Dec. 11, 1951 E. J. WALL 2,578,384

SHOE SKATE AND STOP ASSEMBLY

Filed Oct. 18, 1946 2 SHEETS—SHEET 1

Fig. 1

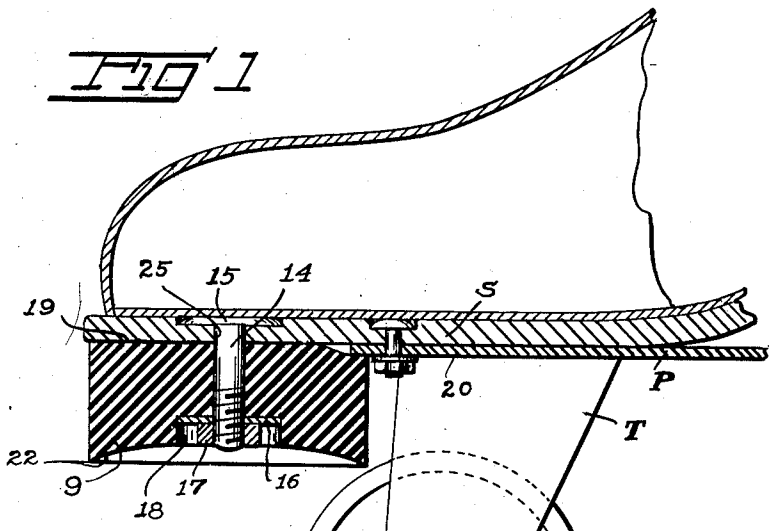


Fig. 4

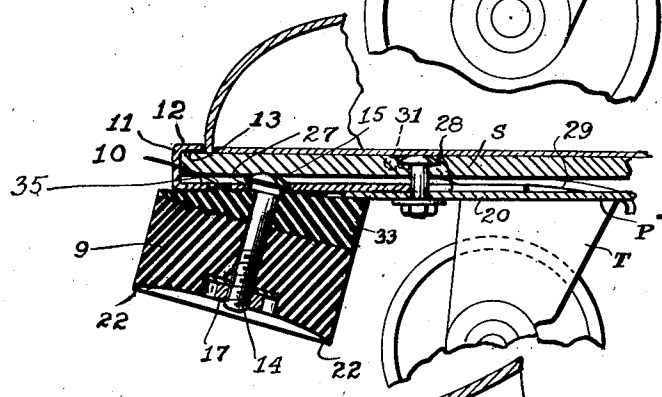
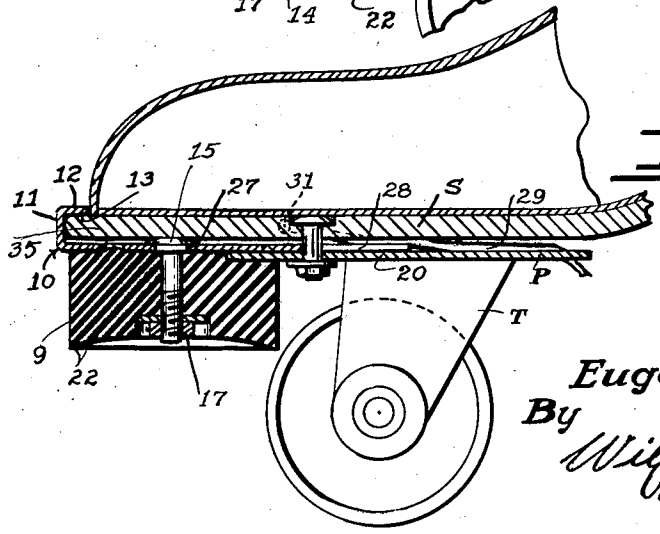


Fig. 2



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Fig 3

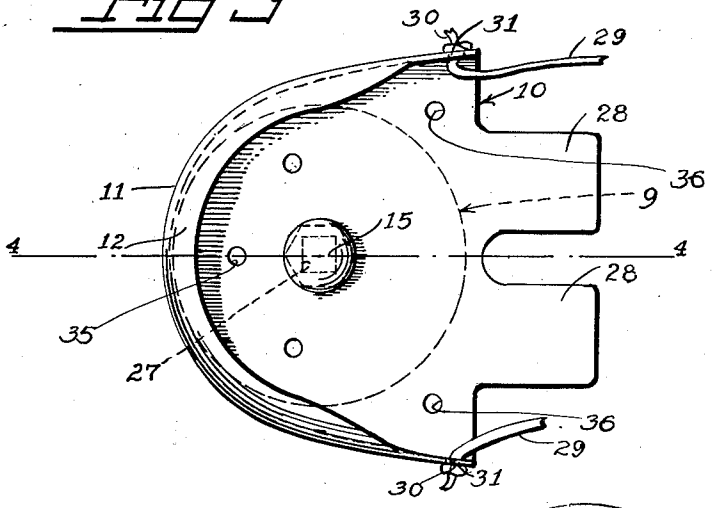


Fig 5

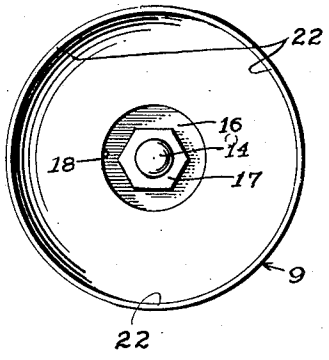
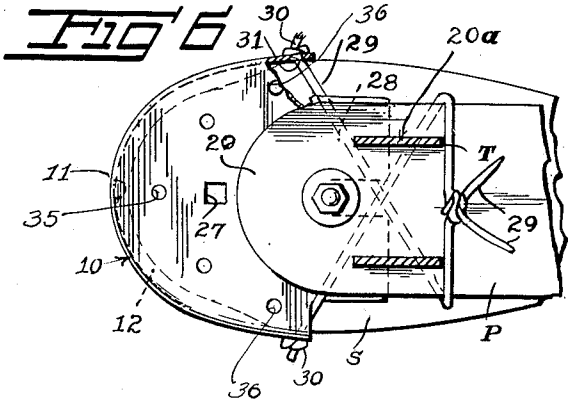


Fig 6



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SHOE SKATE AND STOP ASSEMBLY

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3 Claims. (Cl. 280—11.2)

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The present invention is a further improvement of my Patent No. 2,285,373, of June 2, 1946, for Roller Skates and relates more particularly to a toe stop and bumper which will not injure the skate shoe nor a skating rink floor, there being no nails to gouge an expensive floor.

This device will hold the toe of the shoe skate straight, not allowing it to turn up.

Another advantage of my toe stop resides in the fact that the bumper block, being circular, is "saucer shaped" or concave with turned up peripheral edge. This gives the advantage that, when the block becomes worn on one side, all that need be done is to loosen the holding bolt and turn the bumper block one quarter or half turn round and then tighten the bolt again. This can be repeated so that the block can be used about 16 times longer than usual.

It is imperative that the base of the toe stop go under the shoe skate plate to hold the toe straight.

Several embodiments of the invention are illustrated in the accompanying drawings wherein:

Figure 1 is a vertical section of the device in its simplest form with a single bumper block attached to the leather sole;

Figure 2 is a fragmentary assembly view of a roller skate shoe with the toe stop attachment and single block shown in section on a longitudinal vertical plane of the shoe;

Figure 3 is a top plan view of the attachment plate for carrying the bumper or toe stop;

Figure 4 is a section on a plane along line 4—4 of Figure 3, with a double block toe stop in position;

Figure 5 is a bottom plan view of a circular bumper block; and

Figure 6 is a bottom plan view of the toe plate showing the fasteners secured.

In the drawings, like reference characters denote the same details in the different views.

S denotes the bottom sole of a roller skate shoe under which is firmly secured, by rivets or any other suitable means, the main steel plate P carrying a front roller-truck T as seen in Figure 2.

The bumper or toe stop proper, see Figure 5, consists of a cylindrical block 9 of rubber or substitute therefor, with a central hole for an attachment bolt 14 having a flattened head 15 and clamping nut 17 under which a metal washer 16 is placed and for which a recess 18 is provided. The top surface 19 of the block 9 is flat and plain for contact directly with the underside of the shoe sole S in the simplest form of the device as seen in Figure 1, where the skate plate 20 is shown

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entering slightly between the rear end of the block and the leather sole S of the shoe. The under side of the block 9 is concave or saucer-shaped, that is to say, the peripheral edge 22 is sharp so that the thickness of the block is greater, as measured at the edge, than in the center of the block 9.

The single central bolt 14, Figure 1, is drawn through corresponding holes 25 in the leather sole S and the block 9, with the head 15 resting directly on the inner surface of the sole and the nut 17 drawn up tightly against the washer 16. The advantage of using one central bolt 14 for securing the toe stop or bumper block 9 is that after the edge 22 which is located immediately below the tip of the toe, has been worn down, a fresh, sharp portion of the edge 22 can be turned into its place by simply loosening the nut 17 and again tightening the nut 17. This procedure may be repeated several times until the edge has become low and blunt all around.

In Figures 2, 3 and 4, a preferred construction is illustrated.

The toe stop or bumper attachment, here consists of metal toe plate 10 having substantially the contour of the toe point of the sole S, and reaches back about three inches from the tip. This toe plate 10 has a semi-circular upstanding marginal flange 11 covering the front edge of the sole S, and a back turned narrow lip portion 12 adapted to cover the projecting narrow ledge 13 of the sole S.

Instead of the bolt 14 running through the sole leather as in Figure 1, it here is taken only through the plate 10, see Figure 4, so that the head 15 rests directly on top of said plate, below the leather sole S. This has the advantage that the bumper block 9 may be assembled on the plate and then attached together under the sole S. This makes it necessary to key the bolt in the toe plate to keep it from turning, for which reason the bolt hole 27 Figure 3, is made square in the plate 10. The toe plate is accordingly held to the sole S by the lip 12 and two rearwardly directed fingers 28 which engage between the truck plate P and the sole S. In addition to said securing means, flexible fasteners are also provided, which may be in the form of a pair of strings 29 of leather or any other suitable material, of suitable length, one end of each being engaged in the eyelet 31 at the rear end of each flange 11. These two strings 29 may be crossed in the narrow space between the sole S and the truck plate P and then taken around the truck pintle and tied very tightly by the fasteners 31.

The bolt 14 serves to adjustably secure the bumper block 9 to the toe plate 10, that is to say, it constitutes with the nut 17, a means for easily and quickly turning the block 9 around as soon as the edge 22 of the block becomes worn on one side. Thus another portion of the edge can be brought into position for use.

In Figure 4 is shown beside the regular, circular bumper block 9, also a filler block 33 which is wedge-shaped in length direction, with its heaviest dimension rearward, thereby increasing the total thickness of the bumper and tilting it slightly forward. This feature is particularly useful for artists and fancy skaters to soften the blow when jumping.

The filler block is made of the same material as the cylindrical or main block 9, and remains in one position all the time and may therefore be pinned or riveted to the underside of the toe plate 10 if so desired, but as the bolt 14 runs through the same as well as through the main bumper 9, this bolt 14 must be sufficiently long to secure the two bumper blocks 9 in addition to its use in revolvably adjusting the position of the edge of the bumper block.

The toe plate P at its forward portion is provided with the suitably positioned and transversely spaced openings 35 into which will extend portions of the bumper block 9 which will be forced therein as a result of the tightening of the nut 17 on the bolt 14. This is of advantage as it will hold the block 9 from turning or slipping on the plate 10 when the skate shoe is in use and the block 9 in contact with the floor or kindred surface.

The rear portion of the plate 10 is provided with the additional transversely spaced openings 36 through which may be disposed rivets for attaching the block 9 directly to the shoe sole for holding the block in place instead of using strings 30.

It is to be understood that the invention as herein disclosed may be varied from the details described and shown without departure from the spirit of the subjoined claims.

I claim:

1. A bumper and toe stop for roller skates comprising a disk body of yielding material concaved on its bottom side to form a peripheral sharp edge, the body having a recess formed in the center of the bottom of the concavity, a bolt passing axially through the body and extending into said recess, and a securing nut on the said end of the bolt and lying within said recess, the said disk being rotatably adjustable on the bolt for securing a selected portion of said sharp edge in a desired position for use.

2. A bumper and toe stop for roller skates comprising a disk body of yielding material concaved on its bottom surface to form a peripheral sharp edge, and means passing axially through the disk for rotatably adjusting said edge of said disk body for use and securing said body in working position, comprising a toe plate, means for attaching the toe plate to the sole of a shoe and coacting means between the toe plate and the disk body for holding the body against rotation.

3. A bumper and toe stop for roller skates comprising a disk body of yielding material concaved on its bottom surface to form a peripheral sharp edge, and means passing axially through the disk for rotatably adjusting said edge of said disk body for use and securing said body in working position, comprising a toe plate, said plate having openings to receive portions of the yieldable body whereby the body is held against rotation.

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