June 16, 1931. W. V. VAN ETTEN 1,810,380

ROLLER SKATE

Filed May 20, 1930 2 Sheets-Sheet 1

Fig. 1

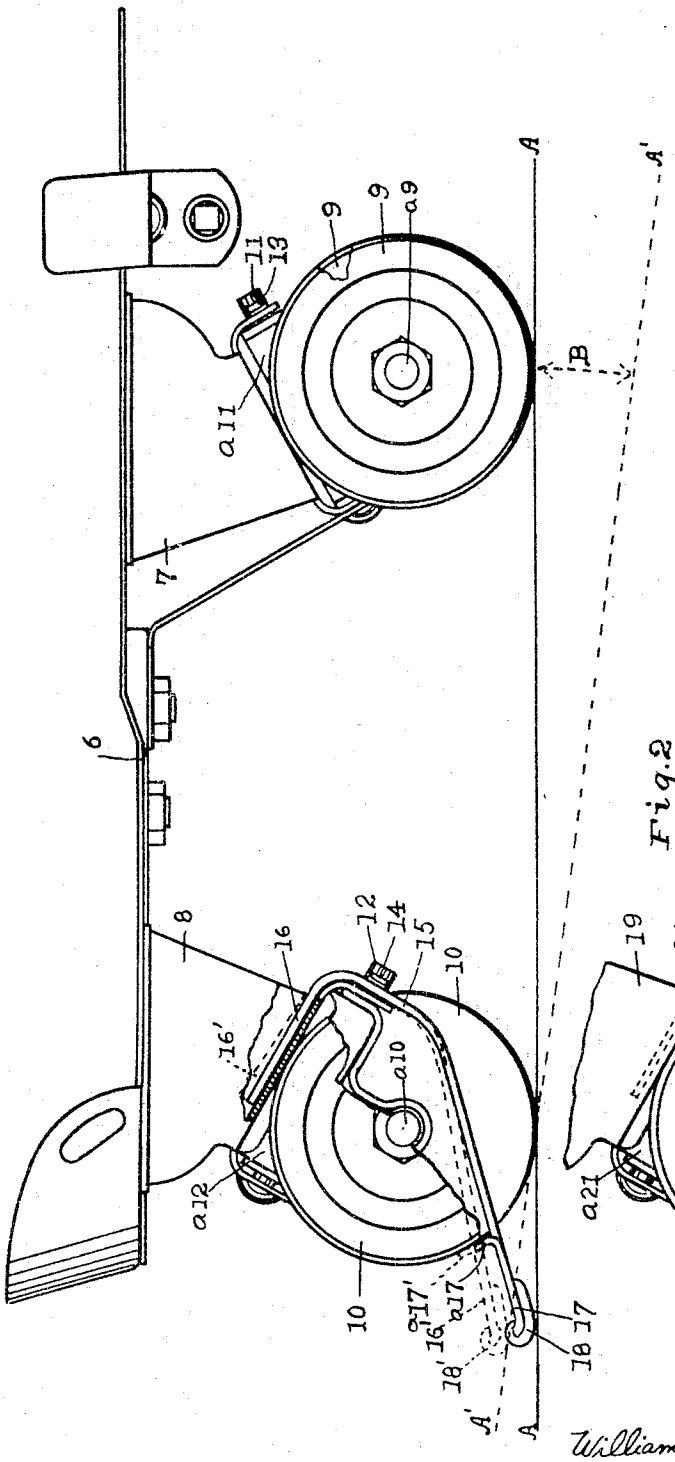
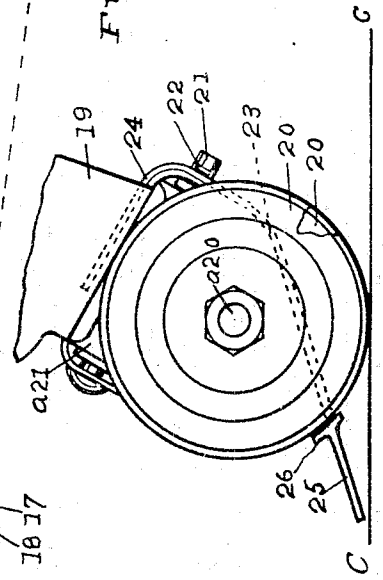


Fig. 2



INVENTOR,
William Valentine Van Etten.
BY
David E. Lain,
ATTORNEY.

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Fig. 3

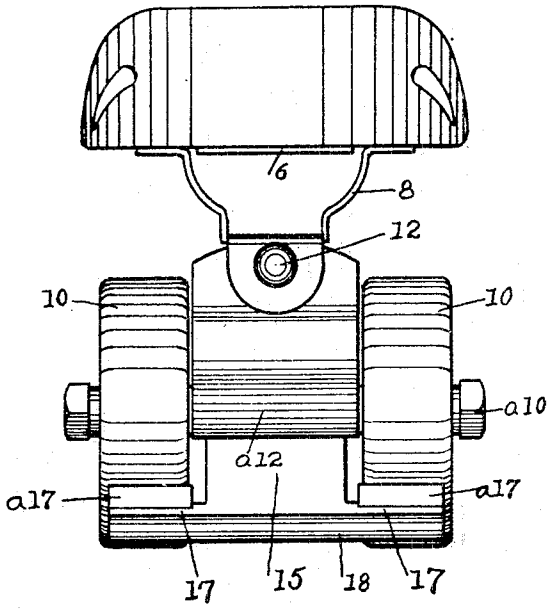


Fig. 4

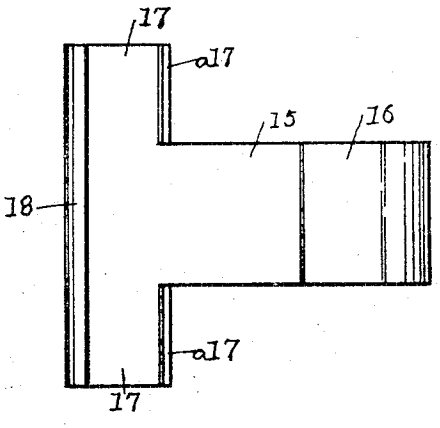
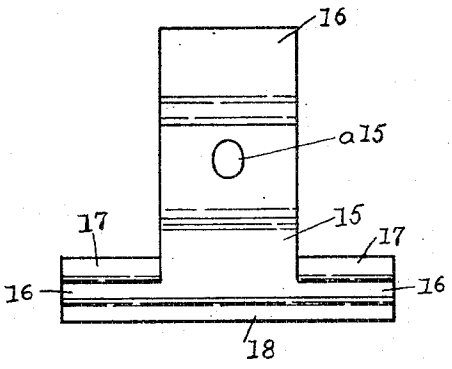


Fig. 5



INVENTOR,
William Valentine Van Etten.
BY
David E. Lain,
ATTORNEY.

Patented June 16, 1931 1,810,380

UNITED STATES PATENT OFFICE

WILLIAM V. VAN ETTEN, OF BELLINGHAM, WASHINGTON

ROLLER SKATE

Application filed May 20, 1930. Serial No. 454,070.

My invention relates to improvements in roller skates and has for an object to provide a brake for the rear wheels of the skates which is automatically applied when the front skate wheels are a particular distance above the floor and the rear skate wheels remain thereon.

Another object of my improvement is to provide a brake for roller skates which is simultaneously applied to the floor and the rear skate wheels when the front skate wheels are a particular distance above the floor and the rear wheels are bearing thereon.

Another object of my improvement is to provide a back stop and brake for roller skates which operates to simultaneously retard farther forward movement of the skates and farther upward movement of the front wheels thereof when they have reached a particular position in elevation while the rear skate wheels bear on the floor.

Another object of my improvement is to provide a back stop and brake for roller skates adapted for application thereto as an added piece of simple construction and small cost.

Other objects of my improvement will appear as the description proceeds.

I attain these and other objects of my improvement with the mechanism illustrated in the accompanying two sheets of drawings, forming a part of this specification, in which Figure 1 is a side elevation of a roller skate to which my back stop and brake device is attached in operative position, Fig. 2 is a side elevation of the rear wheels and a portion of the rear bolster of a roller skate with a modified form of my device in operative position thereon the remainder of the skate being broken away, Fig. 3 is a rear end elevation of Fig 1, Fig. 4 is a rear end elevation of the back stop and brake device shown alone by itself, and Fig. 5 is a plan view of Fig. 4.

Similar characters refer to similar parts in the several views. Certain parts are broken away to show other parts hidden thereby.

With more particular reference to the designated parts: The foot plate 6 of a roller skate of well-known make has front bolster 7 fastened forward to the bottom surface thereof and rear bolster 8 fastened rearward to the bottom thereof. Front skate wheels 9, 9 are mounted on front axle $a9$ for revolution and rear wheels 10, 10 are mounted on rear axle $a10$ for revolution. Front axle bearing block $a11$ is pivotally connected with front bolster 7 by pin 11 retained in place by cotter pin 13. Rear axle bearing block $a12$ is pivotally connected with rear bolster 8 by pin 12 retained in place by cotter pin 14.

Brake attachment 15 has its upper end 16 bent rearward to bear on the upper surface of the bottom wall of hollow rear bolster 8 and in the forward part of the attachment is opening $a15$ through which pin 12 is extended and retained therein by cotter pin 14. The brake attachment passes diagonally downward and rearward between rear wheels 10, 10 and has T head 17, 17 on the lower end thereof. The front edges of the T head are bent over at $a17$, $a17$ to conform in shape with the peripheries of wheels 10, 10 and are disposed close thereto while in nonoperative position. Preferably the bottom edge of the T head is covered with a pad of rubber, as at 18, which is close to but not in contact with floor A when in nonoperative position.

Now assume the skate shown in Fig. 1 to be on a skater's foot who tilts the front end of the skate upward till the floor line A—A is positioned relatively to the skate wheels at A′—A′, the front wheels 9, 9 having passed upward a distance B in Fig. 1. Then upper end 16 of the brake attachment will have moved to 16′ and the lower end thereof will have moved to 18′ bearing on floor A′—A′ while edges $a17$ will be at $a17'$ bearing on the rear wheels 10.

The contact of the rear end of the braking device with the floor will cause frictional resistance to the forward movement of the skate and the contact of edges $a17$ with rear wheels 10 will also cause frictional resistance and retard the revolution of the wheels thus

acting to retard the forward skate movement. Thus the device serves as a brake whenever the front wheels are moved a distance equal to B above the floor and the rear wheels remain on the floor.

Furthermore since the rear end pad 18 is to the rear of the rear wheels its bearing on the floor will serve as a stop against which the skater may, to a degree, lean and catch himself if he be falling over backward. Thus, both the retardation of the forward movement of the skates when the brake is applied and the back stop provided by the rear end of the same will cooperate to aid the backwardly-falling skater in recovering balance.

The pad of rubber, or the like, shown as applied to the bottom surface of the brake at 18 in Fig. 1 serves to prevent injury to a rink floor by the brake end when forcibly bearing thereon as it passes thereover.

The optional construction illustrated in Fig. 2 is similar to that shown in Fig. 1 except the pad is not fastened to the brake end. Here rear bolster 19 is connected with axle block *a*21 by pin 21 retained in place by cotter pin 22. Rear wheels 20, 20 are mounted for revolution on rear axle *a*20. Braking device 23 is engaged with the front end of pin 21 and its upper end 24 is bent rearward to bear on the bottom wall of the hollow bolster. Below the pin the braking device is extended rearward between wheels 20 and its rear end 25 is disposed adjacent floor C—C while the front edges 26 thereof are adjacent the wheels 20.

Thus the uncovered end 25 bears directly on the floor or pavement C—C when it operates as a brake and back stop.

It is not desired to be understood that a properly shaped brake end will do any serious damage to a floor, the pad 18 is shown in order that no damage whatever may be possible to a floor by the use of my improved roller skate.

For use on pavement the unprotected end 25 is preferable and has in practice been found satisfactory and effective in aiding to prevent backward falling by the skater.

The upper end of the braking device shown at 16 and at 24 bears on the bottom wall of the hollow bolster and serves to retain the lower end of the brake out of contact with the floor when the skate is in normal use running on both front and rear wheels. This construction is a part of the extreme simplicity of shape and design of my braking device as particularly shown in Figs. 4 and 5.

The kind of roller skate used for an illustration is well suited for my braking device. However, with slight changes within the purview of my invention it can readily be changed in shape and way of attachment to suit any of the most used roller skates.

Having thus disclosed my invention, what I claim as new therein and desire to secure by Letters Patent is,—

1. A roller skate including a foot plate, front wheels attached to and mounted beneath the front end of the foot plate for revolution, a bolster fastened beneath the rear end of the foot plate, a rear axle connected to the bolster, rear wheels mounted on the rear axle for revolution, a brake device attached to the front side of the bolster extended rearward between the rear wheels, and a T head on the rear end of the brake device disposed adjacent the rear wheels and adjacent the floor on which the skate may run to bear on the rear wheels and on the floor when the front wheels are above the floor.

2. A roller skate including a foot plate, front wheels attached to and mounted beneath the front end of the foot plate for revolution, a bolster fastened beneath the rear end of the foot plate, a rear axle attached to the bolster, rear wheels mounted on the rear axle for revolution, a brake device connected with the front side of the bolster extended rearward between the rear wheels, a T head on the rear end of the brake device adjacent the rear wheels, and a pad fastened on the T head adjacent the floor on which the skate may run to bear on the floor when the front wheels are above the floor and cause the T head to bear on the rear wheels.

3. A roller skate including a foot plate, front wheels connected with and mounted beneath the front end of the foot plate for revolution, a hollow bolster fastened beneath the rear end of the foot plate, a pivot pin extended through openings in the bottom of the bolster, an axle block mounted on the pivot pin for limited oscillation, a rear axle fastened in the axle block, rear wheels mounted on the rear axle for revolution, a braking device engaged with the front end of the pivot pin having its upper end extended through the hollow rear bolster to bear on the bottom wall thereof and its lower end extended rearward between the rear wheels, and a T head on the rear end of the braking device adjacent the rear of the rear wheels and adjacent the floor on which the skate may run to bear on the floor and on the rear wheels when the front wheels are above the floor.

WILLIAM V. VAN ETTEN.