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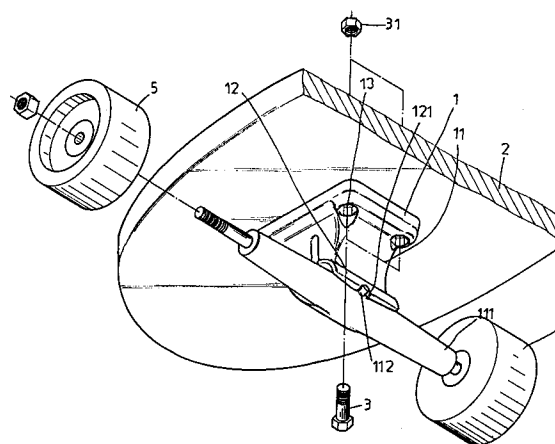
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(54) **Skate truck.**

(57) An unitary skate truck including a truck (1) rigidly anchored to the underside of a skateboard (2), a roller skate, or the like, having an integral beam (11) extending downwardly at an angle from one end of the truck. The other end of the beam (11) has formed an axle hub (111), perpendicularly. The axle hub has an integral lug (112) at center portion along its length and facing outwardly. The other end of the truck opposing the end where the beam is formed thereunder, has extending a portion downwardly and has formed thereunder an arcuate plate (12) in perpendicular and the center portion or its outer edge has a recess (121) for receipt of the lug therein that will confine the axle hub to remain at center regardless the turning or twisting. The arcuate plate (12) is formed that the center portion is thicker and is gradually becoming thinner towards respective ends. The axle hub (111) is also formed that the center portion has the largest diameter and is gradually becoming smaller of its size towards respective ends. The clearance of the center between the arcuate plate (12) and axle hub (111) is small in relation to the clearances between the respective ends of the arcuate plate and the axle hub which have the largest clearance of all, so that the truck is more stable and still maintain maneuverability.



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Field of the Invention

This invention discloses an unitary skate truck. More particularly, an integral truck made especially for roller skate, skateboard, or the like enables riders to maintain a better stability and to have a better maneuverability.

Description of the Prior Art

Trucks of various types have been devised and adapted on roller skate, skateboard, or the like to absorb the vibrations so that rider may feel comfortable in riding, and further still maintain a high maneuverability.

One of those trucks is utilizing as many parts as ten assemblies in one truck which are complicate in assemble or disassemble.

The other type of the truck, a U.S. patent No. 4,398,735, as shown in FIG. 6, is an integral truck 1, having a peg 64 having one end of which been connected to the truck 1 and the other end of which is either in contact with or adjacent to a center point along an axle hub 63 which is mainly functioned to prevent a beam 62 from deflecting. However, the truck 1 may still deflect when a rider shifts his weight from one side to the other, since the peg 64 is standing on the axle hub 63 along.

The inventor has, therefore, invented this unitary skate truck which can solve such problems by integral injection molding of all the parts in a one piece unit to minimize vibration and still maintain its maneuverability.

SUMMARY OF THE INVENTION

It is the primary object of the present invention to provide an unitary skate truck which prevents the truck from deflecting.

It is another object of the present invention to provide an unitary skate truck which has better stability and in the meantime maintains a good maneuverability.

It is a further object of the present invention to provide an unitary skate truck which has a better shock resistance.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a portion of a skateboard incorporating a truck constructed according to the present invention;

FIG. 2B is a side view of FIG. 1;

FIG. 2B is a side view of FIG. 3A in operation, partially sectioned;

FIG. 3A is a bottom view of FIG. 1;

FIG. 3B is a side view of FIG. 3A;

FIG. 4A is a sectional view taken transverse to the longitudinal axis of the skateboard of FIG. 1, midway between the front and the rear trucks, looking forwardly, and showing a turning action of the present truck;

FIG. 4B is a front view of FIG. 4A;

FIG. 5 is a perspective view of a roller skate incorporating the present invention; and

FIG. 6 is a prior art.

DETAILED DESCRIPTION

Referring now to the drawings wherein the showings are for the purpose of illustrating a preferred embodiment of the invention only and not for the purpose of limiting the same, FIG. 1 shows the present invention comprising an integral truck 1, having a beam 11, a cylindrical axle hub 111, and a curved plate 12 being integral injection molded. The truck 1 is rigidly connected to the underside of a skateboard 2 by means of bolts 3 and nuts 31, and extending downwardly from one end thereof at angle to form the beam 11. An axle hub 111 is formed at the other end of the beam 11 and extending perpendicularly thereto, and has an axle which may be molded therein with respective ends of which threaded for receipt of wheels 4 thereon. The axle hub 111 has a larger diameter at its center portion and is gradually decreasing its size toward respective ends in such that the respective endmosts have the smallest size of all. A lug 112 is formed at center portion along the length of the axle hub 111 and facing outwardly. One end of the truck 1 opposing the end where the beam 111 is formed thereunder, has extending a portion downwardly and formed the arcuate plate 12 perpendicular thereto, and a recess 121 at the center portion along the length of the arcuate plate 12 facing outwardly at the location where the lug 112 is positioned within the recess 121. The arcuate plate 12 is shaped in such that the middle has the most thicker portion and the thickness of the arcuate plate 12 is gradually becoming thinner towards respective ends, and at the respective endmosts of the arcuate plate 12 have the most thinner portion of all. Therefore, the clearance at the center portion between the arcuate plate 12 and the axle hub 111 has the smallest count whereas the clearance between the respective ends of the arcuate plate 12 in relation to the respective portions of the axle hub 111 have the largest count of all, as shown in FIG. 3A. Such arrangement enables the truck 1 to be more flexible and more stability when a rider shifts his weight from one side to the other, as shown in FIGS. 4A, 4B.

The recess 121 of the arcuate plate 12 shall confine the movement of the lug 112 therewithin so that no matter how a rider is shifting his weight,

the truck 1 will remain at center position constantly.

FIG. 5 refers to the beams 11' and arcuate plates 12 of the present invention being directly formed with a baseplate 5 of a roller skate. The recess 121' of the arcuate plate 12' and the lug 112' of the axle hub 111' would function the same as they were formed with the skateboard. 5

In operation, when a rider stands on either a skateboard or a roller skate, the beam 11 absorbs part of the force from the rider's weight and vibrations from bumping road and constant twisting and turning by bending inwardly, and the arcuate plate 12 has absorbs the rest parts thereof. In the meantime, the recess 121 of the arcuate plate 12 has confined the movement of the lug 112 of the axle 111 therewithin so that the axle may remain at center at all times, regardless of the twisting, the turning or the like. 10 15

Claims 20

1. An unitary skate truck comprising:

a truck being mounted on the underside of a skateboard; a beam having one end of which formed with and depending from said truck and extending at an angle downwardly and inwardly therefrom; a cylindrical axle hub connected to the other end of said beam extending in perpendicular thereto and having a lug at the center of the length of said axle hub and facing outwardly; an arcuate plate being formed with and depending from the other end of said truck and connected perpendicularly thereto having a recess at front middle position adapted to receive said lug therewithin. 25 30 35

2. An unitary skate truck of claim 1, wherein said axle hub is formed in such that the middle portion of which has a larger diameter, and the size is gradually decreased towards repective ends until the endmosts which have the smallest sizes of all; and wherein said arcuate plate is formed in such that the middle portion of which has the thicker portion, and the thickness is gradually decreased towards respective ends until the endmosts which are most thinner of all. 40 45

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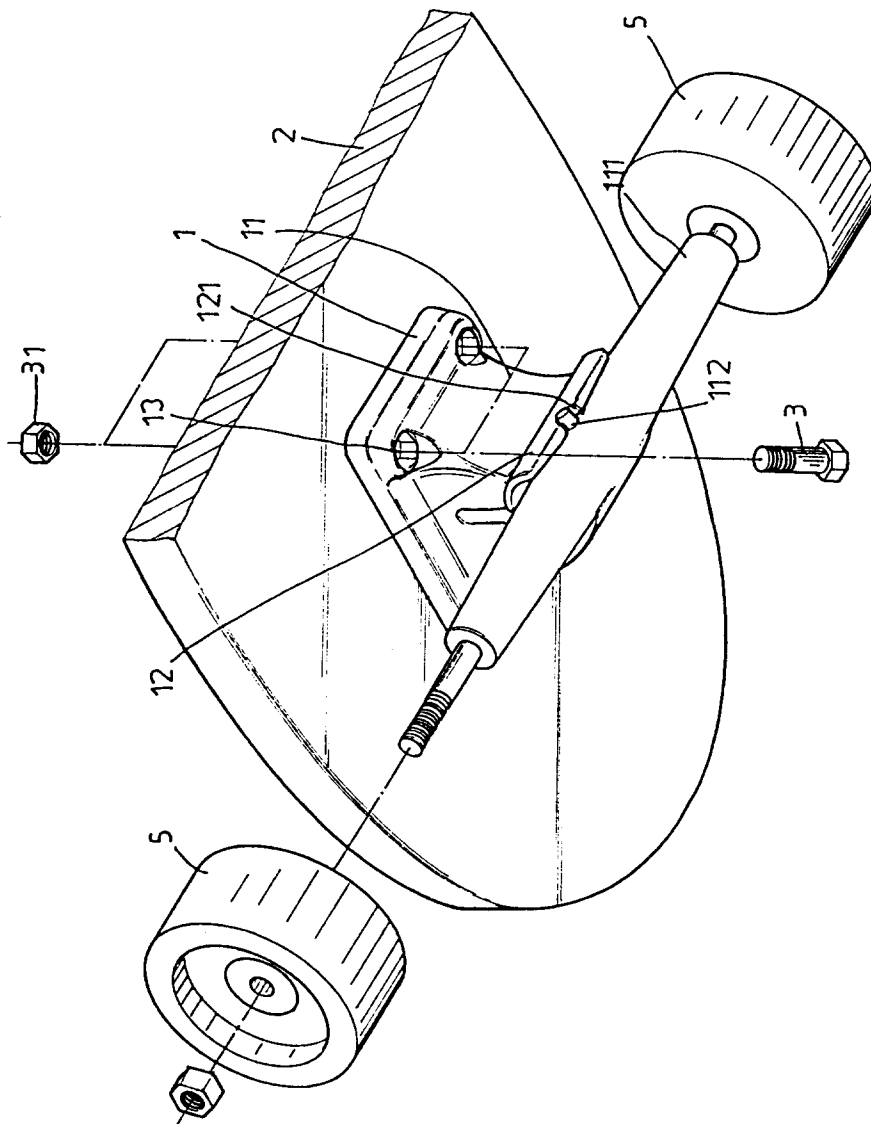


FIG. 1

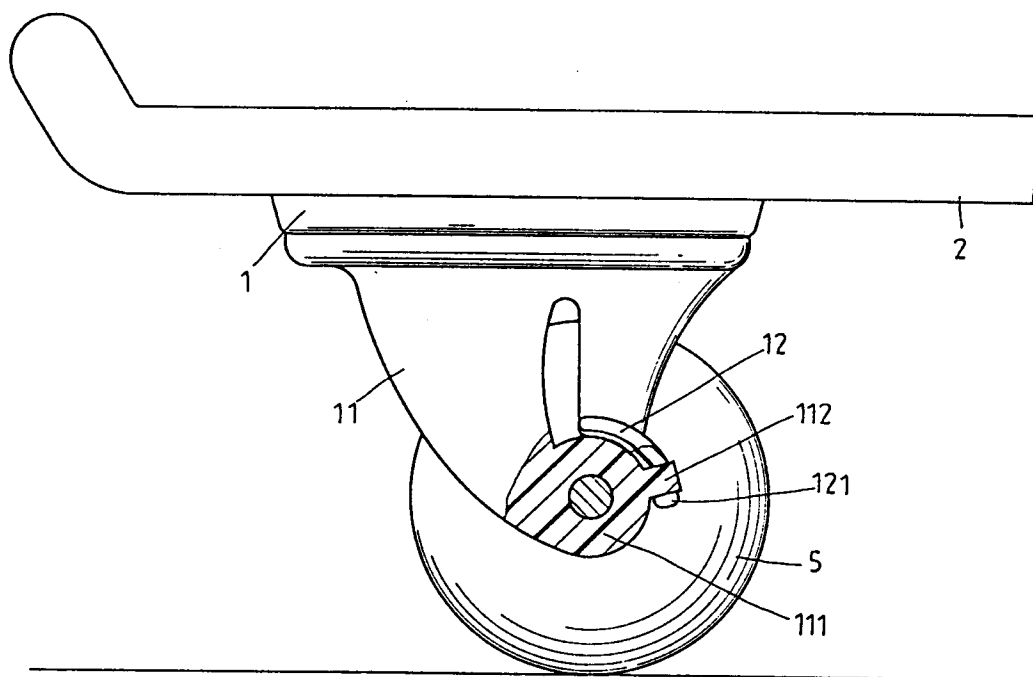


FIG. 2B

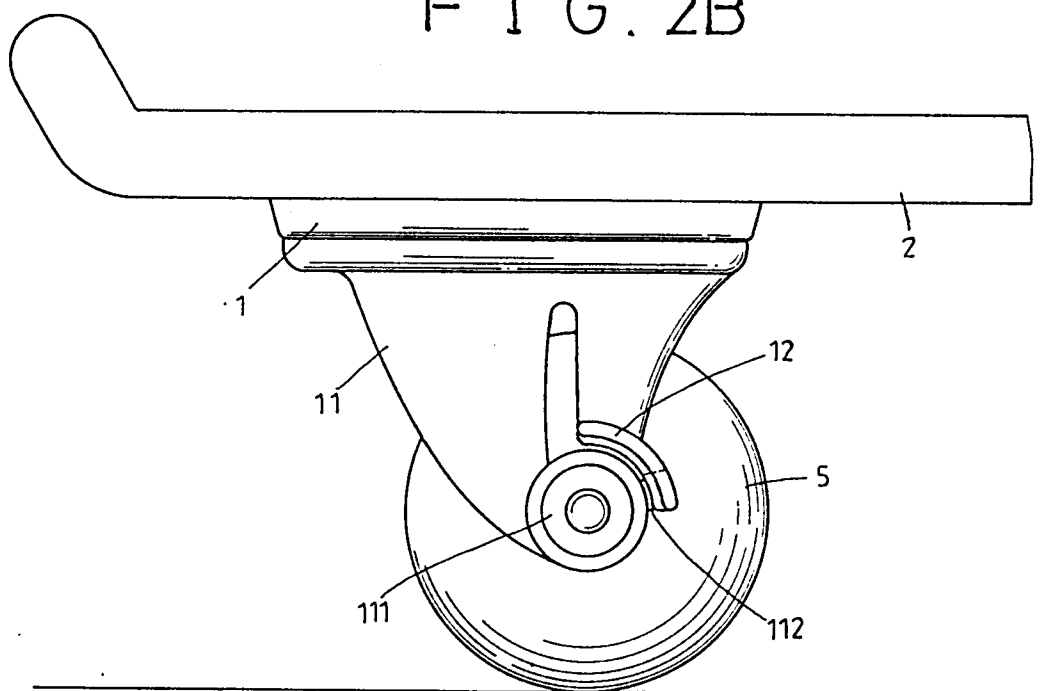


FIG. 2A

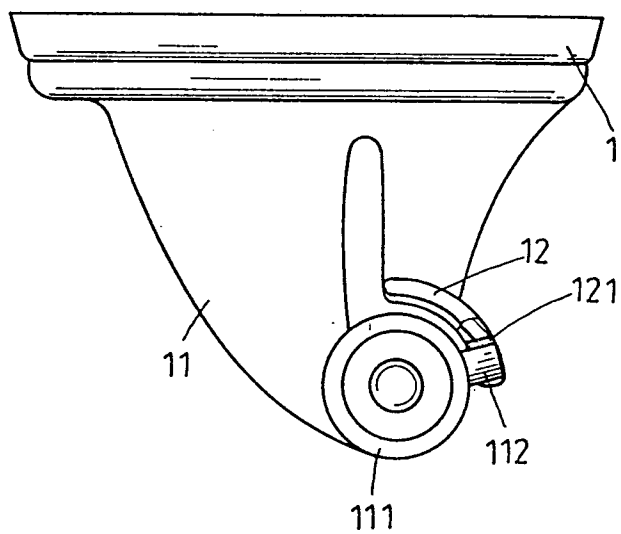


FIG. 3B

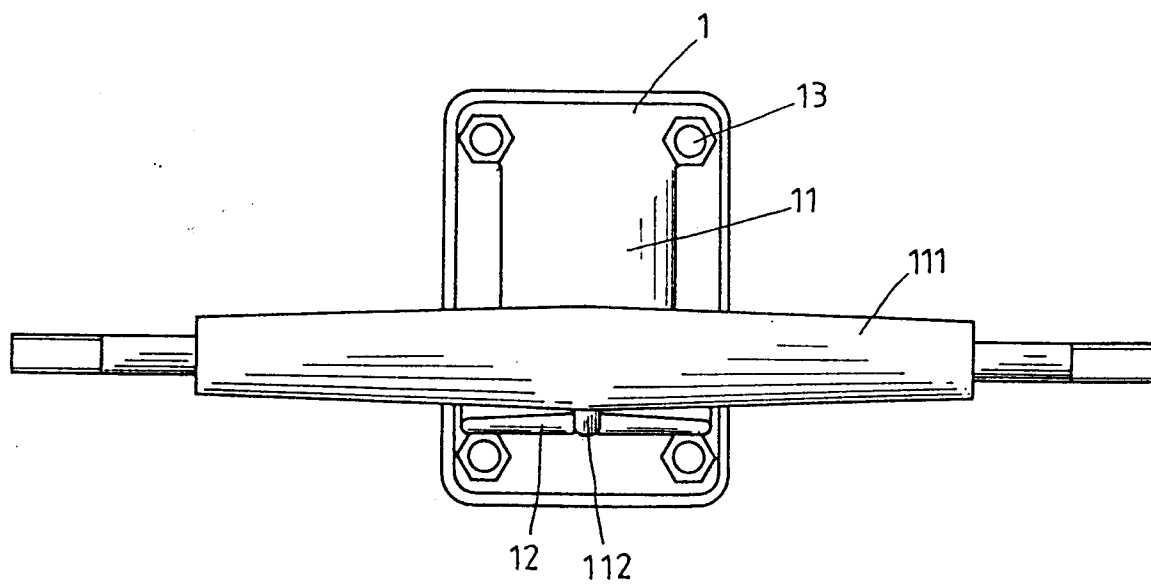


FIG. 3A

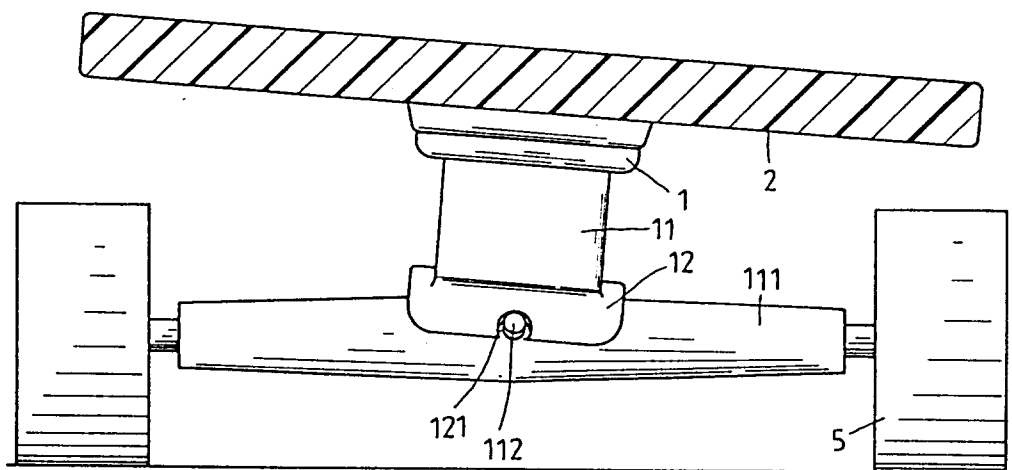


FIG. 4A

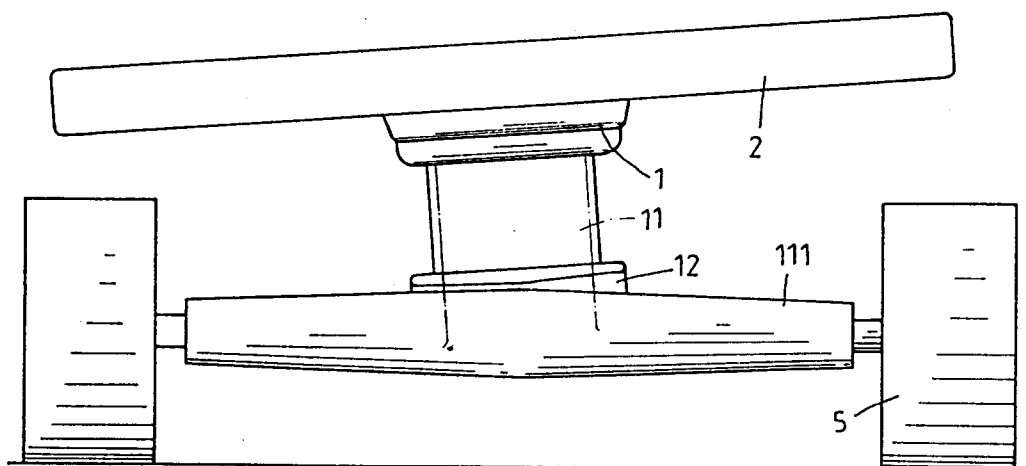


FIG. 4B

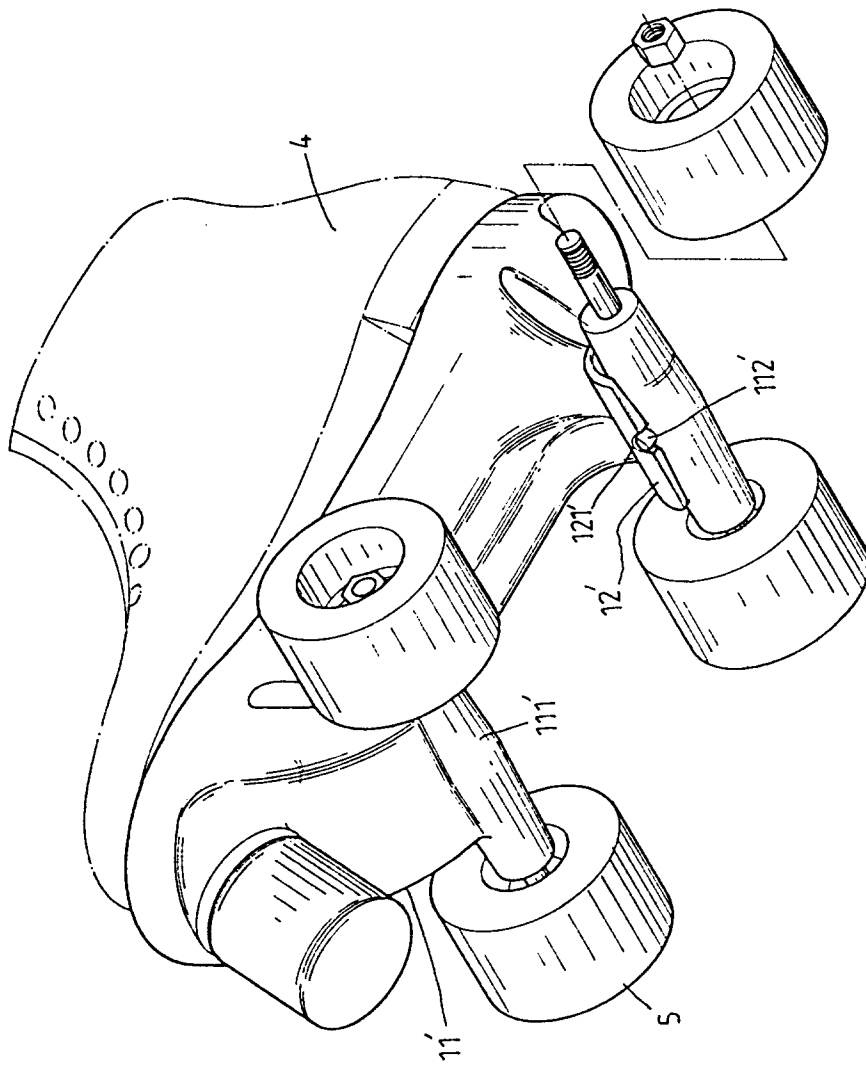


FIG. 5

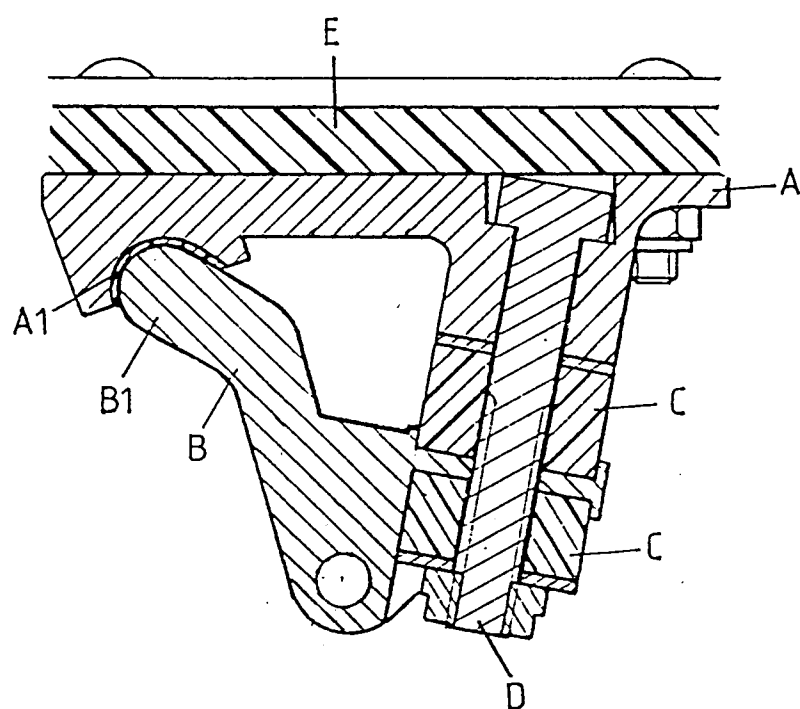


FIG. 6

PRIOR ART



European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 92 10 8795

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	FR-A-2 584 936 (VULLIERME SA) * page 3, line 20 - line 22; figure 3 * ---	1,2	A63C17/00
A	US-A-4 168 842 (KIMMELL ET AL) * figures 3,5,7,9 * ---	1,2	
A	FR-A-2 660 571 (TSAI SHUEI LAI) * figures 1,3 * -----	1,2	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A63C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 SEPTEMBER 1993	Examiner STEEGMAN R.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			