G. B. DEACON.

ROLLER SKATE ATTACHMENT.

APPLICATION FILED JULY 15, 1915.

1,173,343. Patented Feb. 29, 1916.

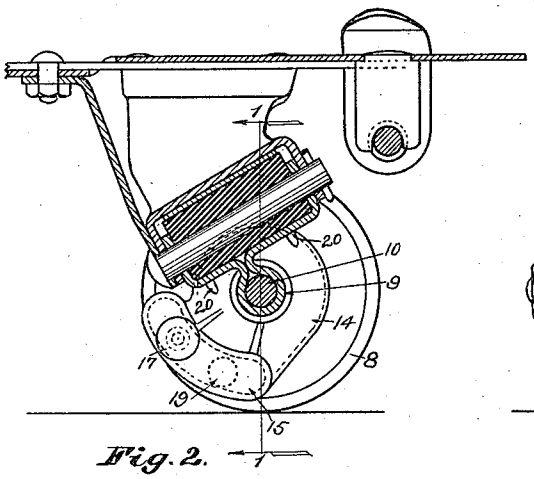


Fig. 2.

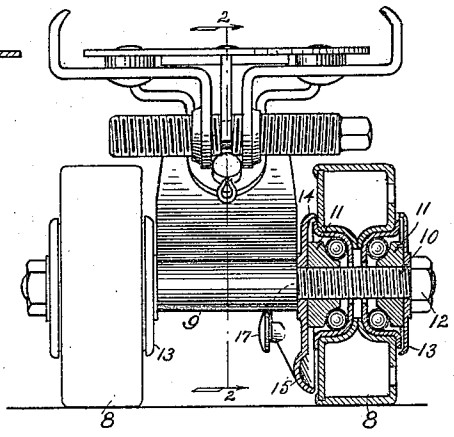


Fig. 1

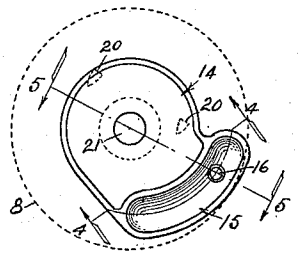


Fig. 3.

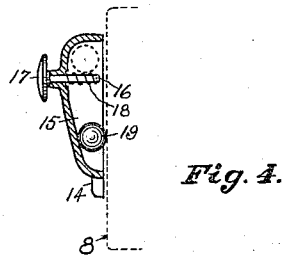


Fig. 4.

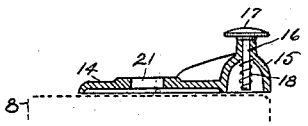


Fig. 5.

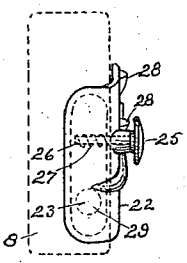


Fig. 7.

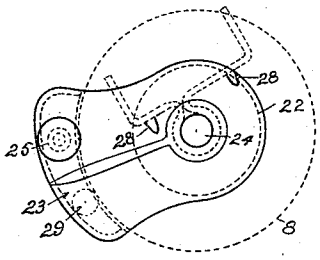


Fig. 6.

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ROLLER-SKATE ATTACHMENT.

1,173,343. Specification of Letters Patent. Patented Feb. 29, 1916.

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To all whom it may concern:

Be it known that I, GEORGE B. DEACON, a citizen of the Province of Ontario, Dominion of Canada, residing at the city of Battle Creek, county of Calhoun, State of Michigan, United States of America, have invented a new and useful Roller-Skate Attachment, of which the following is a specification.

My invention relates to an attachment for roller-skates of any of the well known types.

It has for its objects, to provide means for arresting the rotation of a wheel, or wheels in one direction, at the will of the skater, and capable of adjustment to permit their rotation in either direction, when desired. It is adapted to be attached to any of the well known types of roller skates whether the wheels are arranged tandem, or in pairs, at the heel and toe without changing their present construction in any manner. This I accomplish by simply removing a single part and replacing the same by my attachment, which has the same function as the part removed, with the additional function of an arresting device for the wheel. The device is simple, inexpensive to manufacture, easy to attach, positive in its action and provides a much needed improvement which will increase the utility and safety of roller skates.

Other objects will more definitely appear in the detailed description to follow.

I accomplish these objects of my invention by the devices and means described in this specification and more definitely pointed out in the claims.

Structures embodying the features and functions of my invention are clearly illustrated in the accompanying sheet of drawings which form a part of this specification, in which:

Figure 1, is a front elevation of a well known type of roller skate with certain parts in section on line 1 1 of Fig. 2, with my attachment in place. Fig. 2, is a sectional side elevation of the forward portion of the skate on line 2 2 of Fig. 1, showing my attachment in place. Fig. 3, is a reversed view of my attachment detached from the skate. Fig. 4, is a section on line 4 4 of Fig. 3. Fig. 5, is a section on line 5 5 of Fig. 3. Figs. 6 and 7, are illustrative of a modified structure of my attachment to be more fully described hereinafter.

In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the sectional lines, and similar reference characters refer to similar parts throughout the several views.

Referring to the drawings, 8 8 represents the forward wheels of a well known type of roller-skate, said wheels being of the usual ball bearing type and mounted on a fixed axle.

9 is the body or bolster portion to which is secured the stationary axle 10.

11 11 are the usual ball-cones screw threaded to said axle.

12 is the usual outside nut which locks and holds the several parts in place.

13 is the usual dust-cap or washer placed at either side of the wheel to exclude dust and dirt from the ball bearings.

14 represents the dust-cap portion of my attachment in place on the axle at the inside of the wheel and performs the function of the dust-caps 13, one of which has been removed and my attachment substituted.

15 represents a ball-race casing integrally secured to the dust-cap portion 14. This ball-race is tapered with relation to the side of the wheel as particularly shown in Fig. 4.

16 is a spring-actuated retaining-pin movably inserted in the upper, or enlarged end of the casing of said ball-race, and is provided with the button 17 for convenience in manipulating the same.

18 is a compression coiled spring placed around pin 16, one end of which is secured to the free end of said pin, while the opposite end bears against the inner surface of said ball-race, and serves to hold said pin in its normal position as shown in Fig. 4.

19 is a ball placed within ball-race 15, and is adapted to engage with the side of the wheel and the inner surface of said ball-race, by means of gravity, and arrest the wheel from any backward rotation, while at the same time the wheel is perfectly free to turn in its forward rotation. The taper of said ball-race permits the ball to wedge in between said ball-race and wheel by means of frictional contact, thus locking said wheel from rotation. When desired to permit the wheel to rotate in either direction, pin 16 is drawn out sufficiently to allow the ball to roll to the upper or enlarged portion of said ball-race as shown in dotted line in Fig. 4 and said pin allowed

to assume its normal position which will hold said ball out of commission, thus permitting the wheel to rotate in either direction.

20 20 are lugs or stops secured to the dust-cap, or washer portion of my attachment and adapted to engage the body or bolster portion 9, as shown in Fig. 2, to prevent rotation on the axle.

21 is a hole for insertion of the axle.

While my attachment may be applied to all four wheels of skates having four wheels, or to the front and rear wheels of skates having only two wheels placed tandem, experience has proven that it is only necessary to place it on the forward wheel of the skate which comes on the inside of the foot, in the case of four wheel skates, or the forward wheel in the case of two wheel skates. While this requires that the attachment be made in pairs, it also has the advantage of allowing the skates to be changed from one foot to the other to equalize the wear, or for any other reason it becomes necessary to make such change, by simply changing the attachment to opposite wheels on the skate.

In Figs. 6 and 7 which have been referred to as modified structures of my invention,—Fig. 6 being a side elevation and Fig. 7 an edge elevation,—it will be seen that the tapering ball-race has been placed opposite the periphery or tread of the wheel, and is designated as 23, 22 being the dust-cap or washer portion, which parts correspond to 14 and 15 of Fig. 3. Hole 24 is to receive the axle. Button 25 is secured to pin 26 which is held normally in position by spring 27, all of which correspond to parts 17, 16 and 18 respectively as shown in Figs. 4 and 5. Lugs 28 28 correspond to 20 20 of Fig. 2 and perform the same function. Ball 29, shown in dotted lines, is placed within ball-race 23 and has a frictional contact with the periphery or tread of wheel 8, when turning in one direction, to lock the wheel, while at the same time the wheel is perfectly free to turn in the opposite direction. To permit the wheel to revolve freely in either direction, move ball to the large end of ball-race above pin 26, where it is held out of commission.

It is obvious from the illustrations and descriptions that the functions of either structure of my attachment are practically the same, inasmuch as the arresting of the rotation of the wheel is accomplished by means of a gravity operated ball or member frictionally contacting with the outside surface of the wheel and the inner surface of a tapering ball-race or groove.

It will also be apparent that my device will enable a skater to proceed up an incline with ease and safety, while it will also enable him to make more effectual forward strides when skating on level surfaces without the necessity of turning the foot to one side to produce the necessary friction of the wheels of the skate on the floor or walk to enable him to make such strides at all, thus making roller skating much easier and more graceful, as well as less hazardous.

While I have shown my roller skate attachment in its most approved form, I am aware that it may be greatly varied in many particulars without departing from the essential features of my invention. The tapering groove 15, could be constructed to be secured to other parts of the skate than the axle, and a roller or wedge-shaped arresting member or body could be substituted in lieu of the ball as shown, and be equally as effectual in arresting the rotation of the wheel.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In an attachment for roller skates, the combination with the body portion of a skate supporting a fixed axle with wheels mounted thereon, of a dust-cap portion mounted on said axle between said body portion and the side of the skate wheel, lugs on said dust-cap portion to engage the body portion to prevent rotation thereof, a casing provided with a tapering ball-race secured to said dust-cap portion, a ball within said ball-race to engage the side of the wheel to arrest the backward rotation thereof by means of frictional contact, a spring actuated reciprocating-pin inserted within said casing and projecting normally into said ball-race to retain said ball out of commission to permit the rotation of the wheel in either direction.

2. In an attachment for roller skates, the combination with the body portion of a skate supporting an axle with wheels mounted thereon, of a dust-cap portion mounted on said axle between said body portion and the side of the skate wheel and provided with means to prevent rotation thereof, a casing provided with a tapering ball-race secured to said dust-cap portion, a ball within said ball-race to arrest the backward rotation thereof by means of frictional contact, a reciprocating-member normally projecting into said ball-race to retain said ball out of commission when desired.

3. In an attachment for roller skates, the combination with the body portion of a skate supporting wheels mounted thereon, of a dust-cap portion secured between said body portion and the side of the wheel, a casing provided with a tapering ball-race secured to said dust-cap portion, a ball within said ball-race to engage the side of the wheel to arrest the backward rotation thereof, and means within said ball-race to retain said ball out of commission.

4. An attachment for roller skates comprising a dust-cap portion provided with a hole to permit of attaching to a skate, a

casing formed integral with said dust-cap portion and provided with a tapering ball-race, a ball within said ball-race to engage the side of the wheel to arrest its backward rotation, and means to retain said ball out of commission.

5. An attachment for roller skates consisting of a member adapted to be attached to a fixed part of a skate and provided with a tapering-groove adjacent to and facing the side of the wheel, a gravity-actuated member within said groove to engage said wheel to arrest its backward rotation, and means within said groove to retain said member out of commission.

6. An attachment for roller skates consisting of a member adapted to be rigidly attached to a fixed part of a skate and provided with a tapering-groove adjacent to and facing the outside surface of a wheel, a member within said groove adapted to engage said surface in frictional contact to arrest the rotation of said wheel in one direction, and means to hold said member out of commission.

GEORGE B. DEACON.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."