May 28, 1968 A. O. WADDELL 3,385,608

SKATEBOARD BRAKE

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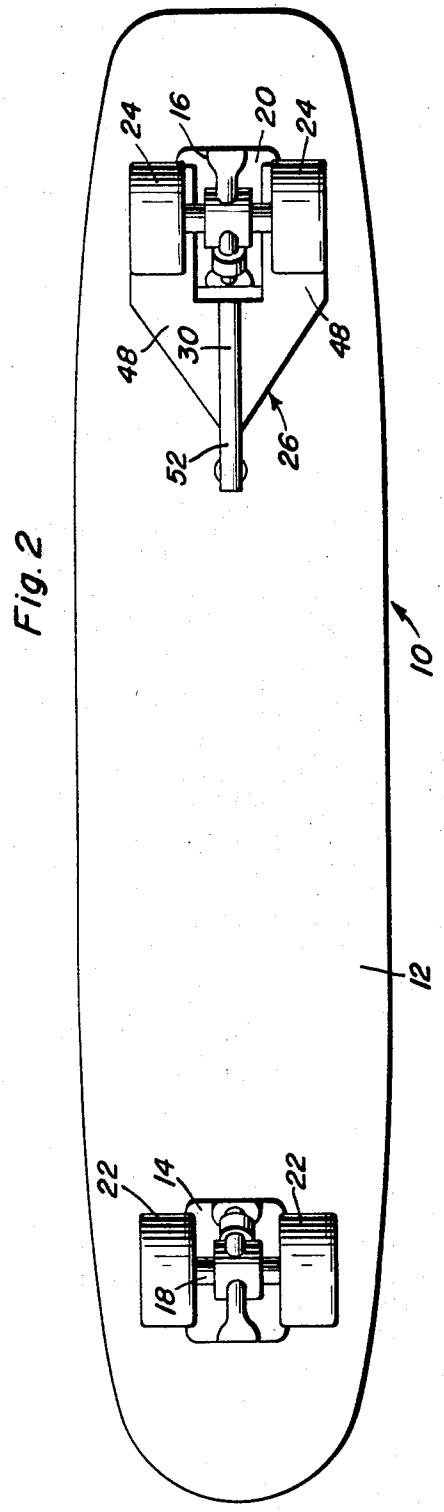


Fig. 2

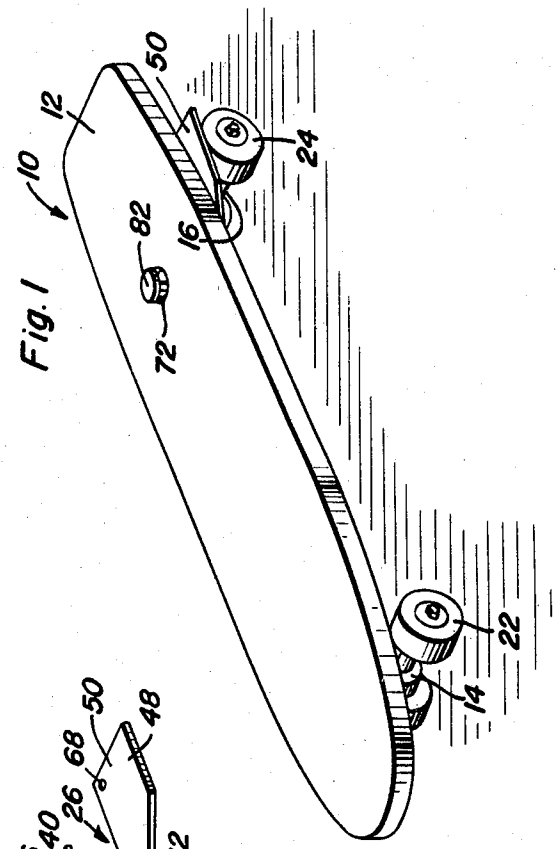


Fig. 1

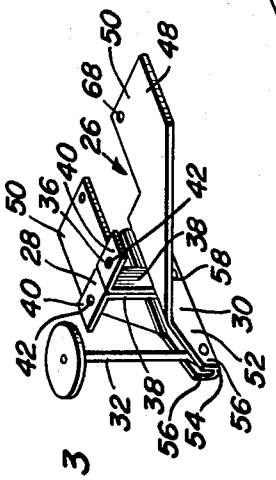


Fig. 3

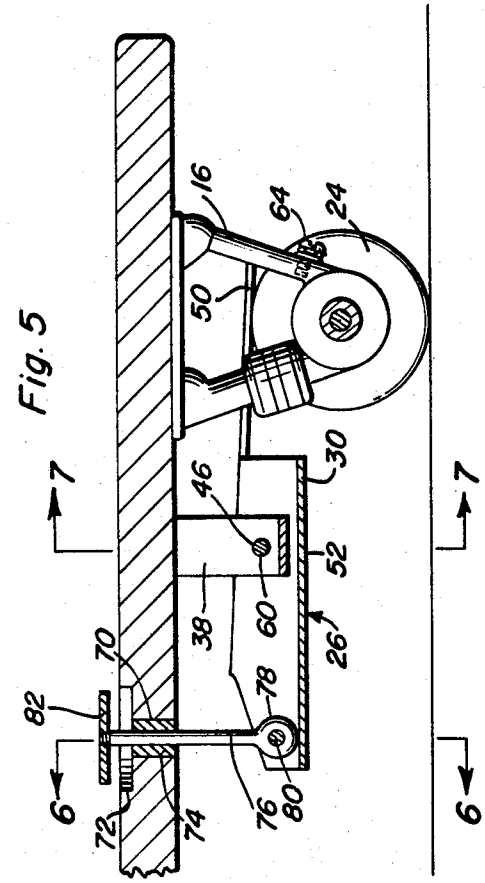
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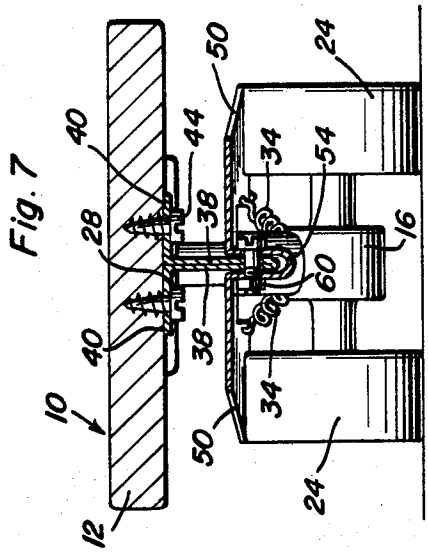
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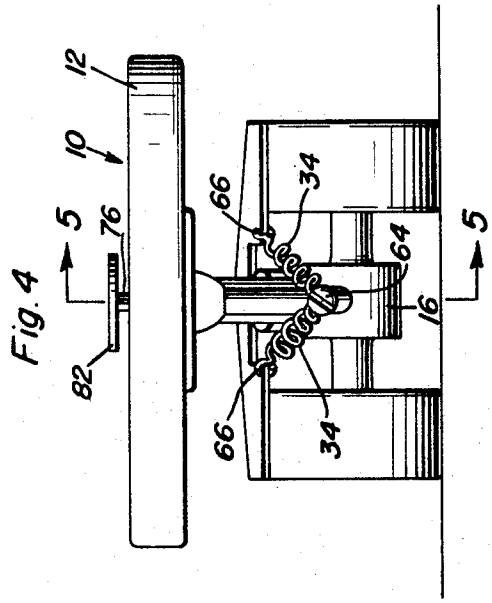
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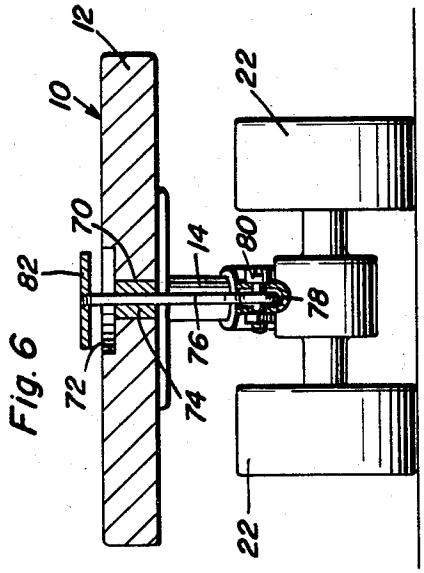
SKATEBOARD BRAKE

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SKATEBOARD BRAKE

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ABSTRACT OF THE DISCLOSURE

A skateboard including brake means operative to automatically brake at least some of the wheels of the skateboard in response to the rider of the skateboard dismounting or falling off the skateboard, the skateboard including an upwardly facing load supporting surface and the brake means including an actuator having a portion movable between a position elevated above the load supporting surface when the brake means is actuated and lowered to a position at least substantially flush with the load supporting surface when the brake means is released together with means yieldingly urging the brake actuator toward an elevated position so as to apply the brake means when a load is not disposed on the load supporting surface.

This invention relates to a novel and useful skateboard brake and more specifically to a brake assembly to be mounted on a skateboard and operative to brake certain wheels of the skateboard should the user of the skateboard jump or fall off the skateboard.

Skateboarding has become a popular sport with teenagers, sub-teenagers and also some of the more sports-minded adults. In learning how to ride a skateboard, and even after a person becomes proficient in the use of a skateboard, it often becomes necessary to jump off of a skateboard and to avoid impending danger. In addition, the rider of a skateboard may unintentionally fall from the skateboard. In either of these instances, assuming the skateboard remains on an incline, the skateboard is free to coast down to the bottom of the incline and beyond thus requiring the user of the skateboard to sometimes walk considerable distances in order to retrieve the skateboard. Accordingly, it is the main object of this invention to provide a skateboard, or any other similar vehicle, with means operative to automatically brake the vehicle in the event the rider of the vehicle dismounts or is accidentally dismounted therefrom.

Another object of this invention is to provide a skateboard brake with actuating mechanism normally biased to the applied position and operatively associated with the passenger supporting portion of the skateboard in a manner such that the brake actuating mechanism may be readily maintained in the brake releasing position thereof at any time a person is disposed on the skateboard.

A further object of this invention is to provide a skateboard brake in accordance with the preceding objects, and which includes structural features adapting it to be readily mounted upon existing skateboards.

A final object of this invention to be specifically enumerated herein is to provide a skateboard brake which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long lasting and relatively trouble free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of a skateboard having the skateboard brake of the instant invention operatively associated therewith;

FIGURE 2 is an enlarged bottom plan view of the skateboard illustrated in FIGURE 1;

FIGURE 3 is a perspective view of the skateboard brake;

FIGURE 4 is an enlarged rear elevational view of the skateboard illustrated in FIGURES 1 and 2;

FIGURE 5 is a fragmentary longitudinal vertical sectional view taken substantially upon the plane indicated by the section line 5—5 of FIGURE 4; and

FIGURES 6 and 7 are transverse sectional views taken substantially upon the plane indicated by the section lines 6—6, 7—7, respectively, of FIGURE 5.

Referring now more specifically to the drawings, the numeral 10 generally designates a conventional form of skateboard including an elongated panel-like body 12 and front and rear depending wheel trucks 14 and 16. The front and rear trucks 14 and 16 include the usual pivotally supported axle assemblies 18 and 20, respectively, having dual wheels 22 and 24, respectively, journaled therefrom.

The brake assembly of the instant invention may be seen to best advantage in FIGURE 3 of the drawings and is generally designated by the reference numeral 26. The brake assembly 26 includes a generally T-shaped mounting base 28, a braking lever 30, and a brake releasing plunger 32 in addition to a pair of brake applying tension spring 34.

The mounting plate 28 comprises an elongated strap 36 of suitable rigid material such as metal which is bent back upon itself at its mid-portion to form a pair of parallel juxtaposed legs 38. The free ends of the legs 38 terminate in laterally and oppositely outwardly directed flange portions 40 suitably apertured as at 42 and each of the flange portions 40 is secured to the undersurface of the body 12 forward of the rear truck 16 by means of a suitable fastener 44 passed through the corresponding aperture 42 and embedded in the body 12.

The legs 38 depend downwardly from the body 12 and are provided with registered apertures 46 adjacent their lower ends.

The brake lever 30 is constructed from a sheet 48 of stiff material such as metal and is initially generally Y or V-shaped in plan including a pair of arm portions 50 joined by a bight or leg portion 52. The arm portions 50 generally parallel each other and the bight or leg portion 52 has a series of reversing bends formed therein so as to define a depending, upwardly opening and generally U-shaped channel portion 54 including upstanding opposite sides 56 which generally parallel the arm portions 50.

The sides 56 are provided with registered apertures 58 intermediate their opposite ends and the lower ends of the legs 38 are receivable between the sides 56 with the apertures 46 registered with the apertures 58. A pivot fastener 60 is secured through the registered apertures 46 and 58 and thereby pivotally supports the brake lever 30 from the lower end of the mounting plate or portion 28 defined by the lower extremities of the legs 38. From FIGURES 5 and 7 of the drawings, it may be seen that the free ends of the arm portions 50 overlie the peripheral portions of the wheels 24 journaled from the rear trunk 16. In addition, a suitable anchor 64 is threadedly engaged with a lower portion of the truck 16 and has one pair of corresponding ends of the expansion springs 34 anchored thereto. The other pair of corresponding ends of the expansion springs 34 are hooked as at 66 and removably engaged with the free ends of the arm portions 50 by means of the hooked portions 66 being passed through apertures 68 provided therefor in the arm por-

tions 50. Accordingly, it may be seen that the springs 34 normally bias the braking lever 52 to the applied position with the undersurfaces of the arm portions 50 frictionally engaged with the upper peripheral portions of the wheels 24.

The skateboard body 12 has a bore 70 formed therethrough forward of the rear truck 16 including a counterbore 72 at its upper end. A sleeve bearing 74 is secured in the bore 70 and slidably receives therethrough a brake actuating rod portion 76 of the plunger 32. The lower end of the rod 76 includes an eye 78 through which a pivot fastener 80 is received, the pivot fastener 80 being secured through the forward ends of the sides 56 of the brake lever 30. The upper end of the rod 76 has a pressure disk 82 threadedly engaged therewith and the pressure disk 82 is completely seatingly receivable within the counterbore 72.

In operation, the springs 34 normally urge the rear end portion of the brake lever 30 downwardly so as to engage the undersurface portions of the arm portion 50 with the upper peripheral portions of the wheels 24. Thus, the forward end of the brake lever 30 is normally displaced upwardly in the position illustrated in FIGURE 5 of the drawings with the pressure disk 82 displaced upwardly and out of the counterbore 72. However, when a person is riding the skateboard 10, his feet or shoes overlie the pressure disc 82 and urge the latter downwardly into its seated position within the counterbore 72 and thereby slightly oscillate the brake lever 30 in a counterclockwise direction as viewed in FIGURE 5 of the drawings so as to lift the undersurface portions of the arm portions 50 out of engagement with the wheels 24. Thus, a person riding the skateboard 10 with his feet disposed in the normal position thereon automatically depresses the pressure disc 82 and retains the brake inoperative. However, should the rider of the skateboard intentionally dismount or unintentionally fall from the skateboard 10, the springs 34 will automatically apply the brake so as to prevent the skateboard from continuing on down the associated incline upon which it is being used.

The foregoing is considered as illustraive only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled is the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In combination, a skateboard including a low elongated body defining front and rear ends, front and rear ground engaging support wheel means carried by corresponding end portions of said body, the latter being adapted to support a load thereon, said vehicle including brake means operatively associated with said wheel means in a manner to normally brake the wheel means at one end portion of said body, said brake means and said body including coacting means operative to release said brake means in response to the placement of a load on said body and to reactivate said brake means in response to said load being removed from supported position on said body, said coacting means including an upwardly facing load supporting surface on said body and a brake actuator for said brake means including a portion movable between a position elevated above said surface when said brake means is actuated and lowered to a position at least substantially flush with said surface when said brake means is released, said portion of said actuator being disposed for engagement by a load placed upon said surface whereby said actuator may be displaced downwardly by said load when resting upon said surface.

2. The combination of claim 1 wherein said body has an opening formed vertically therethrough with its upper end opening upwardly through said surface, said portion of said brake actuator normally projecting upwardly through said opening.

3. The combination of claim 1 wherein said wheel means includes front and rear wheeled trucks dependingly supported from said body.

4. The combination of claim 2 wherein said brake means is operatively associated with the wheel means at the rear of said body.

5. The combination of claim 1 wherein wheel means includes front and rear wheeled trucks dependingly supported from said body, said brake means including a brake lever pivotally supported beneath said body intermediate its opposite ends, for rotation about an axis extending transversely of said lever and said body, one end portion of said lever including a brake portion disposed radially outwardly of the periphery of at least one wheel of one of said trucks and the other end portion of said lever including actuator means disposed in a first position projecting above said body for engagement by the foot of the operator of said skateboard and movable downwardly to a second position at least substantially flush with said body, said brake portion when said actuator means is in said first position, being disposed in frictional engagement with the corresponding wheel and being spaced radially outwardly of that wheel when said actuator means is in said second position.

6. The combination of claim 5 wherein said one truck includes a pair of opposite side wheels and said lever is generally Y-shaped including a pair of spaced arm portions defining said one end portion thereof, said arm portions each defining portions of said brake portion and engageable with the corresponding wheel.

7. The combination of claim 6 including an upstanding actuator member having its lower end pivotally secured to said other end portion of said lever, said body including means defining an upright guide opening extending therethrough through which said actuator member extends, the upper end of said actuator comprising said actuator means.

8. The combination of claim 7 wherein said brake means is operatively associated with the wheels of said rear truck.

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