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2,412,290

ROLLER SKATE

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Fig. 1.

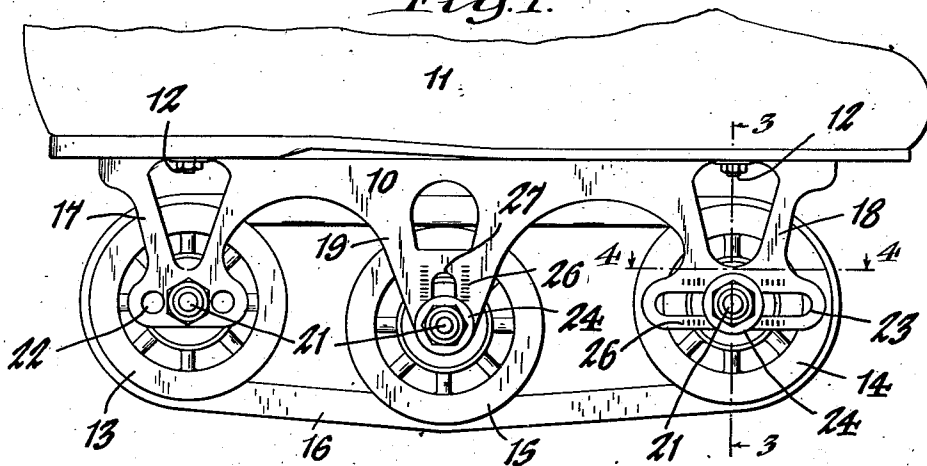


Fig. 2.

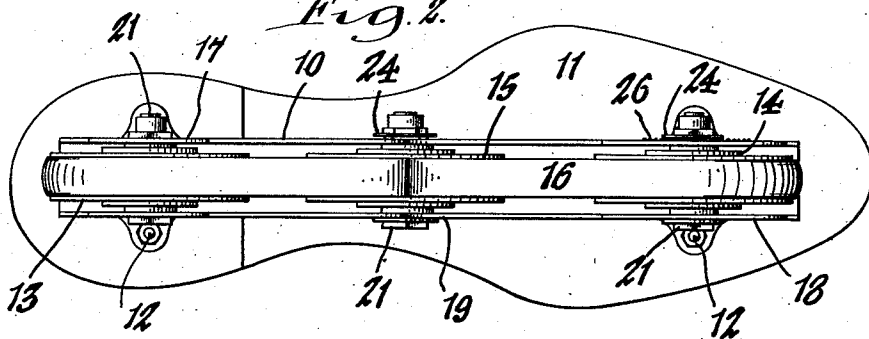


Fig. 3.

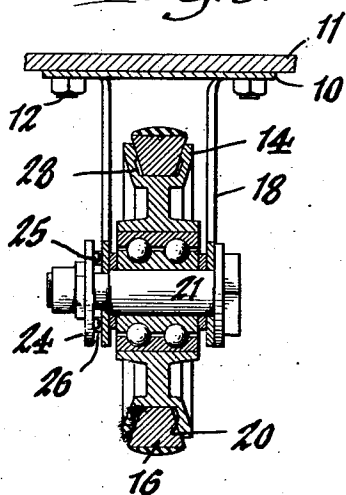


Fig. 4.

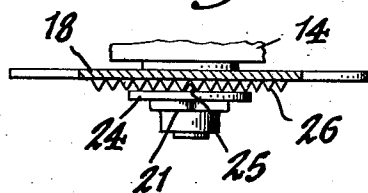
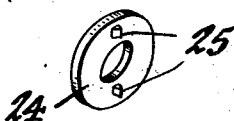


Fig. 5.



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UNITED STATES PATENT OFFICE

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ROLLER SKATE

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1 Claim. (Cl. 280—11.10)

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This invention relates to certain new and useful improvements in sport devices but more particularly to roller skates.

It has for one of its objects to provide a novel skate device of this character which is so designed and constructed as to afford enjoyment and exercise to the user, and which employs a combination of rollers and endless belt construction wherein the lower stretch of the belt constitutes a ground-engaging track over which the rollers travel during the skating operation.

Another object of the invention is to provide a roller skate which is simple, light and inexpensive in construction, whose rollers are adjustable to accommodate different sized shoes as well as belts, and whose belt and roller construction is such that the belt is effectually retained on the rollers and serves to protect the rims of the rollers and prevents them from scratching the skating floor.

A further object is to so arrange the rollers and belt that the skate will have a rocker action.

Other features of the invention reside in the construction and arrangement of parts hereinafter described and particularly pointed out in the appended claim.

In the accompanying drawing:

Figure 1 is a side elevation of a roller skate embodying my invention. Figure 2 is a bottom plan view thereof. Figure 3 is an enlarged vertical section taken on line 3—3, Figure 1. Figure 4 is an enlarged horizontal section taken on line 4—4, Figure 1. Figure 5 is a perspective view of one of the lock washers for adjustably retaining a roller in a set position of adjustment on the skate-frame.

In the preferred embodiment of the invention shown in the drawing, the same consists of a frame 10 of substantially U-shape in cross section which carries the roller elements of the skate and which is rigidly secured to the shoe 11 by bolts 12 or like fasteners. The roller elements consist of ball-bearing supported rollers or pulley-like wheels 13 and 14 disposed, respectively, adjacent the heel and toe ends of the frame, and intermediate like roller or pulley-like wheel 15 disposed between the end rollers, and an endless belt 16 of rubberized or like material passing around the several wheels, the lower stretch of the belt constituting a ground-engaging track over which the roller-like wheels travel during the skating operation.

The frame 10 is provided with depending end walls or brackets 17 and 18 on which the companion rollers or wheels 13 and 14 are respectively mounted, and intermediate depending wall or

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bracket 19 on which the companion center or intermediate wheel 15 is mounted. Each of the pulley-like wheels or rollers has a groove 20 in its periphery for the engagement of the belt 16, and each has an axle in the form of a bolt 21 for supporting it on the frame. By preference, the heel-bracket 17 is provided with a plurality of horizontally aligned axle-receiving openings 22 while the toe bracket 18 has horizontal slots 23 therein for supporting the axle of the roller 14, whereby the end rollers may be adjusted toward and from each other to accommodate and adapt the frame 10 to different sized shoes. Furthermore, the longitudinal slot adjustment provided in the toe bracket enables the companion roller to be adjusted as desired to place the proper tension on the belt 16. For the purpose of effectually retaining the toe roller 14 in a set position of adjustment, a washer 24 is applied to its axle and has locking teeth 25 on its inside face which are adapted to mesh with corresponding rows of serrations or notches 26 formed in one side of the toe bracket 18 in parallel relation to its companion slot 23.

The intermediate roller is adjustable vertically on its bracket 19 and for this purpose the latter has upright slots 27 therein through which its axle extends. For the purpose of retaining the axle in a set position of vertical adjustment it is provided with a washer of the same type as the washer 24 adapted to engage companion serrations 26 formed on the bracket alongside its slot 27. As shown in Figure 1, this intermediate roller 15 preferably assumes a position below the axial plane of the end rollers 13 and 14 to cause the belt to take a substantially arcuate path of travel along its lower stretch and accordingly afford a rocker-like action to the skate.

The belt 16 is preferably of frusto-conical shape in cross section, and the roller-grooves 20 which receive it are of similar cross section, as shown in Figure 3. The periphery of the belt projects beyond the peripheral edges of the rollers and its outer or ground-engaging face is preferably made of rubber and is crowned or arched in cross section. The side edges of the belt are straight and are coextensive or in registering alinement with the side walls of the roller-grooves to resist displacement of the belt from the rollers. Adjacent their bottom faces the opposite side walls of the belt-receiving groove are widened by the provision of circumferential recesses 28. By this construction, the belt has a tendency, during the skating operation, to be crowded into the roller grooves and to be thereby expanded into the

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widened portions or circumferential recesses 28 to thereby prevent the belt from accidentally coming off the rollers, as when skating round turns. Furthermore, the belt projects somewhat beyond the peripheral edges of the rollers and thereby serves as a guard or protector and prevents the edges of the rollers from scratching the skating floor.

I claim as my invention:

A skate of the character described, comprising a frame adapted for attachment to a shoe, longitudinally-alined, grooved rollers applied to the toe and heel ends of said frame, an endless belt en-

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gaging the grooved rollers, said belt and roller-grooves being substantially frusto-conical in cross section with the tread portion of the belt projecting beyond the periphery of the rollers, and the lower stretch of said belt constituting a ground-engaging track over which the rollers travel during the skating operation, the side walls of the roller-grooves adjacent the bottoms thereof having circumferential grooves therein into which the inner portion of the belt is adapted to extend.

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