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(54) **Wheel for roller skate and skateboard trucks**

(57) The present specification describes a wheel for roller skate and skateboard trucks, which is useful for application to all types of roller skates and skateboards, in such a way that the wheel has at least one perimeter recess that defines at least two rolling surfaces with a convex curved shape. Thus, the essential object of the invention is to improve stability and balance while skating, enabling better spinning and curve-taking.

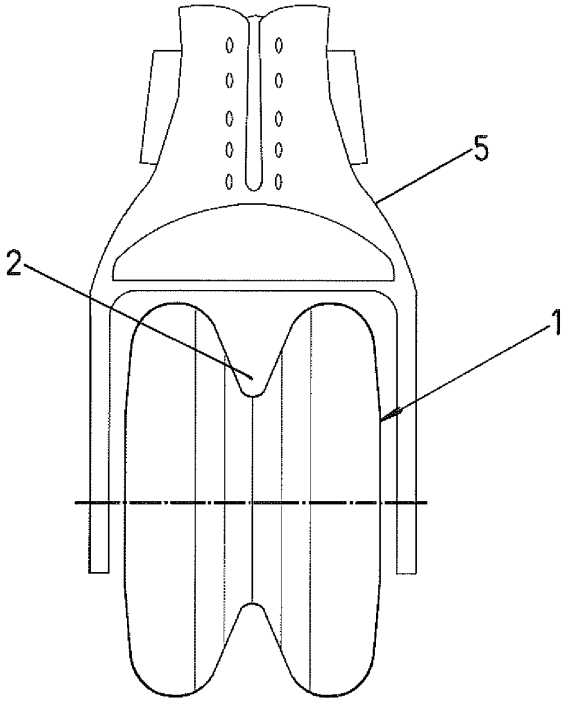

Fig. 4

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Description

OBJECT OF THE INVENTION

[0001] The following Utility Model, as expressed in the heading of the present specification, relates to a wheel for roller skate and skateboard trucks, which is of the wheel type that is installed on roller skates and skateboards, from whose characteristic shape significant improvements for movement on firm sliding surfaces are obtained.

[0002] Thus, the essential characteristic of the wheel, object of the invention, is that its central perimeter section has a recess that gives it a frontal profile similar to that of an hourglass in a horizontal position or a diabolo, providing great stability, safety and balance to the user.

[0003] Likewise, another characteristic of the wheel, object of the invention, is its lower weight and simple design.

FIELD OF APPLICATION

[0004] The present specification describes a wheel for roller skate or skateboard trucks, which is useful for application to all types of roller skates and skateboards and which facilitates both normal skating and stunts.

BACKGROUND OF THE INVENTION

[0005] Everyone is familiar with the popular roller skates composed of a platform that adapts to the sole of footwear, provided with a kind of blade or a series of wheels, in such a way that the skates with blades are useful for skating on ice and the skates that incorporate a series of wheels are useful for skating on firm surfaces, there being two types thereof: "quad" skates with four wheels or "in-line" skates.

[0006] Skates with four wheels per quad skate are structured by a front axle and a back axle that determine two pairs of rolling wheels with a general cylindrical shape. In this way, the length of the generatrix of each wheel determines the friction of the skate on the sliding surface. Obviously, if the contact surface when sliding is large, this hampers the versatility of the skate regarding movement and figures inherent to skating, such as spinning and curve-taking.

[0007] In-line skates, on the other hand, are formed by a succession of wheels arranged in a straight line, as its name suggests, whose form and arrangement increase the risk of deformity and possible injuries to the knees and ankles, and which, in practice, it tries to solve through the clearly visible structure of "high-top" skates, aimed at protecting against possible "twisting" of the aforementioned knee and ankle joints.

[0008] The user of this type of skate unconsciously tends to look for better stability, particularly if standing still, inclining the skates outwards and adopting unnatural positions.

[0009] Likewise, we may consider the document ES 1 044 578 in which a wheel for roller skate and skateboard trucks is described, characterised in that the lateral rolling surface, created by a slightly curved generatrix, has a longitudinal axis equal to or greater than the diameter of the larger circumference thereof, the wheels being positioned relative to the truck, by respective axles positioned between corresponding projections of the roller skate or skateboard platform.

DESCRIPTION OF THE INVENTION

[0010] The present specification describes a wheel for roller skate and skateboard trucks, which is useful for application to all types of roller skates and skateboards, in such a way that the wheel has at least one perimeter recess that defines at least two rolling surfaces with a convex curved shape.

[0011] In a preferred embodiment of the invention, the wheel has a central perimeter recess that defines two rolling surfaces with a convex curved shape. Likewise, the wheel may have two or more perimeter recesses that would define the corresponding rolling surfaces.

[0012] The rolling surfaces with a general convex curved shape defined on the wheel have the same diameter, in such a way that, via this configuration, greater stability is obtained, enabling better spinning and curve-taking.

[0013] To complement the description carried out below, and with the aim of making the characteristics of the invention more readily understandable, the present specification is accompanied by a set of plans, in whose figures the most characteristic features of the invention are represented in an illustrative and non-limiting way.

BRIEF DESCRIPTION OF THE DESIGNS

[0014]

Figure 1. Shows a frontal view of a wheel for roller skate and skateboard trucks, wherein one may observe its central perimeter recess, giving it a general horizontal hourglass or diabolo shape.

Figure 2. Shows a sectioned view of the wheel for roller skate and skateboard trucks of the previous figure.

Figure 3. Shows a side view of the wheel for roller skate and skateboard trucks of figure 1.

Figure 4. Shows a frontal view of the roller skate provided with a truck made for wheels as in the object of the invention, wherein one may observe the central perimeter recess in the same that defines two rolling surfaces.

Figure 5. Shows a frontal view of different relative positions of a wheel, object of the invention, wherein one may observe its vertical position with two support points, and its position when inclined towards either side, with one support point.

DESCRIPTION OF A PREFERRED EMBODIMENT

[0015] In light of the aforementioned figures and in accordance with the adopted numbering we may see how the wheel 1 for the roller skate and skateboard trucks is characterised by having a recess 2 in its central perimeter section, which defines two convex curved rolling surfaces 3 and 4, giving it a general horizontal hourglass or diabolo shape.

[0016] Thus, it may be seen in the design figures how the wheel 1 has two rolling surfaces 3 and 4, of the same diameter, and with a convex curved shape, facilitating the stability of the skater and enabling better spinning and curve-taking.

[0017] Thus, the essential object of the invention is that, via the aforementioned embodiment, stability and balance are improved, facilitating skating and enabling better spinning and curve-taking.

[0018] In figure 4 of the designs, a wheel, object of the invention, is seen mounted on an in-line skate 5, wherein one may observe the characteristic configuration thereof.

[0019] The position that the wheel 1 adopts when sliding has been represented in figure 5 of the design, wherein one may observe how in a vertical position to the ground it has two support points, whilst in adopting an inclined position it has one support point.

[0020] In a variation of the practical embodiment of the invention, the wheel 1 may have more than one perimeter recess 2 defining more than two convex curved rolling surfaces, giving it greater stability, balance and safety, both in normal sliding, and for spinning and other stunts.

[0021] Furthermore, we may see how the central recess 2 may have different shapes, since it essentially involves embodying at least one perimeter recess to define at least two rolling surfaces.

[0022] The wheel may be manufactured out of different materials and, in a preferred embodiment, it is manufactured out of nylon®.

Claims

1. A wheel for roller skate and skateboard trucks, which is useful for application to all types of roller skates and skateboards, **characterised in that** the wheel (1) has at least one perimeter recess (2) that defines at least two rolling surfaces (3 and 4) with a convex curved shaped.

2. A wheel for roller skate and skateboard trucks, according to claim 1, **characterised in that** the wheel (1) has a central perimeter recess (2) that defines two rolling surfaces (3 and 4) with a convex curved shaped.

3. A wheel for roller skate and skateboard trucks, according to claim 1, **characterised in that** the rolling surfaces (3 and 4) with a general convex curved shaped defined on the wheel (1) have the same diameter.

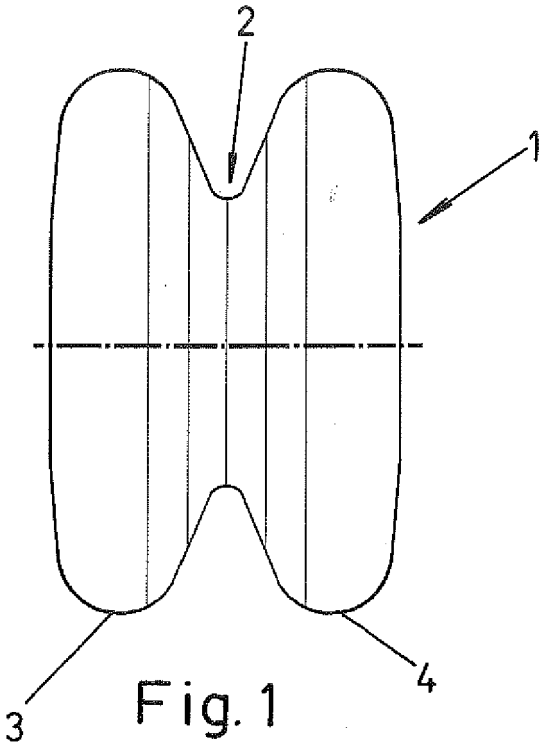

Fig. 1

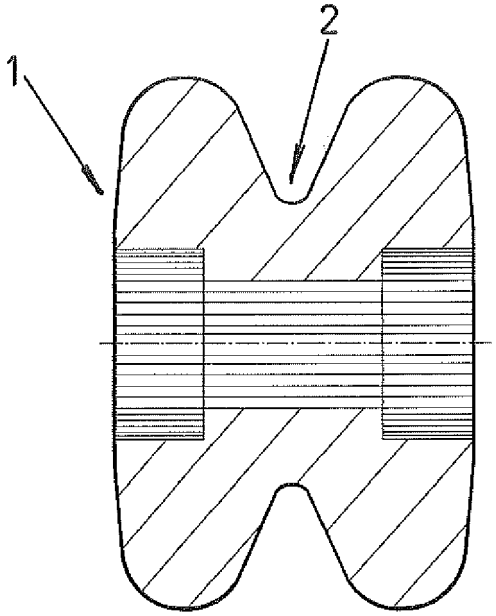

Fig. 2

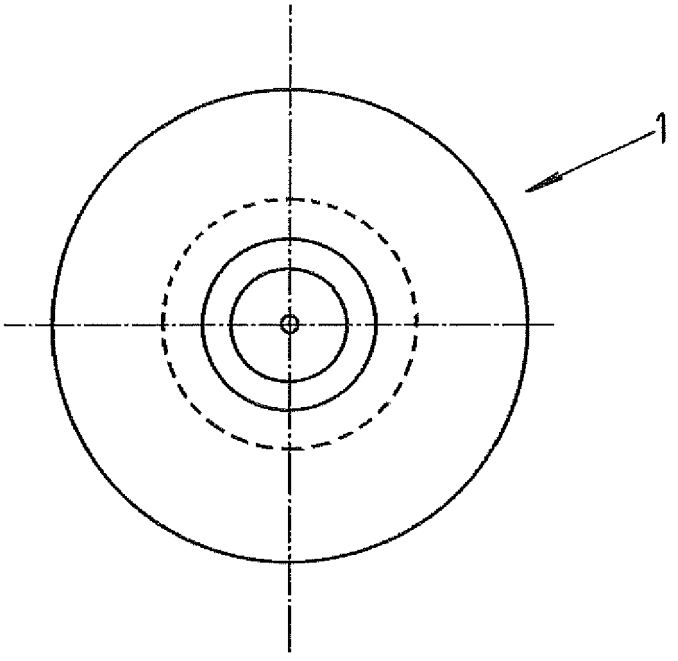

Fig. 3

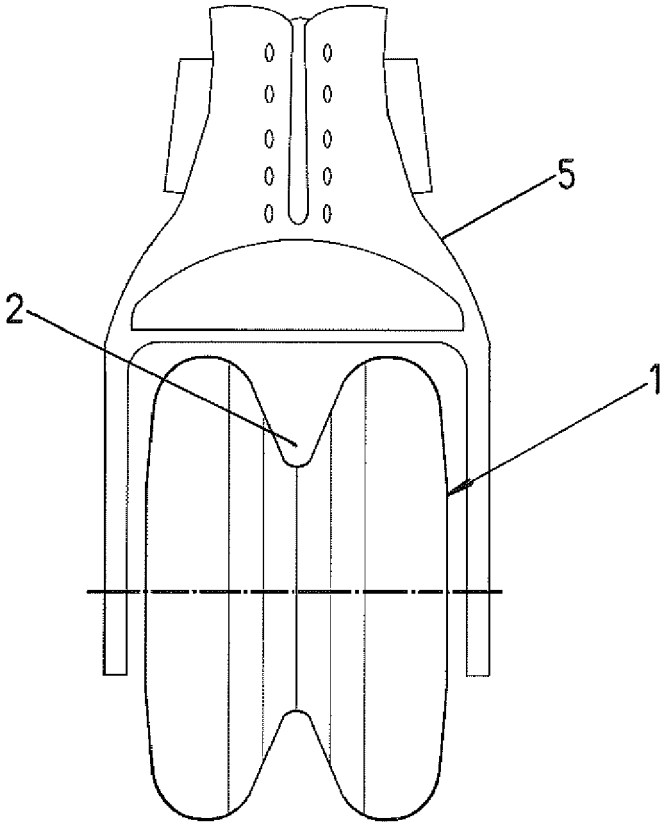

Fig. 4

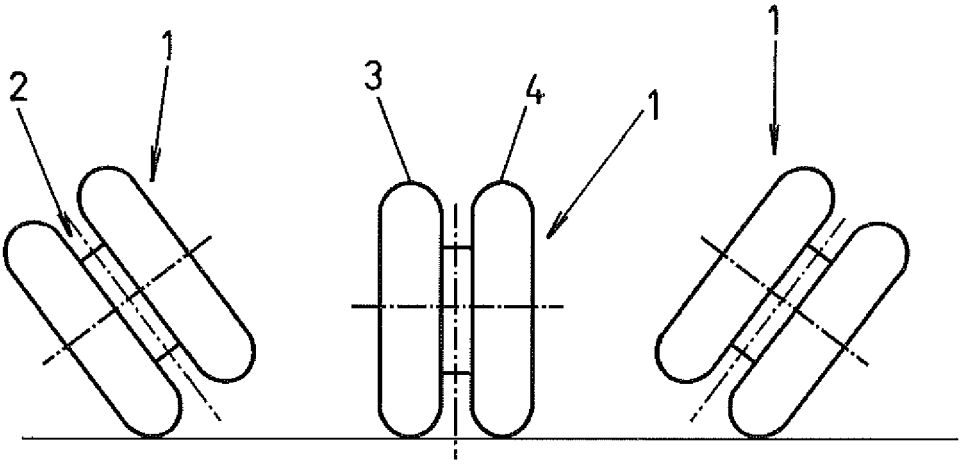

Fig. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 14 16 4894

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 7 311 318 B1 (FUNK SHELBY A [US]) 25 December 2007 (2007-12-25) * column 3, line 48 - column 7, line 17; figures 1-4 *	1-3	INV. A63C17/22
X	EP 2 198 936 A2 (HARDTER PAUL [DE]) 23 June 2010 (2010-06-23) * paragraph [0011] - paragraph [0014]; claims 1-5; figures 1-4 *	1-3	
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			TECHNICAL FIELDS SEARCHED (IPC)
			A63C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	24 October 2014	Brunie, Franck

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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E : earlier patent document, but published on, or after the filing date
D : document cited in the application
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EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 14 16 4894

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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24-10-2014

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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