This invention relates broadly to roller skates and more specifically to dust caps for the wheel bearings thereof which serve to prevent dust and dirt from being picked up from the floor or surface of the skating rink and accumulating in the wheel bearings. The main object of the present invention is the provision of removable dust caps for roller skate wheels with novel means for retaining the caps on the wheels and yet permitting easy and practically instantaneous removal thereof for the purpose of oiling or cleaning the wheel bearings.

Another and more specific object of the invention is the provision of such means in the form of one or more permanently magnetized members on the dust caps adapted to register in the bearing recess of the wheel and to be retained therein by magnetic attraction with the magnetizable wheel bearing housing.

The above as well as additional objects will be clarified in the following description wherein reference numerals refer to like-numbered parts in the accompanying drawings. It is to be noted that the drawing is intended solely for the purpose of illustration and that it is therefore neither desired nor intended to limit the invention necessarily to any or all of the exact details shown or described except as far as they may be deemed essential to the invention.

Referring briefly to the drawing, Fig. 1 is a fragmentary perspective view of a roller skate equipped with the removable dust caps of the present invention.

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a perspective view of one of the dust caps per se.

Fig. 4 is a perspective view of the wheel of Fig. 2 per se.

Referring in detail to the drawing, the numeral 10 indicates a roller skate having the wheels 11 provided with removable outer dust caps 12 and detachable dust caps 13 on their inner sides.

The wheel 11 has a cylindrical metallic core 14 of magnetizable material, which is provided with axial recesses 15 on both sides, giving access to the ball bearings 16. The hub 17 of the bearing is rigid with the axle 18, and the annular core 14 is rigid with the wheel 11. The core 14 has a circumferential flange 19 surrounding the recess 15.

The dust caps 12 and 13, which are both circular in outline although the former is preferably deformed into a convex outer side and a concave inner side while the latter is preferably in the shape of a flat disc, are both provided on their inner sides with two or more permanently magnetized steel clips 20 in the shape of approximately semi-cylindrical bands which are arcuate in configuration and adapted to register frictionally in the recess 15 in contact with the flange 19. These clips extend at right angles to the vertical plane through the cap, and are supported on pedestals 21 intermediate their length, the pedestals extending rigidly or integrally from the cap. The magnetization of the clips is such that the juxtaposed ends or poles 22 of two adjacent clips are alternately north and south in magnetization. Thus, when a cap is mounted on the wheel, the path of flux between such mutually adjacent poles is through the portion of the flange 19 between the poles. As a consequence, the degree of or amount of frictional engagement of the clips against the flange 19 need be slight since the magnetic attraction of the clips to the flange serves almost entirely, if not entirely, to retain the cap in place.

Hence the caps may, in an obvious manner, be very easily removed or attached, whenever and for whatever purpose is deemed necessary.

The preferred number of magnetized clips 20 is, as illustrated in the drawing, two, as then each clip has an arcuate length of approximately 180 degrees and thus approaches the most efficient form of permanent magnet, that of the "horseshoe" form.

Thus a practical and improved removable dust cap has been provided for roller skates.

Obviously, modifications in form or structure may be made without departing from the spirit and scope of the invention.

In order to make the cap more efficient in excluding dust from the bearings, a gasket 23, shown only on the outside dust cap 12 in Fig. 2, may be provided in any desired manner.

I claim:

In a roller skate including a shaft having a hub thereon and a wheel having an annular core of magnetizable material rigid therewith, said hub shaft registering in said annular core, said core having a circumferential flange enclosing an axial recess, the improvement consisting in a dust cap adapted to cover said recess and having two diametrically opposed permanently magnetized clips in the form of approximately semi-cylindrical bands extending from and at right angles to the dust cap adapted to be inserted into said recess to engage the inner surface of said flange to retain the dust cap on the wheel by magnetic attraction between said clips and said flange, each of said clips having the outer cylindrical surface thereof complementary to said inner surface of the flange and having a pedestal extending therefrom intermediate its length, said pedestal extending also from and secured to the dust cap and thus spacing the clip from the dust cap, said clips each having an arcuate length of slightly less than 180 degrees.

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