Jan. 9, 1968 R. F. CORE 3,362,722

SKATE BOARD OR THE LIKE

Filed Feb. 3, 1966

Fig. 2

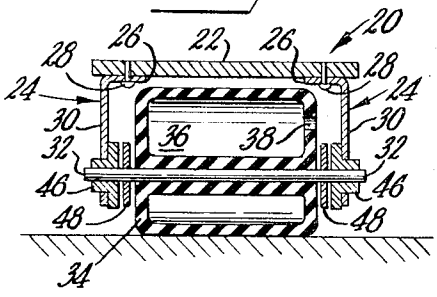


Fig. 1

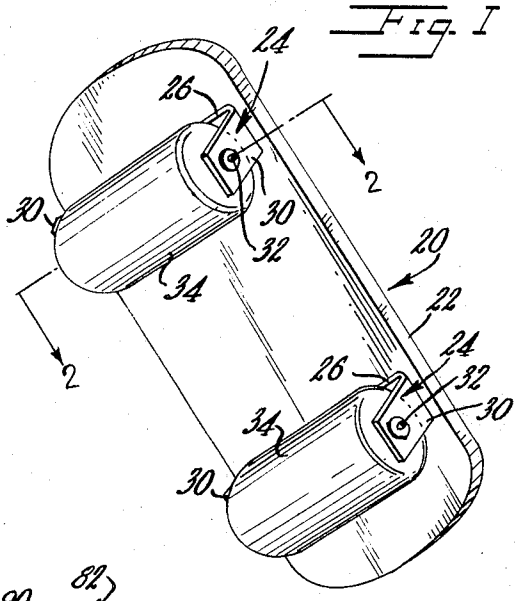
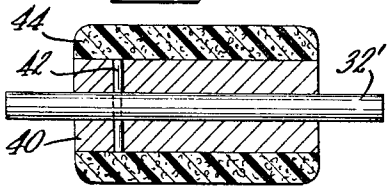


Fig. 3



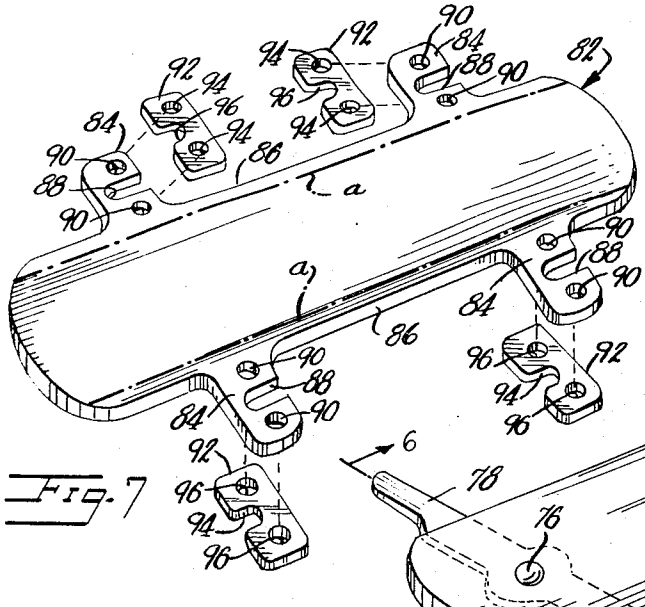


Fig. 4

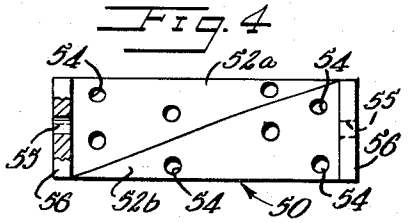


Fig. 7

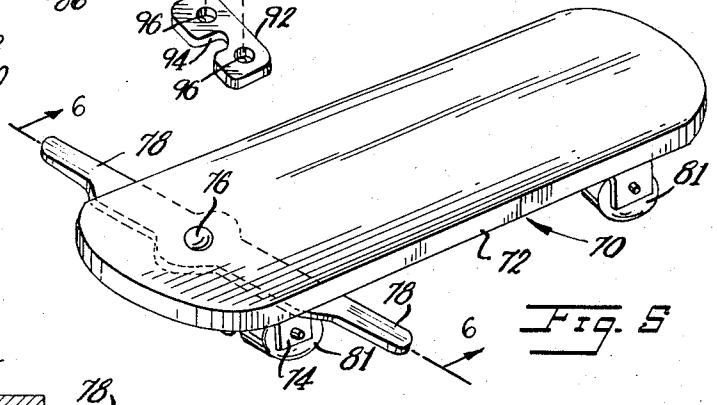
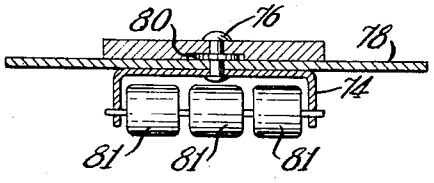


Fig. 5

Fig. 6



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SKATE BOARD OR THE LIKE

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ABSTRACT OF THE DISCLOSURE

A skate board provided with a wide deformable tire.

This invention relates generally to skate boards or the like and more particularly to devices of that nature that are safe as well as usable on surfaces such as grass or packed sand.

Although skate boards are very popular today with young people, they are limited to use in a standing or squatting position. In addition, skate boards have two very important and potentially hazardous drawbacks. First, because the presently available skate boards must be used only on a hard, smooth surface such as a sidewalk, there is the danger that pedestrians may be hit. If the skate board is used on a roadway, there is the danger that the skater may be struck by an automobile. The second major drawback is that skate boards are inherently unstable, particularly at the relatively high speeds at which they are used. Thus the user may seriously injure himself if he falls on the sidewalk.

While skate boards are available in many shapes and sizes, they all have the common feature of a board portion that is flat and made in one piece, usually from a hard wood. Wheels are placed below the board so that when the user is standing on the board he may propel himself along the ground.

The present invention provides novel construction for skate boards or the like and in so doing accomplishes at least several very important results. First, the novel wheel construction makes the skate board inherently stable regardless of the speed with which it is used. Therefore, neither the skater nor the pedestrian is likely to be injured because of lack of board control. Second, the novel wheel construction, which includes very low pressure or otherwise readily deformable tires, permits usage of the board on grassy or packed earth terrains. Thus the board need not be used in heavily trafficked areas. In addition, should the skater fall, the grassy surface is softer than that on which the prior art devices are used, so that the likelihood of injury is substantially diminished. It is an important feature of this invention that the tires used on the skate board of this invention will not damage grass.

Still another embodiment of this invention is an extra wide and extra long skate board that the user may lie on instead of stand upon. This is particularly advantageous when the board is used on sloped grassy surfaces, for example, in a park that has many obstructions such as trees, bushes, etc. Thus the user could ride the board down a grassy hill in much the same manner as a sled is used in the winter time. In this last embodiment, it is contemplated that at least two tires will be provided on each axle. Alternatively, and at some additional fabricating expense, a single extra wide tire could be used on each axle in place of the multiple, side-by-side tires.

Accordingly, it is an object of this invention to provide an inherently safe skate board.

Another object is to provide a skate board that may be used on other than hard and relatively smooth surfaces.

An additional object is to provide a steerable roller supported sled.

A further object is to provide a skate board having

readily deformable tires in place of the conventional wheels.

Still another object is to provide an extra wide and extra long board upon which the user may recline instead of stand, the board being provided with readily deformable tires.

These and other objects, features and advantages of the invention will, in part, be pointed out with particularity and will, in part, become obvious from the following more detailed description of the invention, taken in conjunction with the accompanying drawing which forms an integral part thereof.

In the various figures of the drawing like reference characters designate like parts.

In the drawing:

FIG. 1 is a perspective view of one embodiment of my new skate board;

FIG. 2 is a transverse sectional view taken along line 2—2 of FIG. 1 illustrating one form of tire and mounting bracket therefor;

FIG. 3 is a transverse sectional view of an alternative form of tire;

FIG. 4 is a bottom plan view of an alternative mounting bracket;

FIG. 5 is a perspective view of a steerable embodiment of the present invention;

FIG. 6 is a transverse sectional view taken along line 6—6 of FIG. 5; and

FIG. 7 is an exploded pictorial view illustrating another form of construction of this invention.

Referring now to the drawing, the improved skate board **20**, shown in its most basic form in FIG. 1 and FIG. 2, is comprised of a platform **22** that is flat and is usually made of wood. However, in some instances it may be advantageous to cast or otherwise form the platform in a lightweight but rigid synthetic resin material. Front and rear mounting means **24** each have transverse sections **26** secured to the underside of the platform by conventional fasteners **28** such as screws, rivets, etc. Further, each of the mounting means includes a downwardly depending extension **30**. Front and rear axles **32** are rotatably journaled at the ends thereof in extensions **30** and support tires **34**.

The characteristics of the tires mentioned above are of particular importance. The skate board will operate properly when (a) the tires have a width dimension transverse the longitudinal axis of the board that is approximately 2–3 times greater than the radius of the tire and (b) the tires are readily deformable and present a relatively large, flattened area to the ground when a weight is applied. These basic requirements are met by the tire illustrated in FIG. 2. The tire, which may be a suitable rubber or synthetic resin compound, is formed integrally on the axle and is provided with an annular chamber **36**. Air valve **38** permits inflation to a very low pressure or, alternatively, the chamber may be partially liquid-filled.

An alternative tire construction, meeting the requirements noted above, is shown in FIG. 3. An elongated cylindrical support member **40** is secured to the axle **32'** by means of a pin **42** and a deformable tire **44** is integrally formed on the support member. In either of the tire embodiments the transverse width dimension is approximately 6 inches and the tire radius is approximately 1¾ to 2 inches. The axle diameter is in the order of ⅜ inch to ⅝ inch.

Referring again to the mounting means, it will be seen that the downwardly depending extensions each contain a bearing member **46** that permits easy rotation of the axle. In addition, a thrust washer **48** is placed on the axle intermediate each bearing and end face of the tire. The mounting means described is simple yet effective and does not require extensive machining of the axle.

FIG. 4 illustrates an alternative mounting bracket **50** that may be used with the type of tire that is integral with the axle. The bracket is formed of two identical halves **52***a* and **52***b* each of which is provided with mounting holes **54** that permit the bracket to be secured to the skate board by conventional fasteners. With suitable bearings and washers as described above, the brackets **50** may be slid onto the axle which is then journaled in holes **55** of downwardly extending bracket portions **56**. Because the two halves of each bracket are identical, the cost of the bracket is reduced and yet a simple assembly technique is provided.

FIGS. 5 and 6 are relied on to illustrate two additional features of this invention. At this time it should be pointed out that, as used herein, the term "skate board" includes a device that the user can stand on by placing two feet flatly on the upper surface or he can lie on by extending his body flatly on the upper surface. This embodiment utilizes the term "sled" to more accurately define the device. In the latter context, as typified by FIG. 5, the board **70** is much larger than that shown in FIG. 1. For example, in the FIG. 5 embodiment, the board portion **72** is approximately 4 feet long and approximately 1½ feet wide.

The tire requirements are the same as heretofore established but the front tire assembly is mounted in a yoke **74** that is pivotally mounted at the forward end of the board on pin **76**. The yoke is secured to and made steerable by means of laterally extending handle member **78**. Advantageously a thrust bearing **80** is used between the handle and the board. Thus this embodiment of the skate board is large enough to recline on and manually steer down a hill.

The second feature of this embodiment is best illustrated in FIG. 6. A plurality of tires **81**, each having the structural characteristics earlier specified, are mounted side-by-side on each axle. It is presently contemplated that 3 or 4 tires on each axle will be sufficient. While this arrangement permits the use of the same size tires as the previous embodiments and therefore obviates the need for additional mold costs, it is within the scope of this invention to provide only a single elongated tire on each axle.

FIG. 7 illustrates another form of construction for the elongated board member which in this embodiment is a one-piece element **82** including four tabs **84** integral therewith. The tabs are bent downwardly, preferably along lines *a* so that in addition to mounting means for the tires, there is also provided a rigidizing edge **86** on each side of the board. In this connection it should be pointed out that the term "board" includes not only wood but, as in this embodiment, a metal member, It is also contemplated that a suitable synthetic resin may also be employed in this embodiment.

Each tab includes a notch **88** and a pair of apertures **90**. Clip members **92** have an oppositely facing notch **94** and a pair of apertures **96**. Suitable fasteners, not shown, secure the clip members to the tabs by using the apertures. The combined notches of the tabs and clip members provide journaling means for the tires' axles.

The embodiments of the improved skate board hereinbefore described all are inherently stable because of the tire construction employed. Further, the skate boards can now be used on terrain such as grass as opposed to the hard, smooth surface required by the prior art devices. This not only takes the skate board away from heavily trafficked areas, but provides less chance for injury to himself and others, should the user fall off. As an added feature, means are provided for steering a large roller-supported sled that is primarily used in a prone position.

Having thus disclosed the best embodiment of the invention presently contemplated, it is to be understood that various changes and modifications may be made by those skilled in the art without departing from the spirit of the invention.

What is claimed is:

1. An improved skate board comprising:

(a) an elongated member having forward and rearward ends;

(b) mounting means depending downwardly from the underside of said board in the assembled condition, said mounting means being positioned proximate the forward and rearward ends of said elongated members, wherein said mounting means includes a plurality of tabs formed integrally with said elongated member and depending downwardly therefrom, two of said tabs being disposed on either side of the forward end and two of said tabs being disposed on either side of the rearward end; and

(c) at least one deformable tire rotatably journaled in each of said mounting means, said tire having a chordal length defining a relatively large ground contact area when a weight is applied to the top surface of said board and a plurality of clip members arranged to retain said tire.

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