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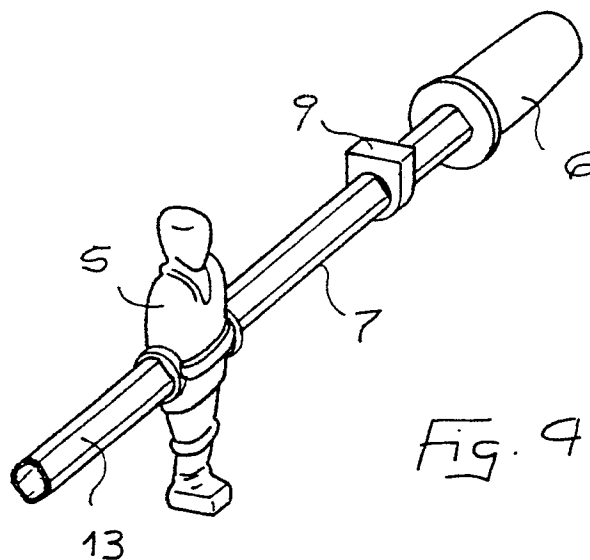
Applicant: **Cecchetti, Claudio**
Via Verdi 54
Cernusco Sul Naviglio (Milan)(IT)

Inventor: **Cecchetti, Claudio**
Via Verdi 54
Cernusco Sul Naviglio (Milan)(IT)

Representative: **Raimondi, Alfredo, Dott. Ing.**
Prof. et al
Studio Tecnico Consulenza Brevetti Piazzale
Cadorna 15
I-20123 Milano(IT)

Rod for table football, designed to prevent the rotation of the footballers about the support rod.

The rod for table football players of the invention is formed by an external tubular member within which there is slidably and rotatably mounted an internal cylindrical member, on which tubular member there are inserted one or more footballers of plastic material or the like, a sleeve which can slide in an axial and rotary manner and is connected to one side of a playing field for which the rod is provided and a handle, the end of the internal cylindrical member being connected to the opposite side of the playing field, in which the tubular member has a section having at least one plane or concave side which can be included in a circumference of diameter substantially equal to the diameter of the sleeve hole, the footballers and the handle being provided with respective holes for fitting on the rod and having a section corresponding to that of the tubular member.



ROD FOR TABLE FOOTBALL, DESIGNED TO PREVENT THE ROTATION OF THE FOOTBALLERS ABOUT THE SUPPORT ROD

The present invention relates to a rod for footballers for table football designed to prevent the rotation of the footballers about their tubular support member.

In table football games, use is made of figures representing the footballers inserted in groups on slidable rods supported above a field bounded by lateral walls, which rods are caused to slide axially and to rotate so that the footballers supported thereon can strike a ball, capturing it from the opponent and propelling it into an aperture located opposite them which represents the opponent's goal.

These footballers must be able to strike the ball vigorously during the rotation of the relative rod and must therefore be rigidly connected to the rod, in particular preventing the rotation of the footballer about the rod which would cancel out the energy of the impact imparted and would bring the set of footballers used out of alignment.

In particular, use is frequently made of telescopic spindles, also known as rods, which may rotate and slide in a relative housing on a wall of the playing field, and a slidable internal member connected to the opposite lateral wall of the playing field.

In these conditions the footballers cannot be locked in position on the external member by through pins, pegs and the like since this would prevent the movement of the internal member and consequently the footballers are usually attached by force fitting.

This type of assembly, also carried out for the handle by which the rod is gripped, is not satisfactory, however, in all conditions and therefore raises the problem of providing the rotational and axial locking of the footballers securely and in a way which is resistant to the stresses of the game, using an arrangement which is inexpensive and easy to assemble.

These results are achieved by the present invention, which provides a rod for table football players formed by an external tubular member within which there is slidably and rotatably mounted an internal cylindrical member, on which tubular member there are inserted one or more footballers of plastic material or the like, a sleeve which can slide in an axial and rotary manner connected to one side of a playing field for which the rod is provided and a handle, the end of the internal cylindrical member being connected to the opposite side of the playing field, in which the tubular member has a section having at least one plane or

concave side which can be included in a circumference of diameter substantially equal to the diameter of the sleeve hole, the footballers and the handle being provided with respective holes for fitting on the rod and having a section corresponding to that of the tubular member.

In particular, the section of the tubular member is advantageously a regular polygon with a number of sides lower than six, with corners connected by circumferential segments, and in a preferred embodiment the section of the tubular member is a quadrilateral having rounded corners.

In one embodiment, the handle and the footballers are moulded from plastic material in a separate manner and are mounted on the tubular member by resilient force fitting.

In a further embodiment, the handle and the footballers are moulded from plastic material directly onto the tubular member; in this case the tubular member is provided, at the position of assembly of each footballer and handle with at least one notch or recess designed to be filled, during moulding, by the plastic material forming the footballer or handle thereby providing for its connection in the axial direction.

Further details are set out in the following description made with reference to the attached drawings, in which:

Fig. 1 is a section through a table football game, showing the assembled rod bearing a plurality of footballers;

Fig. 2 is a lateral view of a footballer, without the rod;

Fig. 3 is a cross-section through a rod of the invention;

Fig. 4 is a perspective view of a rod bearing a player, a handle and a slide sleeve.

As shown in Fig. 1, a table football game is substantially formed by a body 1 in the form of tank representing the playing field, having a base 2 and sides 3; a plurality of rods 4 bearing teams of footballers 5 are rotatably mounted in the sides 3, which rods face alternately in opposite directions and can be operated by the players with combined movements of axial translation and rotation by means of handles 6.

The rods 4 are advantageously telescopic and are formed by an external tubular rod 7 to which the footballers 5 and the handle 6 are connected and by an internal rod 8 which can rotate and slide within the external rod 7 and which is connected at one end to one of the sides 3 of the playing field.

The external rod 7 is in turn connected to and

housed within the opposite side via a sleeve 9 which ensures that it can slide and rotate easily; springs 10 also make it possible to dampen the impacts against the sides caused by an excessively vigorous game.

The footballers 5 are usually made of plastic material and are provided with a transverse hole 11 via which they are inserted on the rod 4.

In order to prevent the rotation of the footballers and the handle 6 on the relative external rod 7, which would cancel out the possibility of play, the member 7 is formed in accordance with the invention by a tubular member having a substantially mixtilinear polygonal section, for example formed by a cylindrical tube 12 with flattened opposite faces 13 as shown in Fig. 3.

This arrangement of the external rod allows it to be supported and freely to rotate within the sleeve 9 since the non-deformed portions 14 of the outer surface of the tube 12 are supported against the wall of its cylindrical inner hole, while the hole 11 in the body of the footballers 5 and the corresponding hole in the handle 6 are provided with the polygonal shape of the section of the tube 12, for example, as shown, a quadrilateral with rounded corners, making relative rotation impossible without destructive deformation of the footballer or the rod.

In order to ensure that rotation is opposed in a sufficiently rigid way, the number of rectilinear segments of the polygonal section of the external rod 7 is advantageously less than six: with a greater number of sides the polygonal profile is little different from the circle circumscribed about it and the plastic material of the footballers could thus be elastically deformed during the large stresses which may take place during play, thereby allowing the rotation of the footballer on the rod.

The section of the tubular member forming the rod 7 may also include concave portions, thereby increasing fastness against rotation even when footballers made of particularly deformable material are used.

The sliding of the footballer and the handle in an axial direction along the rod is prevented by the force fitting of the footballers and the handle obtained by an assembly with shrink fitting and elastic deformation; this ensures the rigidity of the overall assembly under normal conditions of use.

In the case that the footballers and the handle are moulded directly onto the rod relative thereto, for example in an injection die, the axial sliding of the footballers may be further prevented by providing on the external rod 7 notches or recesses 15, shown in dashed lines in Fig. 3, at which points projections 16 are formed within the hole 11 during moulding of the footballers, as a result of which any axial sliding is completely prevented.

The presence of the recesses 15 does not

prejudice the sliding of the internal rod 8 since, as shown in dot-dash lines in Fig. 3, it can freely rotate and slide in contact with the surface of the recesses.

Many variants can be made without thereby departing from the scope of the general characteristic features of the invention.

10 Claims

1. A rod for table football players characterized in that it is formed by an external tubular member within which there is slidably and rotatably mounted an internal cylindrical member, on which tubular member there are inserted one or more footballers of plastic material or the like, a sleeve which can slide in an axial and rotary manner and is connected to one side of a playing field for which the rod is provided and a handle, the end of the internal cylindrical member being connected to the opposite side of the playing field, in which the tubular member has a section having at least one plane or concave side which can be included in a circumference of diameter substantially equal to the diameter of the sleeve hole, the footballers and the handle being provided with respective holes for fitting on the rod and having a section corresponding to that of the tubular member.

2. A rod for table football as claimed in claim 1, characterized in that the section of the tubular member is a regular polygonal with a number of sides lower than six, with corners connected by circumference segments.

3. A rod for table football as claimed in claim 1, characterized in that the section of the tubular member is a quadrilateral with rounded corners.

4. A rod for table football as claimed in one or more of the preceding claims, characterized in that the handle and the footballers are separately moulded from plastic material and are mounted on the tubular member by resilient force fitting.

5. A rod for table football as claimed in one or more of the preceding claims, characterized in that the handle and the footballers are moulded directly from plastic material onto the tubular member.

6. A rod for table football as claimed in claim 5, characterized in that the tubular member is provided, at the position of assembly of each footballer or handle, with at least one notch or recess designed to be filled, during moulding, with the plastic material forming the footballer or handle, thereby providing for its connection in the axial direction.

