

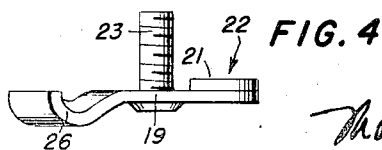
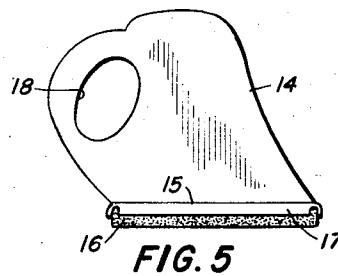
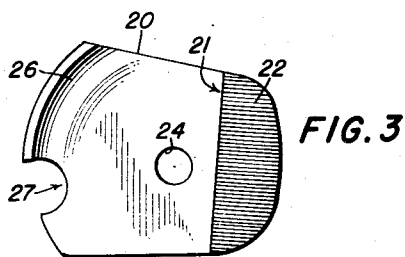
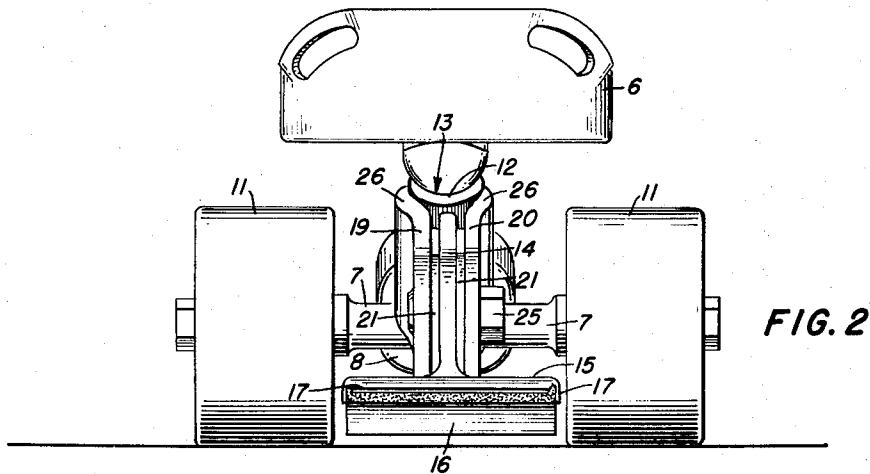
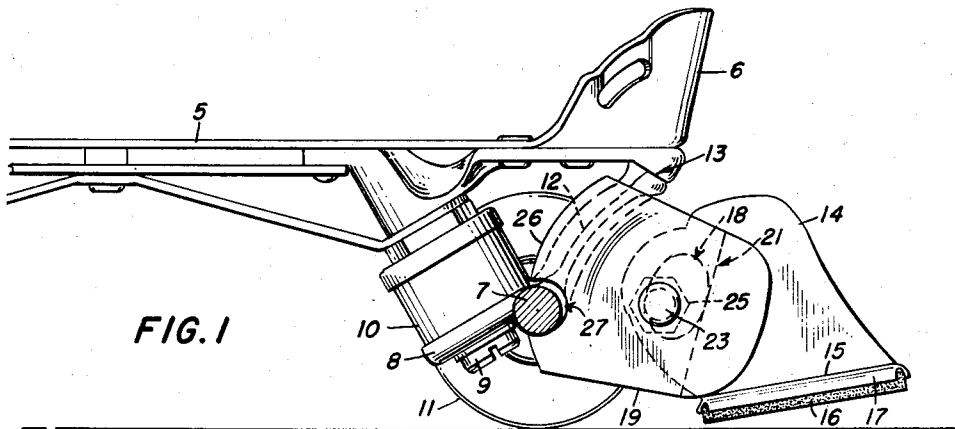
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ROLLER SKATE BRAKE ATTACHMENT

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2,872,201

ROLLER SKATE BRAKE ATTACHMENT

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5 Claims. (Cl. 280—11.2)

The invention relates generally to roller skates and seeks to provide a novel brake means applicable to roller skates and which is simple in construction, efficient in operation and subject to being manufactured at low cost.

It is well known that serious and damaging falls commonly are experienced by persons using roller skates, whether they be grownups or children. A rather common experience is to have the skates run out forwardly from under a skater, resulting in a bad fall backward, and possible injury to the back or neck, or even a very serious head injury, such as a skull fracture. An object of the present invention is to provide a novel skate brake means which will act automatically to engage the floor or ground as the skates whereon they are mounted start to run out forwardly from under a person wearing them, thereby to exert a braking action effective quickly to reestablish the person's equilibrium and prevent backward falling.

Another object of the invention is to provide a skate brake means which is in the form of an attachment readily mountable on and demountable from the box support column and axle of a skate.

A further object of the invention is to provide a skate brake means of the character stated wherein there is included a brake shoe disposed for engagement with the ground or floor immediately beyond the rear wheels of the skate, and means permitting adjustment of the angularity and spacing of the brake shoe with relation to the ground or floor.

A still further object of the invention is to provide a skate brake means of the character stated wherein the brake shoe is carried on an upright plate adjustably clamped between opposing mounting or clamping plates which in turn are clamped onto the rear axle box supporting column and have position fixing engagement with the rear axle.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims and the several views illustrated in the accompanying drawings.

In the drawings:

Figure 1 is a fragmentary side elevation illustrating a skate with the brake attachment of the invention mounted thereon, the rear axle of the skate being shown in cross section.

Figure 2 is a rear elevation illustrating the structure of Figure 1.

Figure 3 is a detail inside face view of the mounting or clamping plate shown at the right in Figure 2.

Figure 4 is a detail top plan view of the mounting or clamping plate shown at the left in Figure 2.

Figure 5 is a detail face view of the brake shoe and mounting plate.

In the example of embodiment of the invention herein disclosed, there is shown a conventional form of skate

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including the usual frame 5 and heel cup 6. The usual rear axle 7 also is shown together with the cap 8 projecting therefrom and attached at 9 to the usual cushion box 10. The axle carries the usual wheels or rollers 11 and is additionally supported by the attached support column 12 which is rockably mounted at 13 on the frame. The parts thus far described will be recognized as conventional. The column 12 and the axle 7 from which it projects serve as a supporting or mounting means for the brake attachment of the present invention.

The improved brake attachment includes a brake plate 14 having a foot plate 15 formed thereon or secured thereto and which provides a seat or socket in which to receive a brake shoe 16 formed of rubber or comparable tough friction-grip material. The brake shoe may be secured in place by gripping edge flanges 17, as clearly illustrated in Figures 1, 2 and 5 of the drawing. The brake plate 14 is equipped with an elongated or ovate aperture 18, the purpose of which will become apparent as this description progresses.

Two opposed mounting or clamping plates 19 and 20 are provided, one thereof being shown at the left of the supporting column 12 in Figure 2, and the other at the right of said column. The right hand plate is shown in detail in Figure 3, and the left hand plate is shown in the plan detail in Figure 4. Each of the plates 19 and 20 has a hard carbon steel grip section 21 secured in any approved manner thereto and including a roughened face 22 in position for engaging one laterally directed face of the brake plate 14 disposed between them in the manner clearly illustrated in Figures 1 and 2. The left hand plate 19 has a screw bolt shank 23 secured thereto in any approved manner, as by brazing or the like, and projecting perpendicular to the plane of the plate as shown in Figure 4 for projecting through the aperture 18 in the brake plate 14 and the receiving aperture 24 in the right hand plate 20. With the parts 19, 14 and 20 assembled in the relation illustrated in Figure 2, the nut 25 is applied to the threaded shank 23 to secure the assembly with the brake shoe 16 at just the right height above the ground or floor and at the right inclination with relation thereto. It will be apparent by reference to Figures 1 and 5 of the drawings that the passage of the bolt shank 23 through the ovate or elongated aperture 18 in the brake plate 14 permits a very flexible adjustment of the brake plate 14 upwardly, downwardly, forwardly, rearwardly and angularly about the bolt shank.

It will be apparent by reference to Figures 2 and 4 that the plates 19 and 20 have complementary shaped portions 26 to snugly embrace opposite sides of the supporting column 12, and said plates also are equipped with edge recesses 27 for partially embracing the axle 7 in the manner clearly illustrated in Figures 1 and 3. The edges of the plate recesses 27 engaging upwardly and directly against the axle 7 as shown in Figure 1 thus comprise stabilizing elements. This manner of shaping and mounting of the plates provides a very secure and rigid mounting for the brake means, and yet the attachment as a whole can be mounted on or removed from the skate with great facility.

While one form of the invention has been shown for purposes of illustration, it is to be clearly understood that various changes in the details of construction and arrangement of parts may be made without departing from the spirit and scope of the invention as defined in the appended claims.

I claim:

1. In combination with a roller skate including the usual frame structure, rear axle and rollers thereon, axle supporting box and box supporting column, a brake means comprising a brake plate having a foot plate dis-

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posed in generally horizontal position across the lower edge of the brake plate and carrying a brake shoe presented for engagement with the ground or flooring, and means for removably securing the brake plate to said column, said brake plate having a cross aperture and the brake plate securing means comprising a pair of mounting plates disposed one at each side of the brake plate and engaging at opposite sides with the column, and bolt means for securing the mounting plates together and against the opposed faces of the brake plate and the column.

2. In combination with a roller skate including the usual frame structure, rear axle and rollers thereon, axle supporting box and box supporting column, a brake means comprising a brake plate having a foot plate disposed in generally horizontal position across the lower edge of the brake plate and carrying a brake shoe presented for engagement with the ground or flooring, and means for removably securing the brake plate to said column, said brake plate having a cross aperture and the brake plate securing means comprising a pair of mounting plates disposed one at each side of the brake plate and engaging at opposite sides with the column, and bolt means for securing the mounting plates together and against the opposed faces of the brake plate and the column, each said mounting plate having a hardened grip section secured thereon in position for engaging in secure gripping contact with the opposing face of the brake plate.

3. In combination with a roller skate including the usual frame structure, rear axle and rollers thereon, axle supporting box and box supporting column, a brake means comprising a brake plate having a foot plate disposed in generally horizontal position across the lower edge of the brake plate and carrying a brake shoe presented for engagement with the ground or flooring, and means for removably securing the brake plate to said column, said brake plate having a cross aperture and the brake plate securing means comprising a pair of mounting plates disposed one at each side of the brake plate and engaging at opposite sides with the column, and bolt means for securing the mounting plates together and against the opposed faces of the brake plate and the column, the aperture in the brake plate being larger than the cross section of the securing bolt so that adjustment of the height of the brake shoe above the ground or floor and the angularity thereof with relation to said ground or floor can be varied.

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4. In combination with a roller skate including the usual frame structure, rear axle and rollers thereon, axle supporting box and box supporting column, a brake means comprising a brake plate having a foot plate disposed in generally horizontal position across the lower edge of the brake plate and carrying a brake shoe presented for engagement with the ground or flooring, and means for removably securing the brake plate to said column, said brake plate having a cross aperture and the brake plate securing means comprising a pair of mounting plates disposed one at each side of the brake plate and engaging at opposite sides with the column, and bolt means for securing the mounting plates together and against the opposed faces of the brake plate and the column, each said mounting plate being shaped to partially embrace the column and including an edge recess for partially embracing the axle.

5. In combination with a roller skate including the usual frame structure, rear axle and rollers thereon, axle supporting box and box supporting column, a brake means comprising a brake plate having a foot plate disposed in generally horizontal position across the lower edge of the brake plate and carrying a brake shoe presented for engagement with the ground or flooring, and means for removably securing the brake plate to said column, said brake plate having a cross aperture and the brake plate securing means comprising a pair of mounting plates disposed one at each side of the brake plate and engaging at opposite sides with the column, and bolt means for securing the mounting plates together and against the opposed faces of the brake plate and the column, each said mounting plate being shaped to partially embrace the column and including an edge recess for partially embracing the axle, each said mounting plate having a hardened grip section secured thereon in position for engaging in secure gripping contact with the opposing face of the brake plate, and the aperture in the brake plate being larger than the cross section of the securing bolt so that adjustment of the height of the brake shoe above the ground or floor and the angularity thereof with relation to said ground or floor can be varied.

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