Nov. 3 1925. 1,560,014

F. E. BILLINGS

SKATE ROLLER

Filed Sept. 25, 1922

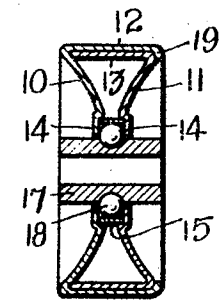


Fig. 1.

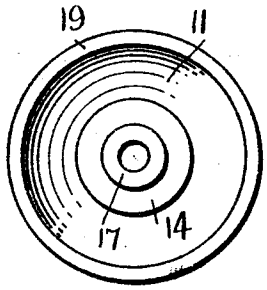


Fig. 2.

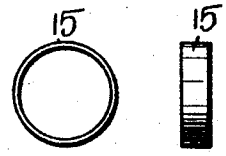


Fig. 3.

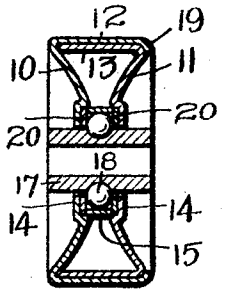


Fig. 4.

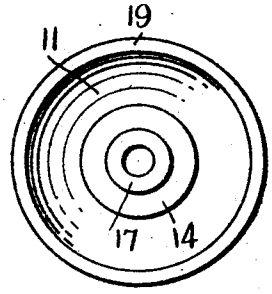


Fig. 5.

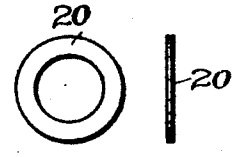


Fig. 6.

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UNITED STATES PATENT OFFICE.

FRANK E. BILLINGS, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO WORCESTER STAMPED METAL COMPANY, A CORPORATION OF MASSACHUSETTS.

SKATE ROLLER.

Application filed September 25, 1922. Serial No. 590,310.

To all whom it may concern:

Be it known that I, FRANK E. BILLINGS, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Skate Roller, of which the following is a specification.

This invention relates to a wheel or roller of the ball bearing type particularly adapted for use on skates.

It is the object of my invention to improve and simplify the construction of such rollers, making them convenient and economical to manufacture and thoroughly reliable and satisfactory in use.

With this general object in view, my invention relates particularly to certain arrangements and combinations of parts which will be hereinafter described and more specifically pointed out in the appended claims.

Two forms of my invention are shown in the drawings, in which—

Fig. 1 is a sectional elevation of one form of my improved skate roller;

Fig. 2 is a side elevation thereof;

Fig. 3 is a front and side elevation of the bearing ring;

Fig. 4 is a sectional elevation of a modification;

Fig. 5 is a side elevation thereof; and

Fig. 6 is a front and side elevation of one of the bearing plates.

Referring particularly to Fig. 1, I have shown a skate roller comprising a pair of side members 10 and 11. These side members are provided with overlapping outer flange portions 12 and 13 which when assembled form a double tread. At their inner portions the members 10 and 11 are bent outward at 14 to form a recess or chamber within which a bearing ring 15 is secured. A grooved sleeve or supporting member 17 and balls 18 are placed in operative relation with the remaining parts of the roller as indicated in Fig. 1, and the structure is then permanently secured in assembled relation by bending or pressing inward the edge 19 of the flange 12.

The roller shown in Fig. 4 is substantially the same as that shown in Fig. 1, with the exception that side bearing plates 20 are provided in addition to the bearing ring 15 in the recess formed by the side portions 14. The bearing ring 15 and side plates 20 are preferably formed of hardened steel and the supporting member 17 may also be of similar material.

A skate roller thus designed is of simple construction and few parts and is both economical to manufacture and satisfactory in service.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed otherwise than as set forth in the claims but what I claim is:—

1. A skate roller comprising a pair of side members having overlapping peripheral flanges forming a double tread portion and having their side portions bent inwardly to form concave discs with axial openings, said discs each having the portion adjacent its axial opening forced axially outward to form a recess on the inner side of said disc, said recess having a straight side wall extending to and surrounded by an annular shoulder, and a straight cylindrical bearing ring of uniform radial thickness throughout its length secured in said recesses between said disc portions and radially positioned by said shoulders to form the peripheral bearing of a ball race.

2. A skate roller comprising a pair of side members having overlapping peripheral flanges forming a double tread portion and having their side portions bent inwardly to form concave discs with axial openings, said discs each having the portion adjacent its axial opening forced axially outward to form a recess on the inner side of said disc, said recess having a straight side wall extended to and surrounded by an annular shoulder, a straight cylindrical bearing ring of uniform radial thickness throughout its length secured in said recesses between said disc portions and radially positioned by said shoulders to form the peripheral bearing of a ball race, and a pair of flat circular plates of uniform thickness also positioned in said recesses and abutting the ends of said cylindrical bearing ring, said circular plates forming the side bearing members of said ball race.

In testimony whereof I have hereunto affixed my signature.

FRANK E. BILLINGS.