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(54) **Entertainment apparatus**

(57) A type of football game machine using model people kept in place by magnetic force in which the football, goal, goalkeepers and football players all rely on magnets and an internal metallic board within the football pitch which creates a magnetic attraction used for the purpose of holding those items in place, with the result that the football players and goalkeepers are not restrict-

ed to tracks in any way, allowing the scope of movements of the football players to be unrestricted. Apart from this, both the football players and goalkeepers have internal joint structures, each movement thus provides a realistic simulation of the action of a real football player kicking a football, allowing a major breakthrough in the extent of simulation, making this football game machine more interesting and playable.

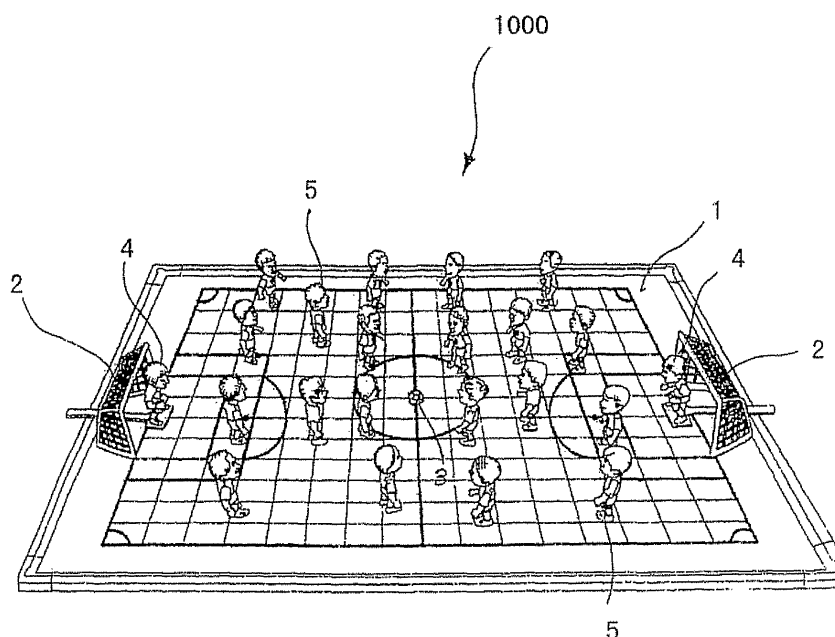


FIGURE 1

Description

[0001] The present invention relates to entertainment apparatus. In particular but not exclusively the invention relates to a type of football game machine. More particularly, embodiments of the invention relate to a type of football game machine using model people kept in place by magnetic force.

[0002] A football game machine using model people kept in place by magnetic force and mainly composed of a football pitch containing a metallic board and a number of football players and goalkeepers with movable joints kept in place by magnetic force, distinguishing it from other football game machines currently on the market. There are a number of football game machines based on current technology, the most commonly encountered being of two types, the first being a traditional football game machine, where the football pitch is a lowered space, there being two goals at the front and back, the left and right sides having paired shaft holes, in which are installed spinning football player shafts with handles, the handles being located outside the football pitch, the football players being located within the football pitch, the movement of the players being controlled by twisting, pulling or pushing of the handles, thus restricting the movements of the football players to within a fixed space, resulting in very limited freedom. In addition to the above-mentioned design, there is another design where apparatus is installed beneath the football pitch, the football players being operated by different control rods or handles, causing them to move in set tracks, also restricting the movements of the football players to within a fixed space, resulting in very limited freedom. In the above-mentioned football game machines, as the movement of the football players is restricted to within a fixed space and the method by which the user makes the football players kick the ball is nothing more than knocking the ball with the football player, there is no simulation of the actual action of the football player kicking the ball, resulting in very limited freedom and realism, making the above-mentioned football game machines uninteresting.

[0003] Taking into consideration the above problems, it is an aim of embodiments of the present invention to provide a football game machine the football players of which are kept in place by magnetic force, the players and goalkeepers of such a football game machine are not restricted by any track, thus the area of movement of the football players is not restricted in any way, resulting in a high level of freedom. Preferably, the legs of the football players may be capable of making a ball kicking movement and/or the waists of the goalkeepers may be thrust backwards and forwards, allowing the movement of the football within the game, resulting in a higher level of freedom and realism than before, making this football game machine more interesting and more playable.

[0004] In a first aspect of the present invention there is provided a football game machine as defined in the appended claims.

[0005] In a second aspect of the present invention there is provided a type of football game machine with model people kept in place by magnetic force, the characteristics of which include:

a football pitch in the base, said football pitch including:

a pitch surface located on the surface of the football pitch, on which are printed the playing area boundaries;
a metallic base to the pitch beneath the pitch surface;
a pitch frame located at the lowest level of the pitch;
four pitch fixing bolts at the four corners of the pitch frame; and
four pitch fixing nuts at the four corners of the pitch frame;

two goals located at the front and back of the pitch, the goals including:

the main goal frame of the goal;
two goal fixing magnets located under the left and right bases of the goal frame; and
a goalkeeper control rod located under the base of the goal used to control the goalkeeper;
a football capable of rolling in any direction on the football pitch, that football including:

a half sphere forming the upper half of the shell of the football;
a half sphere forming the lower half of the shell of the football; and
a magnet located within the above-mentioned football shell;
two goalkeepers located in front of the goals, the goalkeepers including:

a goalkeeper head and hand section consisting of a section connecting the head and left and right hands of the goalkeeper;
a goalkeeper support frame located within the goalkeeper head and hand section;
a goalkeeper body front forming the front half of the body of the goalkeeper;
a goalkeeper body back forming the back half of the body of the goalkeeper;
a goalkeeper feet section forming the lower half of the body of the goalkeeper;
a goalkeeper torque spring located within the swing shaft at the top of the goalkeeper feet section;
a goalkeeper fixing screw located between the goalkeeper body front and

goalkeeper body back allowing fixing of the goalkeeper's body; and
two goalkeeper fixing magnets fixed under the goalkeeper feet section;

two teams of ten football players distributed across the football pitch, the football players including:

a football player head and hand section consisting of a section connecting the head and left and right hands of the football player;
a football player body front forming the front half of the body of the football player;
a football player body back forming the back half of the body of the football player;
a football player left foot forming the left lower half of the body of the football player;
a football player right lower leg forming the right foot and right lower leg of the football player;
a football player right foot section forming the top of the right lower body half of the football player;
a right foot swing connecting shaft located between the top half section of the football player left foot and the football player right foot section also being connected to the top body half of the football player;
a left and right leg connecting cap screw located between the top half section of the football player left foot and the football player right foot section and by which they are connected;
a football player fixing screw located between the football player body front and football player body back fixing together the football player body; and
a football player fixing magnet located beneath the left foot of the football player.

[0006] This apparatus relies only on simple magnetic attraction principles, allowing the football players and goalkeepers to move without any control rods, whilst they still stand up stable, thus removing the restrictions of control rods or tracks, ensuring the movements of the football players are not restricted in anyway, allowing for great freedom; apart from this, the joint structures of the football players and goalkeepers ensure they are more agile, ensuring each movement provides a realistic simulation of the action of a real football player kicking a football, allowing a major breakthrough in the extent of simulation, making this football game machine more interesting and playable.

Appended figure description

[0007]

Figure 1 is a perspective representation of this type of utility model football game machine using model

people kept in place by magnetic force;
Figure 2 is a disassembled representation of the football pitch in figure 1;
Figure 3 is a disassembled representation of the football shown in figure 2;
Figure 4 is a perspective representation of the goal shown in figure 2;
Figure 5 is a perspective representation of the goalkeeper control rod shown in figure 2;
Figure 6 is a face-on representation of the goalkeeper shown in figure 2;
Figure 7 is a disassembled representation of the goalkeeper shown in figure 2;
Figure 8 is a rear view representation of the goalkeeper foot section shown in figure 7;
Figure 9 is a face-on representation of the football player shown in figure 2;
Figure 10 is a disassembled representation of the football player shown in figure 2;
Figure 11 is a cut-away representation of the football player right foot section shown in figure 10 along line 11-11;

Detailed implementation

[0008] Firstly refer to figure 1, figure 1 is the perspective representation of this type of football game machine 1000 using model people kept in place by magnetic force, which includes: a football pitch 1 in the bottom of the football game machine 1000; two goal sets 2 located at the front and back of the football pitch 1; a football 3 capable of rolling freely around the football pitch 1; two goalkeepers 4 that are located in front of each of the goal sets 2; and, two teams of ten football players 5 distributed across the football pitch 1.

[0009] Secondly refer to figure 2, the disassembled representation of the football pitch 1 of the football game machine 1000, including: a pitch surface 10 located on the surface of the football pitch 1, which is printed with playing area boundaries, for the purposes of the game, there being pitch surface bolt holes 100 located at its four corners; a metallic pitch base 11 located under the pitch surface 10, which forms a magnetic attraction with the magnets within the goals 2, the football 3, the goalkeepers 4 and the football players 5, forming the basis of the operation of the football game machine 1000, there being a pitch base bolt hole 110 at each of its four corners; a pitch frame 12 located at the lowest level of the pitch 1, the centre of which is a recessed pitch frame cavity 120, the surround of which is raised to form a frame ledge 121, the pitch surface 10 and pitch base 11 being inserted in the frame cavity 120 there being a frame bolt hole 122 located at the four corners of the frame cavity 120; the four pitch fixing bolts 13 located at the four corners of the pitch frame 12 pass through the frame bolt holes 122, the pitch base bolt holes 110 and the pitch surface bolt holes 100, fixing together the pitch surface 10, the pitch base 11 and the pitch frame 12, forming the football pitch

1; also, four pitch fixing nuts 14 located at the four corners of the pitch surface 10, for fixing use with the pitch fixing bolts 13.

[0010] In addition please see figure 3, showing a disassembled representation of the football 3 of the football game machine 1000, which includes: the football upper half sphere 30 which forms the upper half of the football 3; the football lower half sphere 31 which forms the lower half of the football 3; also, a football magnet 32 contained within the shell of the football 3, said football magnet 32 being able to roll freely within the football 3, allowing the football 3 to not only roll around the football pitch 1 freely, but also ensures that due to the magnetic attraction between the football magnet 32 and the metallic pitch base 11 the football 3 does not leave the area of the football pitch 1 easily, causing inconvenience.

[0011] Figure 4 and figure 5 are perspective representations of the goal frame 20 and the goalkeeper control rod 21 of the football game machine 1000, and these include: the main goal frame 20 of the goal 2, the goal frame 20 consisting of the actual goal frame 200 which simulates a real football pitch goal, the left and right bases of which have goal magnet holes 202, for installation of goal fixing magnets 22, relying on magnetic attraction to ensure that the goals 2 remain fixed in position at the front and back of the football pitch 1, in addition the centre of the base of the actual goal frame 200 possesses a control rod hole 201 through which the goalkeeper control rod 21 passes, allowing it to swing freely to the left and right; also, the goalkeeper control rod 21 being located at the base of the goal 2 and allowing control of the goalkeeper 4, the control rod handle 210 of the control rod 21 being located within the control rod hole 201, allowing the goalkeeper control rod 21 to swing freely to the left and right, thus allowing simultaneous control of the swinging of the goalkeeper feet section recess 212 mounted on the control rod head 211, thus allowing the goalkeeper 4 to be moved in order to block the football 3 when shot at the goal 2.

[0012] One may continue by referring to figures 6 to 8, which are representations of all the components of the utility model goalkeeper 4 from different angles, including figure 6 a face-on representation of the goalkeeper 4, figure 7 a disassembled representation of the goalkeeper 4 and figure 8 a rear view representation of the goalkeeper foot section 45. These figures provide amplification of the goalkeeper 4 assembly process, and may be of assistance in understanding the description of the operation of the goalkeeper 4. As outlined in the above section, the goalkeeper 4 consists of: a goalkeeper head and hand section 40 consisting of a section connecting the head and left and right hands of the goalkeeper, said head and hand section 40 contains a goalkeeper support frame 47, this supports the top half of the body of the goalkeeper 4 and provides a metallic wire within both hands, allowing manual adjustment of the position of the hands causing a ball grasping action by both hands; a goalkeeper body front 43 and a goalkeeper body back 44 forming the front

half and back half of the body of the goalkeeper, the centre of the body front 43 having an inward pointing body front and back joining post 430, there being a joining post screw hole 431 in the centre of that joining post 430, the body back 44 having a corresponding joining hole 440, allowing for the goalkeeper fixing screw 42 to be inserted via the joining hole 440 at the last stage of installation and screwed into the joining post hole 431 thus fixing together the goalkeeper 4 body, in addition the goalkeeper body front 43 upper left side possesses a body front right shoulder groove 432, this corresponds to a right hand body back 44 upper right side body back right shoulder groove 442, allowing for the secure attachment of the right shoulder 401 of the head and hand section 40, in addition, the goalkeeper body front 43 upper right side possesses a body front left shoulder groove 433, this corresponds to the goalkeeper body back 44 upper left side left shoulder groove 441, allowing for the secure attachment of the left shoulder 400 of the head and hand section 40, thus connecting the goalkeeper head and hand section 40 with the goalkeeper body front 43 and body back 44, furthermore, the goalkeeper body front 43 lower left and right sides possess body front waist shaft left and right grooves 434 and 435, these connect with the body back waist shaft left and right grooves 443 and 444 located in the goalkeeper body back 44 lower left and right sides, allowing for secure fixing of the waist shaft left and right protrusions 451 and 452 located at the top of the goalkeeper feet section 45, this is in part to allow the connection of the goalkeeper feet section 45 and the goalkeeper body back and front 43 and 44, in addition these sections form a waist joint, allowing the waist of the goalkeeper 4 to swing backwards and forwards; apart from this, the left back of the goalkeeper feet section waist shaft 450 has a torque spring head shaft groove 453, allowing the torque spring head shaft 411 of the torque spring 41 to be located in the torque spring head shaft groove 453, thus the central spring coil 410 of the torque spring 41 is encased in the waist shaft left protrusion 452, apart from this the torque spring end shaft 412 at the tail end of the torque spring 41 is located in the torque spring tail shaft recess 436 close to the right hand centre of the goalkeeper body front 43, in this fashion the waist section of the goalkeeper 4 forms a joint with a returning force, further there are goalkeeper magnet recesses 454 beneath the left and right feet in the base of the goalkeeper feet section 45, and after installation of the goalkeeper fixing magnets 46, the goalkeeper 4 stands up stable in the goalkeeper feet section recess 212, thus when both hands of the goalkeeper 4 grasp the ball, the user only needs to pull back the upper body of the goalkeeper 4, when released the torque spring 41 causes the upper body of the goalkeeper 4 to return to its original position, stopping rapidly, then the football 3 leaves the hand section of the goalkeeper 4 due to inertia, thus resulting in the effect of the football 3 being thrown.

[0013] Finally, figures 9 to 11 show representations of

the components of the football player 5 from a variety of different angles, figure 9 being the face-on representation of the football player 5, figure 10 being the disassembled representation of the football player 5 and figure 11 being the cut-away view of the football player right hand foot section 56. These figures provide amplification of the assembly process of the football player 5, and may be of assistance in understanding the description of the operation of the football player 5. The football player 5 consists of: a football player head and hand section 50 forming the football player 5 head section and left and right hands; a football player body front 52 and body back 53 constituting the front body half and back body half of the football player 5, there being a football player body front and back connecting shaft 520 located in the centre of the body front 52, there being a connecting shaft screw hole 521 in the centre of that connecting shaft 520, the body back 53 possessing a corresponding connecting hole 530, the football player fixing screw 51 fixing the football player 5 body by passing through the connecting hole 530 and screwing into connecting shaft screw hole 521, there being a body front right shoulder groove 522 on the upper left side of the football player body front 52, which corresponds to the body back right shoulder groove 532 on the upper right side of the football player body back 53, thus allowing secure attachment of the right shoulder 501 of the head and hand section 50, in a similar manner, the top right side of the football player body front 52 has a body front left shoulder groove 523, which corresponds to the body back left shoulder groove 531 located at the top left of the football player body back 53, locking together with the left shoulder 500 of the head and hand section 50, allowing connection of the football player head and hand section 50 and the football player body front and body back 52 and 53, furthermore, there are body front and back fastening shafts 524 located in the lower left and right of the football player body front 52, and these correspond to the body front and back fastening holes 533 located in the lower left and right of the football player body back 53, allowing further locking together of the body of the football player 5, furthermore, once the body of the football player 5 has been assembled, the lower central recess of the football player body front and back 52 and 53 form a football player feet section containment point 525, similarly, there are body front and back base edge recessed surfaces 526 and 534 at the base of the football player body front and back 52 and 53 (beneath the football player feet section containment point 525), and once the football player 5 body has been assembled these form a body connection section through-hole 527; the lower body half of the football player 5 includes the football player left foot 58 forming part of the left lower body half of the football player 5, the base of the foot having a football player magnet recess 580, and after installation of the football player fixing magnet 59, the football player 5 stands stable on the football pitch 1, the right foot of the football player 5 being composed of a football player right lower leg 57 and a football player

right foot section 56, their assembly involves a right knee locking shaft 570 located at the top of the right lower leg 57, the locking shaft 570 being inserted into a locking shaft head insertion hole 561 close to the centre of the base of the right foot section 56, the right knee locking shaft 570 being of a length and diameter corresponding to that of the locking shaft groove 560 located in the base of the right foot section 56, once the right lower leg 57 has been connected to the right foot section 56, it can swing freely, allowing a variety of ball kicking postures, for instance direct kicking with the top of the foot, shooting with the outside of the foot, shooting with the inside of the foot etc.; the connection of the football player 5 left and right feet is via football player left and right foot connecting rivet 54 passing through the football player left foot 58 and the football player right foot section 56, this connecting rivet 54 consists of a connecting rivet body 540, a connecting rivet head 541 and a connecting rivet end 542, the connecting rivet head 541 being located in the right foot section rivet head position 562, the connecting rivet body 540 passing through the right foot section body fixing hole 563 extending into the left foot body fixing hole 581, thus the connecting rivet end 542 fits tightly into the left foot body fixing hole 581, ensuring a stable fit, at the same time, the contact between the right foot body fixing hole 563 and the smooth connecting rivet body 540 allows turning, thus allowing a ball kicking effect by the right foot, when the right and left feet of the football player 5 are connected, the other end of the locking shaft end ring 582 is embedded at the other end in the left foot insertion cavity 582 underneath the left foot body fixing hole 581, ensuring that the football player left lower leg 57 cannot disconnect leftwards; regarding the upper and lower body connection of the football player 5, this relies on the protruding football player body connection section 583 at the top of the football player left foot 58 and the foot pull connecting shaft 55, the foot pull connecting shaft 55 being an elongated object, one end of which is bent to create a ring-shaped connecting shaft connecting ring 551, of a size that fits over the football player body front and back connecting shaft 520, the other end of the pull-out foot connecting shaft 55 being bent over to form a connecting shaft pivot axle 552 at a right angle with the actual connecting shaft 550, the pivot axle 552 can be inserted into the connecting shaft pivot hole 564 near the centre of the right foot section 56, finally the actual connecting shaft 550 is hidden in the connecting section recessed groove 584 on the inside of the football player body connection section 583, ensuring that it cannot be seen, apart from this, there is a foot section sliding recessed groove 565 in a position behind the connecting shaft pivot hole 564, forming a sliding unit with the foot section sliding projection 585 behind the football player left foot 58, thus at the same time as allowing the right foot to perform a kicking action, it is also capable of concealing the foot pull connecting shaft 55 within, ensuring that the external form retains an attractive appearance. [0014] Furthermore, after the football player body con-

necting section 584 passes through the body connection section through-hole 527, it resides in the football player feet section containment point 525, the size of the body connection section through-hole 527 is the same as that of the football player body connection section 583, but as the top of the football player connection section 583 extends outwards forming a foot section anti-escape projection 586, when the top body half of the football player 5 moves upwards or its lower body half moves downwards, the football player body connection section 583 moves down within the body connection section through-hole 527, until coming into contact with the anti-escape projection 586 wider than the body connection section through-hole 527, which ensures that the lower body half of the football player 5 does not escape from the upper body half leading to disassembly. With regards to operation, the user only need lift up the body top of the football player 5, regardless of whether the lifting force used is less than that required to overcome the magnetic attraction causing the football player 5 to separate from the football pitch 1, or whether it is greater than that required to overcome the magnetic attraction causing the football player 5 to separate from the pitch 1, in either case the distance between the right foot section body fixing hole 563 and the football player body front and back connecting shaft 520 increases, this is because when not much force is used, the magnetic force is still enough to ensure that the football player left foot 58 remains firmly attached to the football pitch 1, thus the lower body half of the football player does not move, whilst the lifting of the football player hand and feet section 50 drives the football player body front and back connecting shaft 520 upwards, at the same time the football player body connection section 583 slides downwards along the body connection section through-hole 527, until it reaches the anti-escape projection 586 wider than the body connection section through-hole 527, this results in the distance between the right foot section body fixing hole 563 and the football player body front and back connecting shaft 520 increasing, however this does not result in disassembly. Apart from this, when the force is greater than that required to cause the football player left foot 58 to overcome the magnetic force, causing the whole football player 5 to leave the football pitch 1, the weight of the lower body half of the football player 5 causes the football player body connection section 583 to slide down along the body connection section through-hole 527, until coming into contact with the anti-escape projection 586 wider than the body connection section through-hole 527, resulting in the distance between the right foot section body fixing hole 563 and the football player body front and back connecting shaft 520 increasing, but without disassembly occurring; as the distance between the right foot section body connection hole 563 and the football player body front and back connecting shaft 520 increases, the connecting shaft pivot axle 552 drives the connecting shaft pivot hole 564 around and raises the left and right foot connecting rivet 54 that acts as kicking axis for the football

player 5, the turning of the connecting rivet 54 causing the right foot to be raised backwards, when the football player is replaced on the football pitch 1 or force is applied downwards on the football player head and hand section 50, the football player body connection section 583 travels upwards along the body connection section through-hole 527, causing the distance between the right foot section body fixing hole 563 and the football player body front and back connecting shaft 520 to return to its original size, causing the foot pull connecting shaft 55 to return to its original state, causing the connecting rivet 54 to rotate causing the right foot to shift forwards causing a ball kicking motion, the strength of the ball kick being decided by the pressure with which the head and hand section 50 is pressed or the speed with which the football player 5 is put down.

[0015] In fact, the above-mentioned football player 5 only adopts right foot ball kicking as implementation 1, in addition left foot ball kicking can be used as a second implementation, and construction of the mirror images of the football player left foot 58, the football player right lower leg 57 and the football player right foot section 56 is all that is required, being installed and used in a similar manner, allowing this utility model to adopt both right-footed kicking football players and left-footed kicking football players, making the football game machine 1000 even more realistic.

[0016] It is possible to appreciate from the above-mentioned structures, that this utility model provides a new design, and only relies on simple principles of magnetic attraction, allowing the football players 5 and goalkeepers 4 to stand up stable on the football pitch without any control rods, eliminating the restrictions of tracks, with the result that the scope of movements of the football players is not subject to any restrictions at all, making their movements more free; apart from this, the structure of the joints of the football players 5 and goalkeepers 4 makes them more agile, and each movement is capable of simulating the ball kicking movement of an actual football player, allowing a major breakthrough in the extent of simulation, making the football game machine 1000 more interesting and playable.

[0017] Embodiments of the invention may also be understood with reference to the following numbered paragraphs.

1. A football game machine relying on magnetic force to fix model people in place, wherein this consists of: a football pitch installed in the base, that football pitch having printed playing area boundaries; two goal sets for the front and back of the football pitch, and consisting of the main goal frame of the goal and a goalkeeper control rod located under the base of the goal; a football capable of rolling in any direction on the football pitch; two goalkeepers located in front of the two goal sets; and two teams of ten football players distributed across

the football pitch;
wherein:

the above-mentioned football pitch base contains a metallic board;
there are goal fixing magnets located under the left and right bases of the above-mentioned goal frames;
the above-mentioned goalkeepers having joints that can rotate or swing, there being goalkeeper fixing magnets beneath the feet for the sake of positioning;
the above-mentioned football players having joints that can rotate or swing, there being football player fixing magnets beneath the feet for the sake of positioning.

2. The football game machine according to paragraph 1, wherein the goalkeeper control rods are located in the control rod holes, allowing the free control of the swinging of the rods to the left and right and simultaneously control of the swinging of the goalkeepers mounted on top of these.

3. The football game machine according to paragraph 1, wherein the centre of the football contains a football magnet that can roll around freely within the football, allowing the football to roll around freely on the football pitch, having a magnetic attraction with the metallic pitch base.

4. The football game machine according to paragraph 1, wherein there is a goalkeeper support frame within the head and hand section of the goalkeeper, this for the purpose of supporting the top body half of the goalkeeper and to provide an internal metallic wire for both hands, to allow for manual positioning of the hands.

5. The football game machine according to paragraph 1, wherein the goalkeeper body front lower left and right sides possess body front waist shaft left and right grooves, these connecting with the body back waist shaft left and right grooves located in the goalkeeper body back lower left and right sides, allowing for secure fixing of the waist shaft left and right protrusion located at the top of the goalkeeper feet section, forming a waist joint, allowing the waist of the goalkeeper to swing backwards and forwards.

6. The football game machine according to paragraph 1, wherein the waist of the goalkeeper has a torque spring, the torque spring head shaft of the torque spring head being located in the feet section waist shaft left and right grooves, therefore the central spring coil of the torque spring is encased in the waist shaft left protrusion, apart from this the torque spring end shaft at the tail end of the torque spring is located in the torque spring tail shaft recess close to the right hand centre of the goalkeeper body front, in this fashion the waist section of the goalkeeper forms a joint with a returning force.

7. The football game machine according to paragraph 1, wherein the right foot of the football player is composed of a football player right lower leg and a football player right leg section, the right lower leg having a right knee locking shaft, the locking shaft being inserted into an insertion assembly recess close to the centre of the base of the right leg section, the right knee locking shaft being of a length and diameter corresponding to that of the insertion groove located in the base of the right leg section, once the right lower leg has been connected to the right leg section it can swing freely, allowing a variety of ball kicking postures, for instance direct kicking with the top of the foot, shooting with the outside of the foot and shooting with the inside of the foot.

8. The football game machine according to paragraph 1, wherein the connection of the football player left and right feet is via the football player left and right foot connecting rivet passing through the football player left foot and the football player right foot section, this connecting rivet consists of a connecting rivet body, a connecting rivet head and a connecting rivet end, the connecting rivet head being located in the right foot section rivet head position, the connecting rivet body passing through the right foot section body fixing hole extending into the left foot body fixing hole, thus the connecting rivet end fits tightly into the left foot body fixing hole, ensuring a stable fit.

9. The left and right foot connecting rivet according to paragraph 8, wherein the body of the connecting rivet is smooth, the contact between the right foot body fixing hole and the smooth connecting rivet body allowing turning, thus allowing a ball kicking movement by the right foot.

10. The football game machine according to paragraph 1, wherein when the right and left feet of the football player are connected, the locking shaft end ring, being embodied at the other end in the left foot insertion cavity underneath the left foot body fixing hole, ensures that the football player left lower leg cannot disconnect leftwards.

11. The football game machine according to paragraph 1, wherein the top of the left foot of the football player has a player body connecting section, the player body connecting section being the same size as the body connecting section through-hole.

12. The football game machine according to paragraph 11, wherein the top of the football player body connecting section extends outwards forming a foot section anti-escape protrusion, which is larger than the body connecting section through-hole.

13. The football game machine according to paragraph 1, wherein there is a foot pull connecting shaft between the football player upper and lower body, one end of which is bent to create a ring-shaped connecting shaft connecting ring, the other end of the foot pull connecting shaft being bent over to form a connecting shaft pivot axle at a right angle with the

actual connecting shaft.

14. The football game machine according to paragraph 13, wherein the connecting shaft connecting ring of the foot pull connecting shaft is of a size that fits over the football player body front and back connecting shaft.

15. The football game machine according to paragraph 13, wherein the foot pull connecting shaft connecting shaft pivot axle can be inserted into the connecting shaft pivot hole near the centre of the right foot section, the actual connecting shaft being hidden in the connecting section recessed groove on the inside of the football player body connection section.

16. The football game machine according to paragraph 8, wherein the connecting rivets are located next to the connecting pivot hole, thus acting as an axis for the upwards and downwards movement of the pivot hole driven by the pivot axle, the turning of the connecting rivet resulting in the backward lifting of the right leg, which causes a kicking movement.

[0018] Throughout the description and claims of this specification, the words "comprise" and "contain" and variations of the words, for example "comprising" and "comprises", means "including but not limited to", and is not intended to (and does not) exclude other moieties, additives, components, integers or steps.

[0019] Throughout the description and claims of this specification, the singular encompasses the plural unless the context otherwise requires. In particular, where the indefinite article is used, the specification is to be understood as contemplating plurality as well as singularity, unless the context requires otherwise.

[0020] Features, integers, characteristics, compounds, chemical moieties or groups described in conjunction with a particular aspect, embodiment or example of the invention are to be understood to be applicable to any other aspect, embodiment or example described herein unless incompatible therewith.

Claims

1. A football game machine relying on magnetic force to fix model people in place, comprising:

a football pitch adapted to be installed in a base; at least one goal set configured for placement at at least one selected from amongst a front portion and a back portion of the pitch, and comprising a main goal frame of the goal set and a goal keeper control rod;
a football capable of rolling in any direction on the pitch;
at least one goalkeeper; and
at least one football player suitable for placement on the pitch;

wherein:

the base comprises a metallic board, the at least one goalkeeper and the at least one football player each having at least one joint that can rotate or swing, a foot of the at least one goalkeeper and a foot of the at least one football player being provided with a fixing magnet.

2. A machine as claimed in claim 1 wherein a control rod is associated with the goal set, the control rod being adapted for connection to a goalkeeper, the control rod being adapted to co-operate with the goal set such that the goalkeeper may be manipulated by said rod from an opposite side of the goal set.
3. A machine as claimed in claim 2 wherein the goal frame is provided with an aperture through which the control rod may be passed.
4. A machine as claimed in any preceding claim wherein the at least one goal set is provided with at least one goal-fixing magnet, the goal-fixing magnet being adapted to co-operate with the base to prevent lateral movement of the goal set.
5. A machine as claimed in claim 4 wherein the at least one control rod is configured to permit swinging of said at least one joint of the goalkeeper.
6. A machine as claimed in any preceding claim wherein a centre of the football comprises a football magnet.
7. A machine as claimed in claim 6 wherein the football is configured to allow the football magnet to move freely within the football.
8. A machine as claimed in any preceding claim wherein a goalkeeper support frame is provided, said frame extending between the head and hand sections of the goalkeeper, the frame being adapted to support a top body portion of the goalkeeper.
9. A machine as claimed in claim 8 wherein the frame is connected to at least one hand of the goalkeeper.
10. A machine as claimed in claim 8 wherein a position of the at least one hand may be permanently changed by deforming the frame.
11. A machine as claimed in any one of claims 8 to 10 wherein the frame comprises a wire.
12. A machine as claimed in any preceding claim wherein a waist portion of the goalkeeper comprises a rotatable joint, such that an upper body portion of the goalkeeper may be rotated with respect to a lower

body portion of the goalkeeper about a lateral axis generally coincident with said waist portion of the goalkeeper such that the lower body portion may swing backwards and forwards with respect to the upper body portion, wherein the lower body portion comprises legs of the goalkeeper.

13. A machine as claimed in claim 12 wherein the waist portion of the goalkeeper is provided with a torque spring, said torque spring providing a returning force to promote the upper and lower body portions assuming a first orientation with respect to one another.

14. A machine as claimed in claim 1, wherein the right foot of the football player is composed of a football player right lower leg and a football player right leg section, the right lower leg having a right knee locking shaft, the locking shaft being inserted into an insertion assembly recess close to the centre of the base of the right leg section, the right knee locking shaft being of a length and diameter corresponding to that of the insertion groove located in the base of the right leg section, once the right lower leg has been connected to the right leg section it can swing freely, allowing a variety of ball kicking postures, for instance direct kicking with the top of the foot, shooting with the outside of the foot and shooting with the inside of the foot.

15. A machine as claimed in claim 14, wherein the connection of the football player left and right feet is via the football player left and right foot connecting rivet passing through the football player left foot and the football player right foot section, this connecting rivet consists of a connecting rivet body, a connecting rivet head and a connecting rivet end, the connecting rivet head being located in the right foot section rivet head position, the connecting rivet body passing through the right foot section body fixing hole extending into the left foot body fixing hole, thus the connecting rivet end fits tightly into the left foot body fixing hole, ensuring a stable fit.

16. A machine as claimed in claim 15 wherein the body of the connecting rivet is smooth, the contact between the right foot body fixing hole and the smooth connecting rivet body allowing turning, thus allowing a ball kicking movement by the right foot.

17. A machine as claimed in claim 16, wherein when right and left feet of the football player are connected, the locking shaft end ring, being embodied at the other end in the left foot insertion cavity underneath the left foot body fixing hole, ensures that the football player left lower leg cannot disconnect leftwards.

18. A machine as claimed in claim 17 wherein a top of the left foot of the football player has a player body

connecting section, the player body connecting section being the same size as the body connecting section through-hole.

19. A machine as claimed in claim 18, wherein a top of the football player body connecting section extends outwards forming a foot section anti-escape protrusion, which is larger than the body connecting section through-hole.

20. A machine as claimed in claim 19 wherein there is provided a foot pull connecting shaft between the football player upper and lower body, one end of which is bent to create a ring-shaped connecting shaft connecting ring, the other end of the foot pull connecting shaft being bent over to form a connecting shaft pivot axle at a right angle with the actual connecting shaft.

21. A machine as claimed in claim 20, wherein the connecting shaft connecting ring of the foot pull connecting shaft is of a size that fits over the football player body front and back connecting shaft.

22. A machine according to claim 20 or claim 21, wherein the foot pull connecting shaft connecting shaft pivot axle can be inserted into the connecting shaft pivot hole near the centre of the right foot section, the actual connecting shaft being hidden in the connecting section recessed groove on the inside of the football player body connection section.

23. A machine as claimed in any one of claims 15 to 22 wherein the connecting rivets are located next to the connecting pivot hole, thus acting as an axis for the upwards and downwards movement of the pivot hole driven by the pivot axle, the turning of the connecting rivet resulting in the backward lifting of the right leg, which causes a kicking movement.

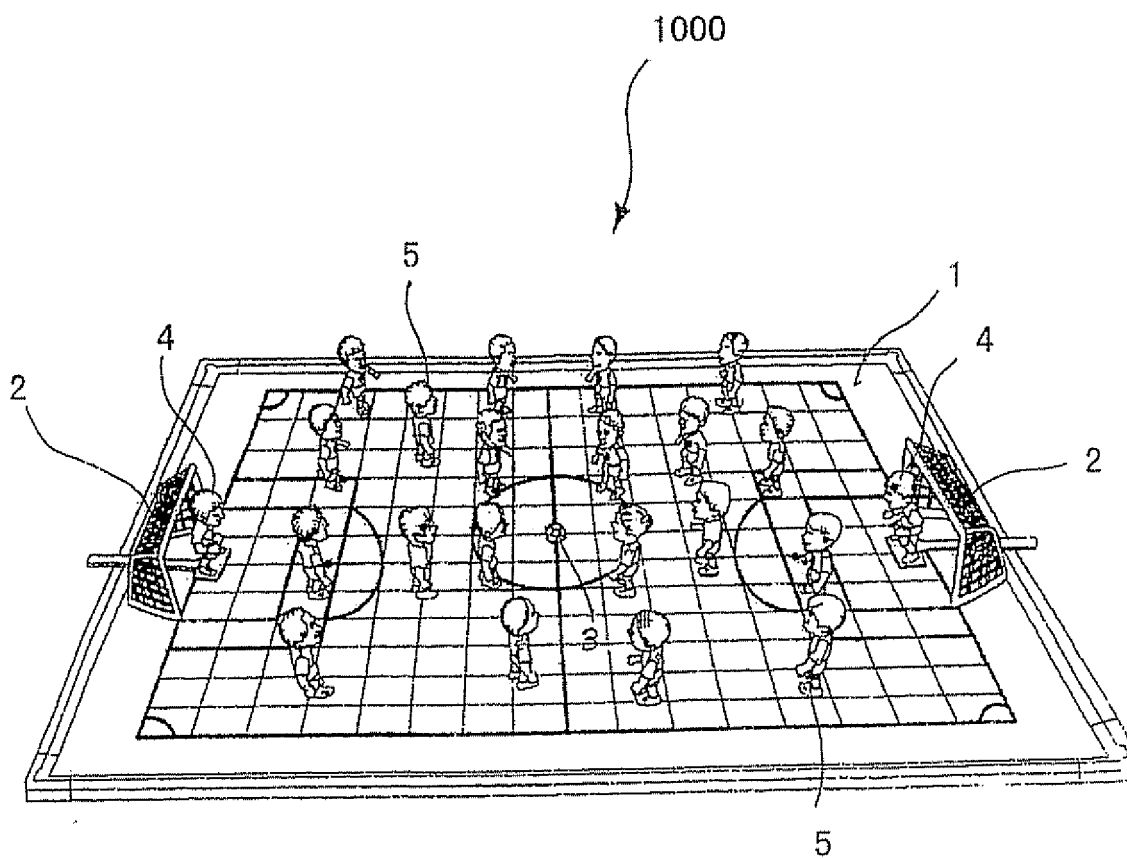


FIGURE 1

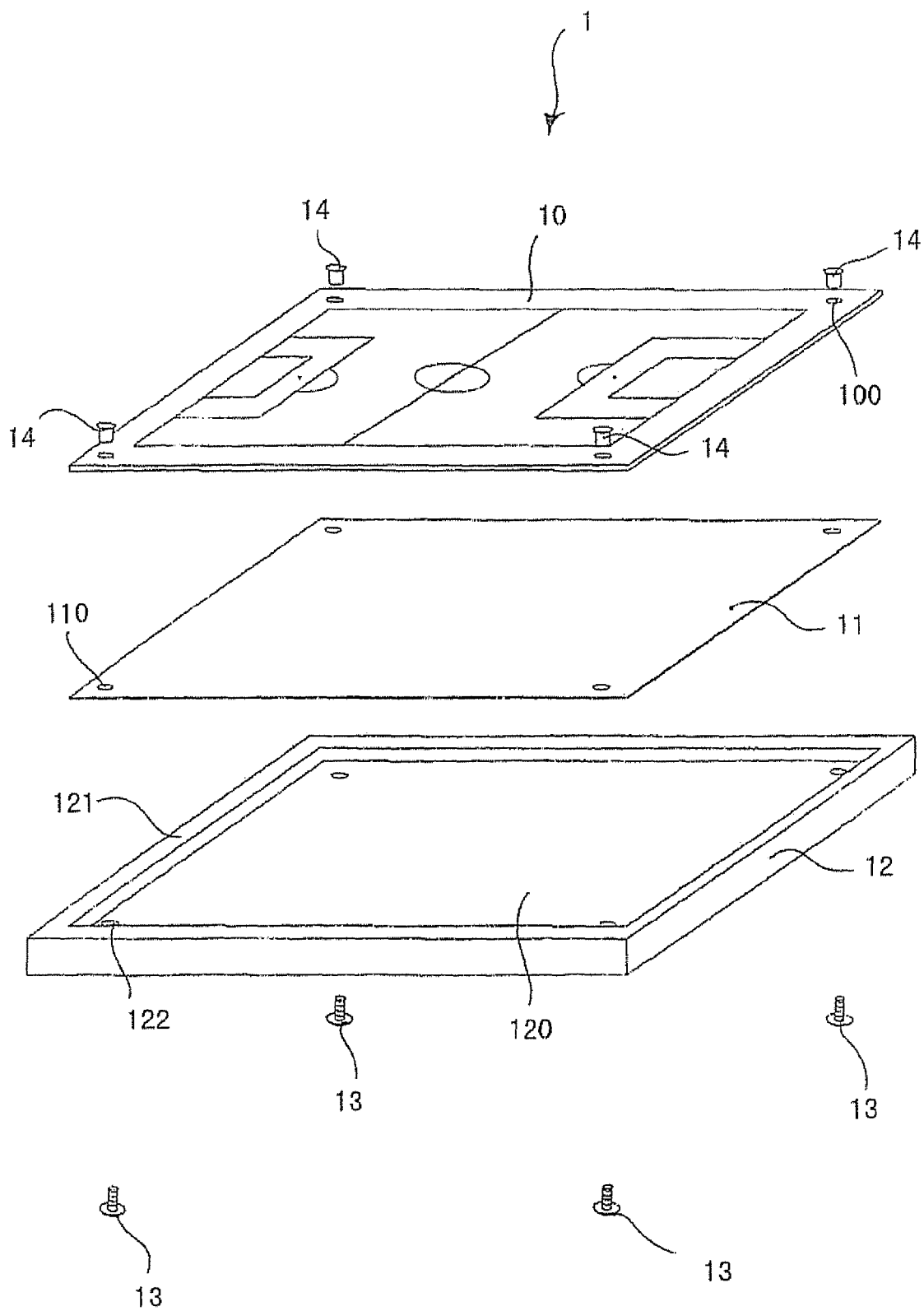


FIGURE 2

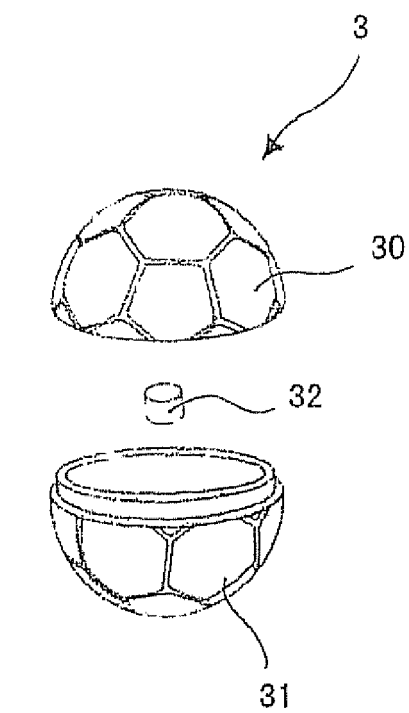


FIGURE 3

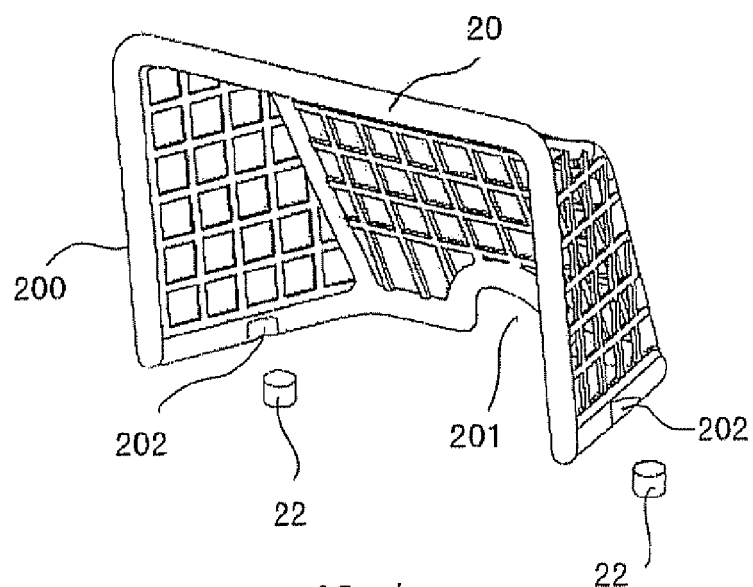


FIGURE 4

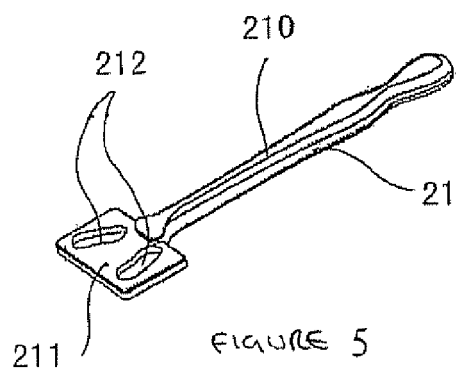


FIGURE 5



FIGURE 6

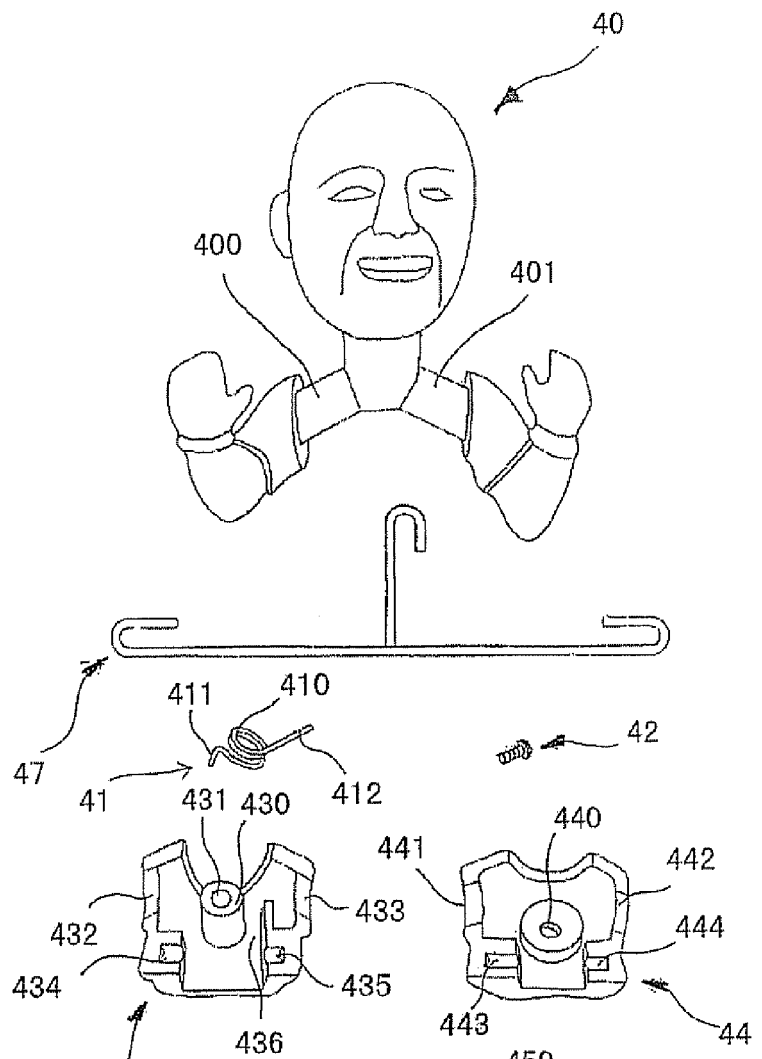


FIGURE 7

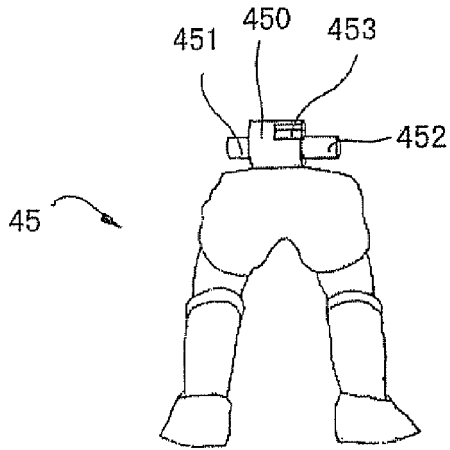
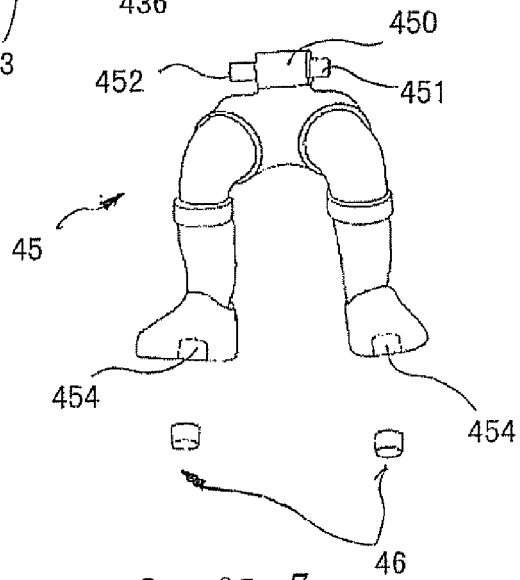


FIGURE 8



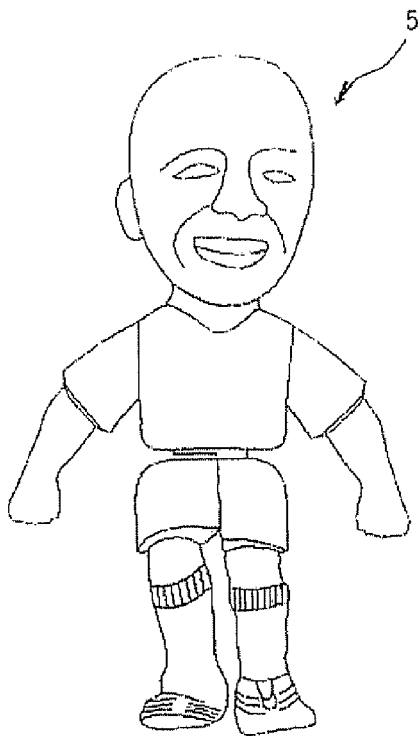


FIGURE 9

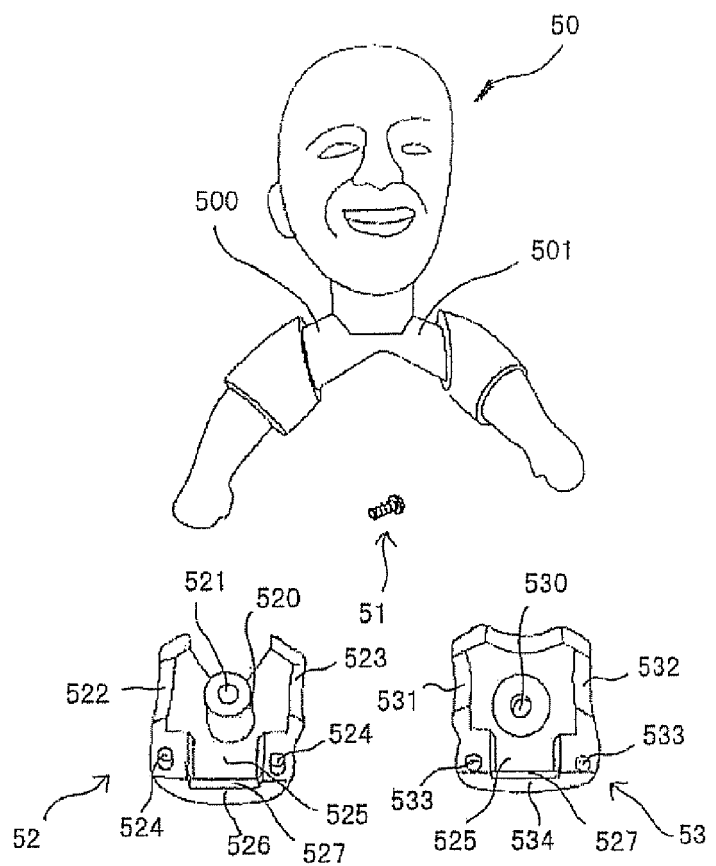


FIGURE 10

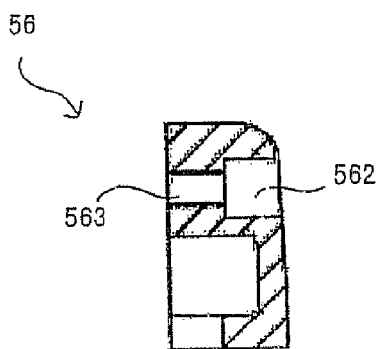
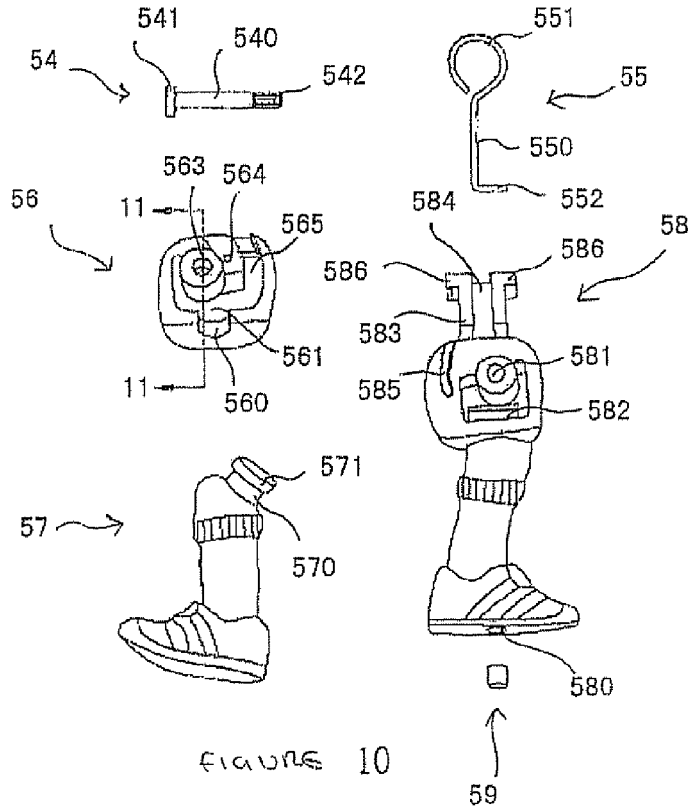


FIGURE 11





European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 06 11 8904

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 31 January 2007	Examiner Lucas, Peter
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31-01-2007

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