

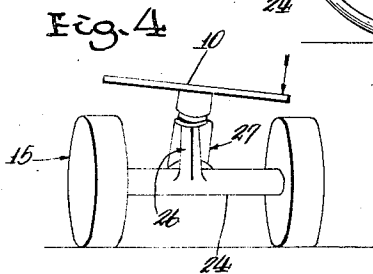
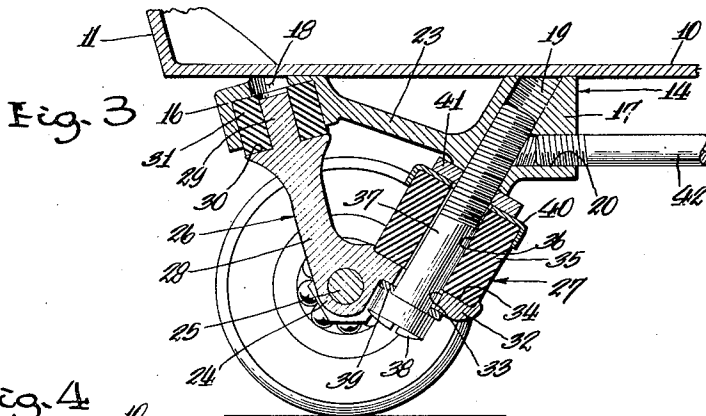
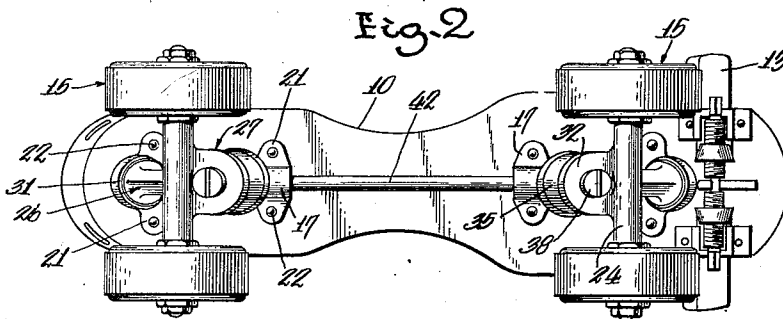
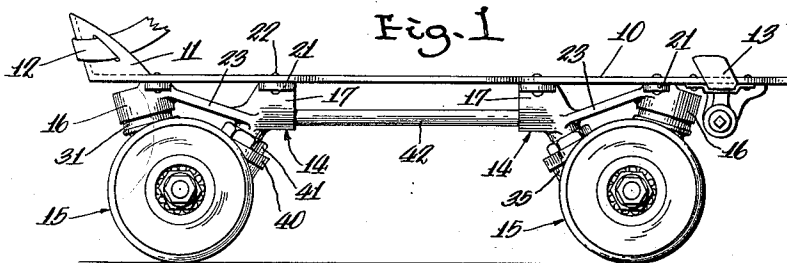
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ROLLER SKATE

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ROLLER SKATE

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This invention relates to roller skates, more particularly to roller skates adapted for use on a roller rink. The principal object of this invention is to provide new and improved roller skates.

In the drawing accompanying this specification, and forming a part of this application, there is shown, for purposes of illustration, one form which the invention may assume, and in this drawing:

Figure 1 is a side elevational view of a roller skate illustrating an embodiment of the invention,

Figure 2 is a bottom plan view of the roller skate shown in Figure 1,

Figure 3 is an enlarged fragmentary sectional view along the longitudinal center of the skate, and

Figure 4 is a more or less diagrammatic view showing a relation of parts of the skate under certain conditions.

The embodiment herein shown to illustrate the invention comprises plate means 10, which may be formed similar to the plate means of a roller skate of usual construction. The plate means 10, at its rear end, may have the usual heel cup 11, formed with slots to receive a fastening strap 12, while at its forward end, the plate means may have the usual clamping structure 13.

Rigidly secured to the plate means 10, and extending from the under surface of the plate means, are members 14, spaced apart longitudinally with respect to the plate means 10, each member forming connection providing means for receiving corresponding parts of a roller carrying means 15. In the embodiment shown, each member comprises spaced blocks 16 and 17, each block providing a socket for receiving a part of the respective roller carrying means 15. The block 16 is in the form of an inverted cup, having an aperture 18 formed in its closed end, whereas the block 17 is formed with a screw-threaded aperture 19 extending therethrough. The portion 17 also has a screw-threaded aperture 20 disposed at an angle to the aperture 19, the axis of the aperture 20 being generally parallel to the plate means 10.

The spaced blocks 16 and 17 are formed with apertured ears 21 for receiving rivets 22, the rivets also passing through the plate means 10, for the purpose of rigidly holding the blocks assembled with the plate means. Means are provided to brace the construction of the roller skate adjacent each of the members 14, and

as here shown, this means comprising a strut 23, formed integral with and extending between the blocks 16 and 17, but being preferably spaced from the plate means 10 and inclining upward from the block 17 to the block 16.

The roller carrying means 15 comprises a housing or axle carrier 24, for receiving an axle 25. Extending from the housing 24 are arm means 26 and 27, these arm means diverging with respect to each other from the housing 24 in a direction toward the plate means 10. The arm 27 is inclined a greater amount with respect to the vertical than is the arm 26, as clearly shown in Figure 3. The ends of the arms 26 and 27 of each roller carrying means 15 are secured to a respective member 14, suitable means being interposed to minimize the transmission of shock from the roller carrying means 15 to the plate means 10, when the roller skate is in use, while at the same time permitting movement of the roller carrying means 15 relative to the plate means 10.

As here shown, the arm means 26 comprises a portion 28 integral with the housing 24, the end 29 of this portion being of a cross-sectional size somewhat smaller than the area of the cup or socket formed by the block 16. A shoulder 30 is formed by the reduced end 29, this shoulder being spaced inwardly from the extremity of the end, and resilient means 31 is carried by the end 26. The resilient means 31, as here shown, comprises a tubular rubber buffer fitting over the end 29, and being of a cross-sectional size to snugly fit the cup or socket formed by the block 16. The cross-sectional sizes of the end 29 and the aperture 18 in the cup or socket formed by the block 16 are so proportioned that when the rubber buffer is compressed, the extremity of the end 29 may freely extend into the aperture 18.

The arm means 27 comprises an abutment 32 integrally extending from the housing 24, and being apertured as at 33. The abutment 32 is provided with a seat 34, in which is positioned resilient means, such as the rubber buffer 35 herein shown. The rubber buffer 35 is provided with an aperture 36, through which freely extends the shank of a screw-threaded stud 37, the aperture 33 in the abutment 32 being enlarged with respect to the cross-sectional size of the stud 37, as shown in Figure 3. The head 38 of the stud 37 overlies the surface of the abutment opposite the seat 34, a washer 39 being preferably interposed between the head 38 and the adjacent surface of the abutment 32. The

threaded extremity of the stud 37 is screw-threadedly received within the socket or aperture 19 formed in the block 17. A sheet-metal cup 40 preferably embraces the end of the rubber buffer opposite to the end received in the seat 34, this cup being apertured so as to freely pass the stud 37, and a nut 41 clamps the sheet-metal cup 40 to the rubber buffer 35, adjustment of the nut 41 providing for the desired compression of the rubber buffer 35.

As will be clearly seen in Figures 1 and 2, the members 14 are similar, but oppositely disposed, so that the apertures 20 in the facing blocks 17 are in aligned relation. Means are provided to brace the skate structure, and particularly that portion of the plate means 10 which lies between the members 14. The brace means, as here shown, comprises a rod 42 underlying and preferably spaced from the bottom surface of the plate means 10, the rod 42 having screw-threaded extremities respectively received within a screw-threaded aperture 20. Thus, the plate means 10 is held against bending or buckling action under any circumstances. As best seen in Figure 1, the rod 42, in effect, forms a continuation of the struts 23, and in this manner forms a truss construction effectively reinforcing the entire roller skate construction.

The invention herein disclosed provides a construction wherein each wheel carrying means 15 is assembled with the plate means 10 at a plurality of points, suitable means being provided at these points to prevent shock from being transmitted from the wheel carrying means 15 to the plate means 10. Also, the construction is such that when pressure is applied to one side or the other of the plate means 10, the plate means 10 will tilt downwardly at that side where pressure is applied, as shown in Figure 4. This tilting movement causes a combined compression and twisting of the rubber buffers 31 and 35, causing each of the wheel carrying means 15 to twist a proportional amount, the wheel carrying means moving in complementary relation, so that the user of the roller skate may steer the skate in any desired direction by applying a greater pressure on one or the other side of the plate means 10. When this greater pressure is removed, the resiliency of the rubber buffers will bring the wheels to straight forward position. Inasmuch as the nut 41 adjusts the compression of the buffer 35, compression as well as torsion of the buffer 35 is controlled, thereby controlling the shock absorbing qualities as well as the steering qualities of the skate construction.

It will be apparent to those skilled in the art that we have accomplished at least the principal object of our invention, and it also will be apparent to those skilled in the art that the embodiment herein described may be variously changed and modified, without departing from the spirit of the invention, and that the invention is capable of uses and has advantages not herein specifically described; hence it will be appreciated that the herein disclosed embodiment is illustrative only, and that our invention is not limited thereto.

We claim:

1. A roller skate, comprising: plate means, adapted to underlie the shoe of a user of the skate; a member, rigidly secured to the under surface of said plate means, and providing spaced-apart socket means; roller carrying means, comprising an axle carrier and a pair of arm means extending from said axle carrier to-

ward respective socket means; one of said arm means comprising an apertured abutment and a stud extending through said aperture and secured in one of said socket means, and comprising also a rubber buffer disposed about said stud and interposed between said abutment and said one socket means, and the other of said arm means comprising an end of smaller cross-sectional size than the other socket means and a shoulder spaced inwardly of said end, and comprising also a rubber buffer disposed about said end and interposed between said shoulder and the bottom of said other socket means.

2. A roller skate, comprising: plate means, adapted to underlie the shoe of a user of the skate; spaced-apart socket-providing blocks, rigidly connected to said plate means and projecting from the under surface of said plate means, said blocks having an integral strut extending therebetween and so constructed and arranged as to effect bracing of said blocks; and roller carrying means, comprising an axle carrier and a pair of arm means extending from said axle carrier toward respective sockets, one of said arm means comprising an apertured abutment and a stud extending through said aperture and secured in one of the sockets, and comprising also a rubber buffer disposed about said stud and interposed between said abutment and the respective socket-providing block, and the other of said arm means comprising an end of smaller cross-sectional size than the other socket, and a shoulder spaced inwardly of said end, and comprising also a rubber buffer disposed about said end and fitting said other socket, and interposed between said shoulder and the bottom of said other socket.

3. A roller skate, comprising: plate means, adapted to underlie the shoe of a user of the skate; two spaced-apart members aligned longitudinally of said plate means, each member comprising a pair of spaced-apart blocks, projecting from the under surface of said plate means and rigidly connected to said plate means, each pair of blocks having an integral strut extending therebetween and so constructed and arranged as to effect bracing of said blocks, and each individual block having a socket the axis of which extends transversely with respect to said plate means, and the facing blocks of said spaced-apart members each having a socket the axis of which extends generally parallel with respect to said plate means; roller carrying means connected to each of said members, each roller carrying means comprising an axle carrier and a pair of arm means extending from said axle carrier and toward the pair of blocks in the respective member, one of said arm means comprising an apertured abutment and a stud extending through said aperture and secured in the transversely extending socket of one block, and comprising also a rubber buffer disposed about said stud and interposed between said abutment and said one block, and the other of said arm means comprising an end of smaller cross-sectional size than the socket in the other block, and a shoulder spaced inwardly of said end, and comprising also a rubber buffer disposed about said end and fitting the socket in said other block, and interposed between said shoulder and the bottom of the socket in said other block; and a bracing rod, underlying said plate means, and having its ends secured within the sockets of said facing blocks.

4. A roller skate, comprising: means, adapted to underlie the shoe of a user of the skate, including a plate adapted to engage the tread face

of the foot or footwear of the wearer, and connection-effecting means extending from the under surface of said plate and providing a pair of spaced-apart recesses, one of which is formed with interior screw-threads; an axle carrier; a pair of arms extending in spaced relation from said axle carrier, each having a portion by which said plate means is supported by said axle carrier, and one of said portions being apertured; a pair of resilient means, respectively interposed between each of said portions and said connection-effecting means, the resilient means cooperating with said apertured portion also being apertured, and the other resilient means being seated in the unthreaded one of said recesses; and a screw bolt passing through the apertures in said one portion and its respective resilient means and screw-threadedly engaging the threads of said threaded one of said recesses.

5. A roller skate, comprising: plate means, 20

adapted to be engaged by the tread face of a foot or footwear of the wearer; an axle carrier; a pair of arms extending from said axle carrier in spaced relation and having a portion by which said plate means is supported by said axle carrier; a pair of resilient means, respectively interposed between each of said portions and said plate means; one of said portions and the respective part of said plate means being so constructed and arranged to provide a recess and a cooperating projection of a cross-sectional size smaller than said recess and formed with a shoulder, and the respective resilient means being so constructed and arranged that it fits about said projection, bears against said shoulder, and seats in said recess.

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