white colour of the surface.

Advantageously, the rigid and smooth surface 20 further comprises two goals 26 which have dimensions compatible with those of the playing pitch and/or with the dimensions of the goalkeeper playing piece and the outfield player pieces. Preferably, the goals 26 have a height  $h_P$  ranging between 60 mm and 90 mm and width  $l_P$  ranging between 10 cm and 16 cm. In the even more preferred solution the goals 26 have a height  $h_P$  of about 75 mm and width  $l_P$  of about 13 cm.

The goals 26 are preferably made to resemble those of real football pitches. They may therefore comprise preferably a rigid frame formed by two posts and a crossbar, which have a round cross-section. The rigid frame has preferably fastened to it a net (not shown) able to retain the ball piece 13 when it is propelled inside the goal 26.

Advantageously, the rigid and smooth surface 20 may comprise a hole 28 inside each of the two goals 26. In this case the net of the goal defines advantageously a bag which downwardly enters the bottom of the hole so as to receive the ball piece 13. This solution prevents the ball piece 13 from rebounding out of the goal once it has entered.

As the person skilled in the art may easily understand, the present invention achieves the object of overcoming most of the drawbacks mentioned with reference to the prior art.

More specifically, the present invention consists in allowing an as accurate as possible simulation of that which occurs in reality during a game of football, in particular from the point of view of strategy and dynamics.

Moreover, the invention provides a kit which is able to reproduce different playing conditions which may arise during a game of football, favouring in particular the tactical and strategic aspects which become crucial in the game of football, as they are in the real game of football.

In fact, one of the advantages of the invention is to provide the person playing the game with a greater freedom as regards the composition of his/her set 10, so as to simulate the freedom which a football coach has when choosing the players and their positions on the pitch. In fact, in accordance with some embodiments of the invention, the person playing the game may, by selecting the various types of outfield player pieces and various combinations thereof, choose the formation which is "physically", and therefore tactically, most suitable for the game to be played.

The game Tulitt is played using procedures which are easily understood and converted into an appropriate set of rules and which have the primary aim of reproducing solutions typical of the game of football. For example, but not exclusively, there are the rules for passing the ball and so-called dribbling. The rules are simple, in the same way that the game of football is simple, and for the most part may be readily understood.

The person skilled in the art, in order to satisfy specific requirements, may make modifications to the embodiments described above of the set 10 of playing pieces and game kit 100 and/or replace parts described with equivalent parts, without thereby departing from the scope of the attached claims.

### Claims

1. Set (10) of playing pieces (11, 12) representing a team in a table game which simulates the game of football, the playing pieces having an at least partially cylindrical or prismatic shape (110, 220) comprising a circular support base, characterized in that it comprises a regular goalkeeper playing piece (11) and a plurality of outfield player pieces (12), said plurality of outfield player pieces comprising at least one outfield player piece having a diameter and/or weight and/or sliding characteristic which is different from those of the other outfield player pieces of said plurality.
2. Set (10) of playing pieces according to Claim 1, characterized in that said regular goalkeeper playing piece (11) has an at least partially cylindrical or prismatic shape (110) with a respective radius or circumradius  $R$  greater than or equal to 9 mm, the regular goalkeeper playing piece (11) also having a height greater than or equal to 50 mm and a weight greater than or equal to 30 g; and said outfield player pieces (12) having an at least partially cylindrical shape (12) comprising a circular support base (121) with a diameter greater than or equal to 20 mm, and a cylindrical side wall (124) with a height greater than or equal to 4 mm.
3. Set (10) of playing pieces according to Claim 2, characterized in that said regular goalkeeper playing piece (11) has a respective radius or circumradius  $R$  ranging between 9 mm and 12 mm, the regular goalkeeper playing piece (11) also having a height ranging between 50 mm and 60 mm and a weight ranging between 30 g and 40 g; and said outfield player pieces (12) have a cylindrical shape support base (121) with a diameter ranging between 20 mm and 35 mm and a cylindrical side wall (124) with a height ranging between 4 mm and 10 mm.
4. Set (10) according to each of Claims 1 to 3, characterized in that, in the plurality of outfield player pieces (12), the outfield player pieces with a smaller diameter have a greater sliding capacity and the outfield player pieces with a greater diameter have a smaller sliding capacity.
5. Set (10) according to each of Claims 1 to 4, characterized in that it further comprises a substitute goalkeeper playing piece (11'), which is entirely similar to the regular goalkeeper playing piece (11), but has a height greater than or equal to 30 mm and preferably ranging between 30 mm and 40 mm and a weight greater than or equal to 10 g and preferably ranging between 10 g and 20 g.
6. Kit (100) comprising two sets (10) of playing pieces in accordance with any one of Claims 1 to 5, further comprising an additional ball piece (13) having an at least partially

- cylindrical shape (130) having a circular support base with a diameter ranging between 10 mm and 20 mm and a cylindrical side wall (134) with a height ranging between 4 mm and 6 mm, and a rigid and smooth surface (20) which has, marked out on it, a playing pitch (22) with a length ( $L_{RG}$ ) ranging between 130 cm and 145 cm and width ( $l_{RG}$ ) ranging between 72 cm and 82 cm.
7. Kit (100) according to Claim 6, characterized in that the ball piece (13) has a weight of between 2 g and 4 g.
  8. Kit (100) according to Claim 6, characterized in that said playing pitch has two further transverse lines arranged between the halfway line of the pitch and the lines marking the boundaries of the penalty area.
  9. Kit (100) according to Claim 6, characterized in that the rigid and smooth surface (20) has two opposite sides on both of which a playing pitch (22) is marked out.
  10. Kit (100) according to each of Claims 6 or 8 and 9, characterized in that the rigid and smooth surface (20) has a length ( $L_{CD}$ ) ranging between 160 cm and 200 cm and width ( $l_{CD}$ ) ranging between 100 cm and 130 cm, so as to define, around the playing pitch (22), an intended playing field (24).
  11. Kit (100) according to any one of Claims 6 to 10, characterized in that the rigid and smooth surface (20) further comprises two goals (26) which have a height ( $h_P$ ) ranging between 60 mm and 90 mm and width ( $l_P$ ) ranging between 10 cm and 16 cm.
  12. Kit (100) according to any one of Claims 6 to 11, characterized in that the rigid and smooth surface (20) further comprises a hole (28) inside each of the two goals (26).

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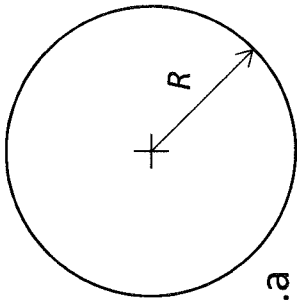


Fig. 3.a

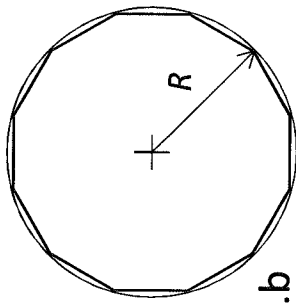


Fig. 3.b

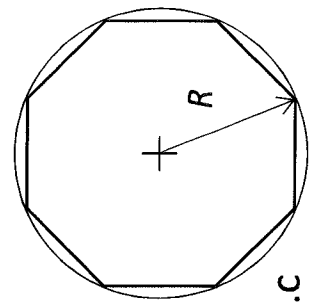


Fig. 3.c

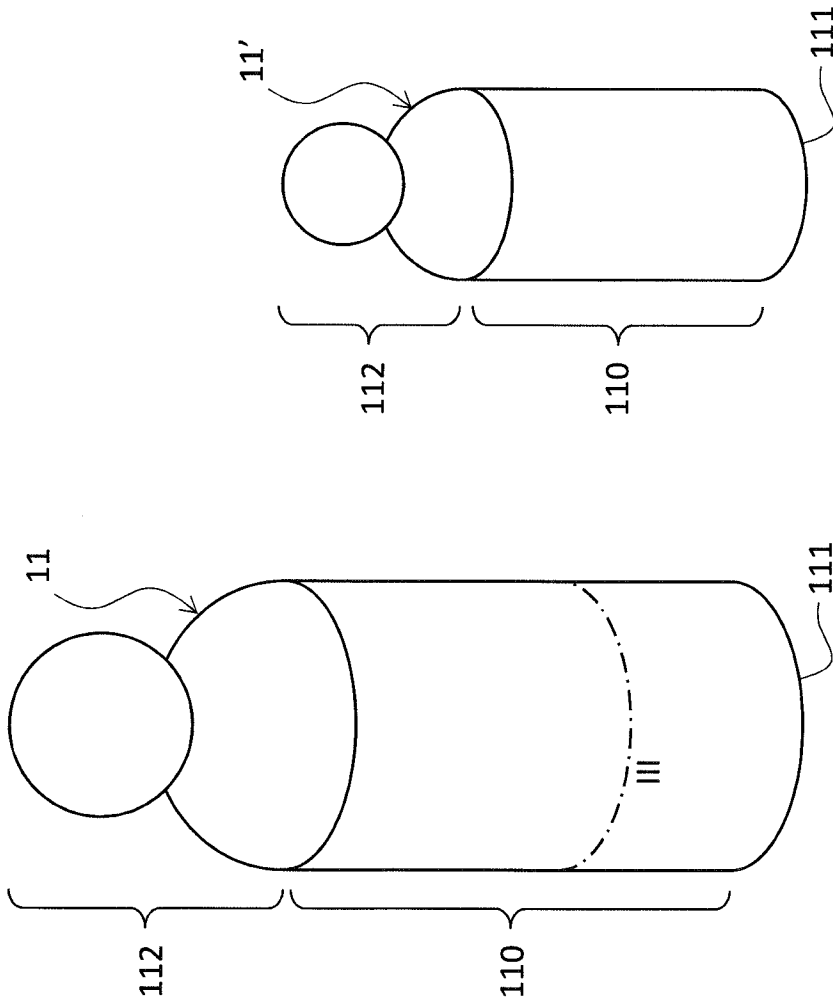


Fig. 2

Fig. 1

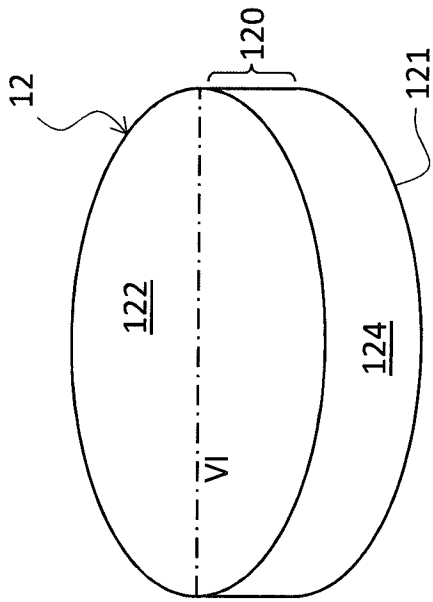


Fig. 4

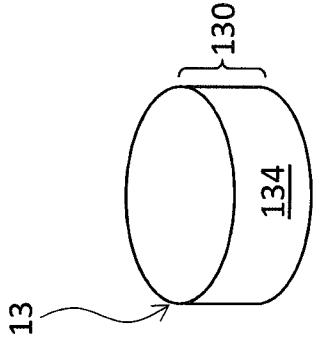


Fig. 5

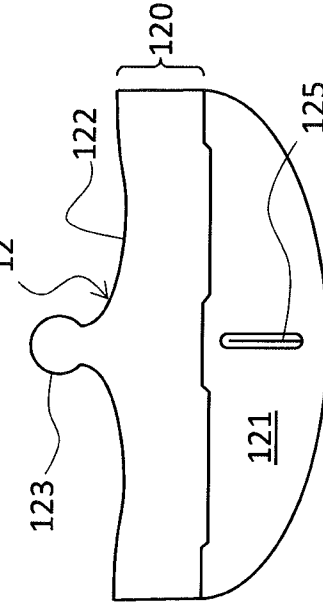


Fig. 6.a

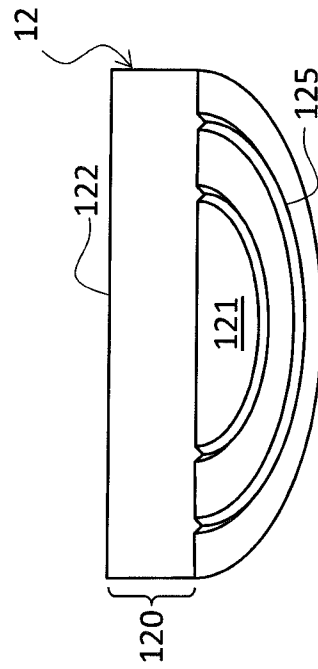


Fig. 6.b

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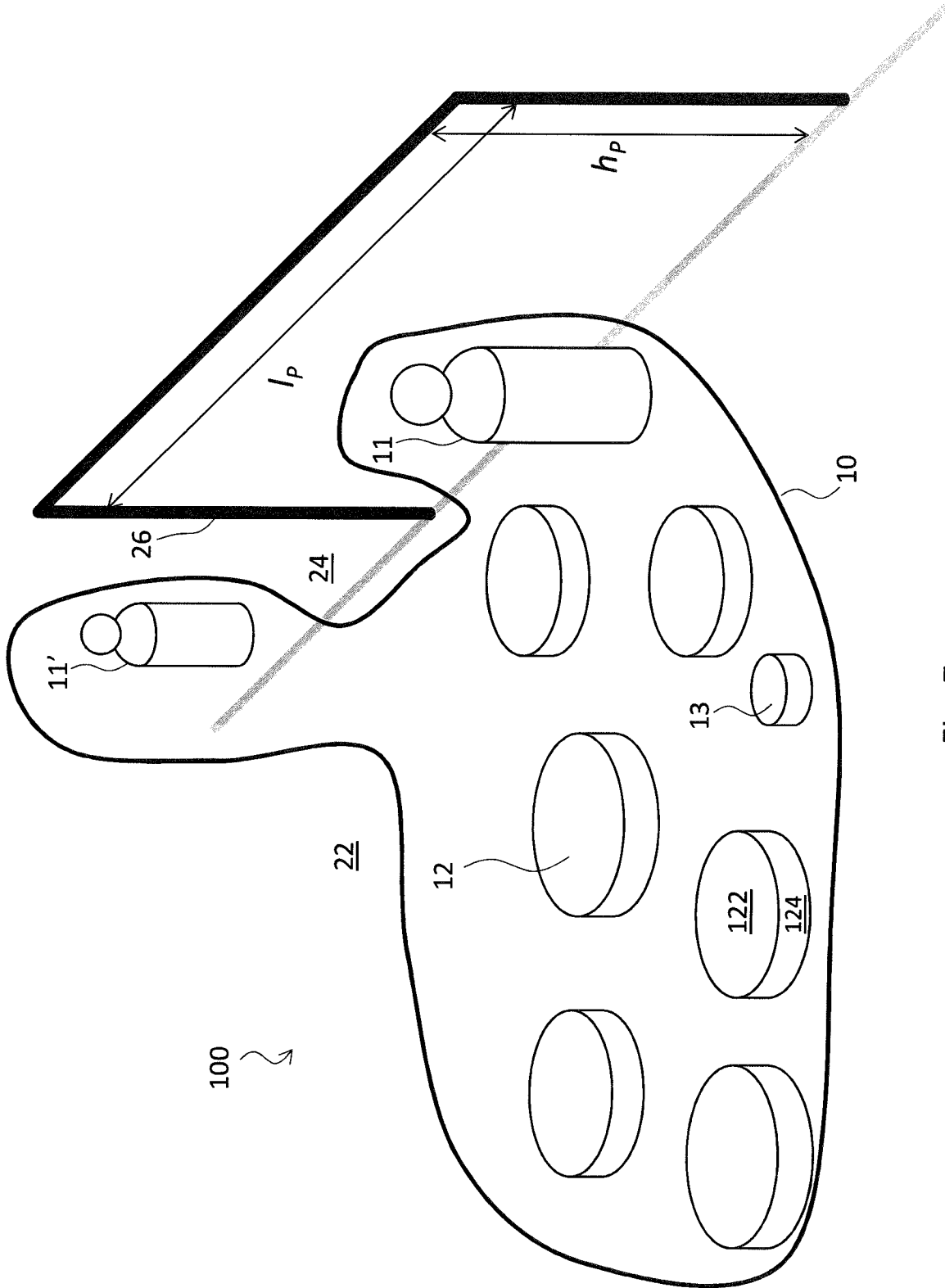


Fig. 7

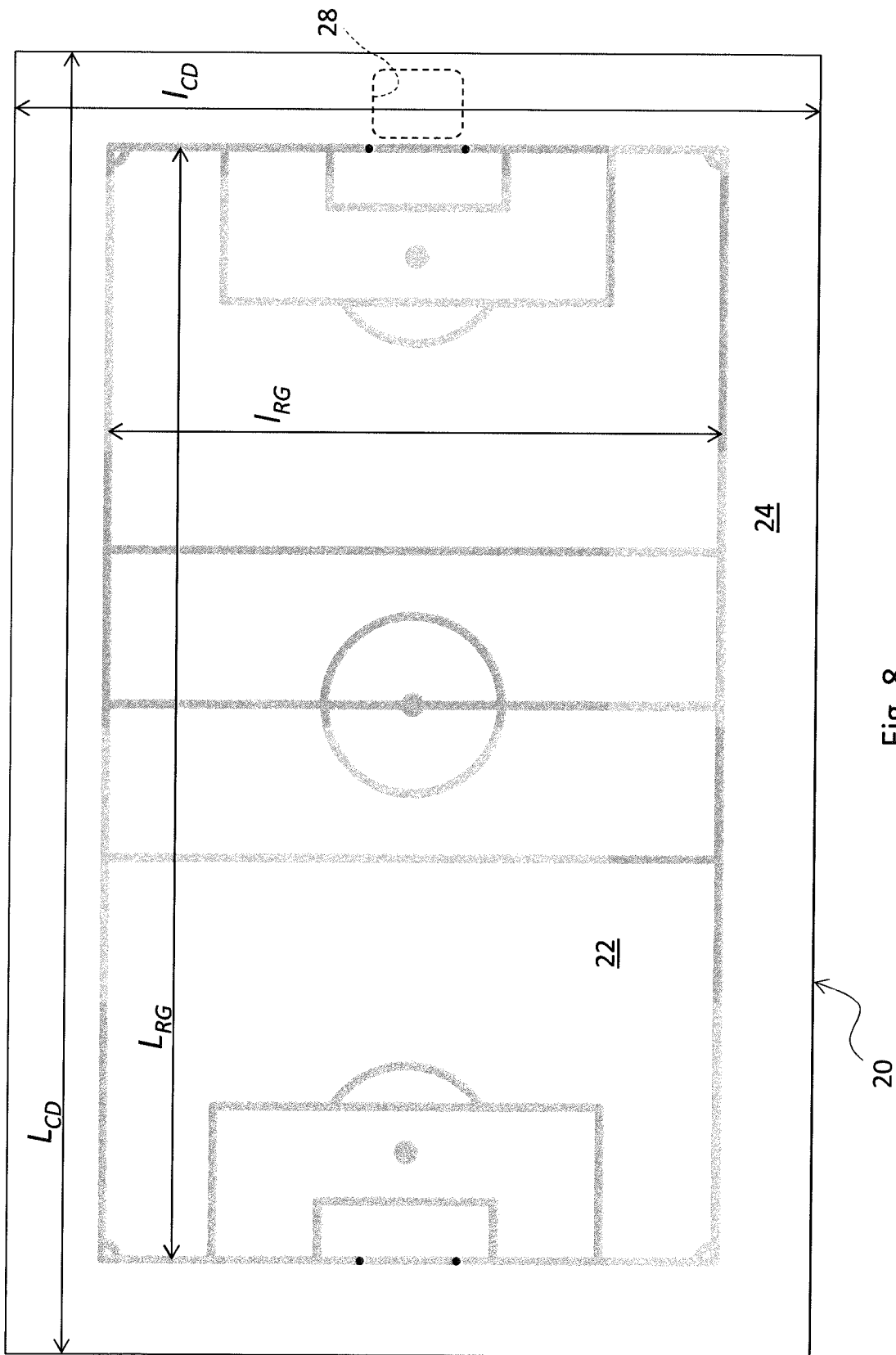


Fig. 8



# INTERNATIONAL SEARCH REPORT

International application No <b>PCT/IB2016/056840</b>
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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> INV. A63F7/06 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) A63F		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 634 857 A (GABRIEL BEGIN) 29 March 1950 (1950-03-29) page 1, line 62 - page 2, line 56; figures -----	1-12
X	GB 2 202 457 A (KNIGHT ANTHONY MARK) 28 September 1988 (1988-09-28) page 7, line 16 - page 11, line 15; figures -----	1-12
X	US 1 603 717 A (ROBERT RUBINO ET AL) 19 October 1926 (1926-10-19) page 1, line 57 - page 2, line 19; figures -----	1-12
A	CN 1 085 818 A (LIU ZHAOQUAN [CN]) 27 April 1994 (1994-04-27) the whole document -----	1-12
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No  
PCT/IB2016/056840

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