Sept. 3, 1968 J. W. SCHINKE 3,399,904

SKATE BOARD STRUCTURE

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FIG. 1

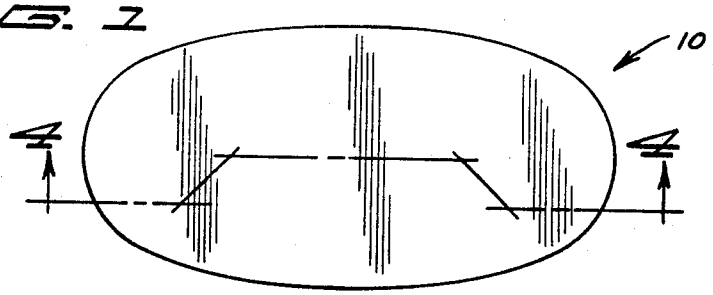
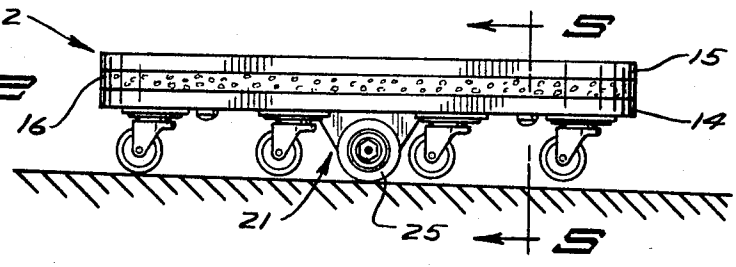


FIG. 2



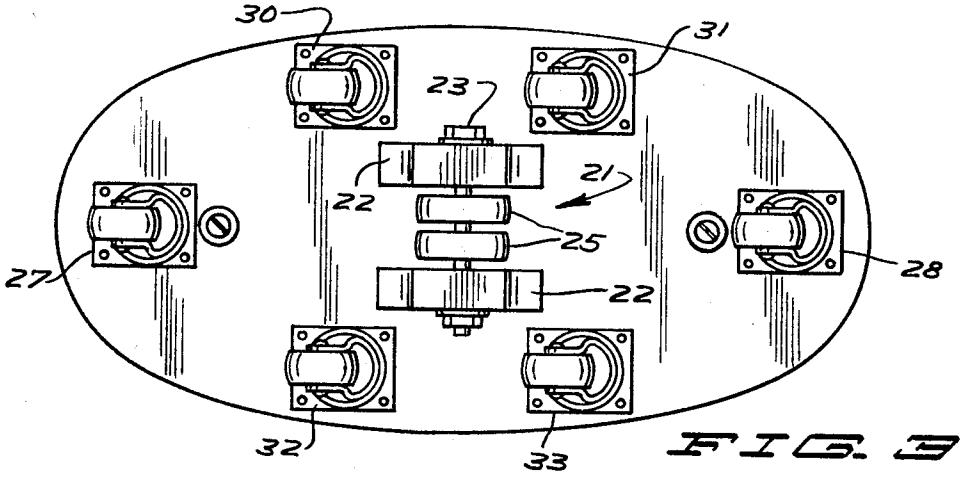


FIG. 3

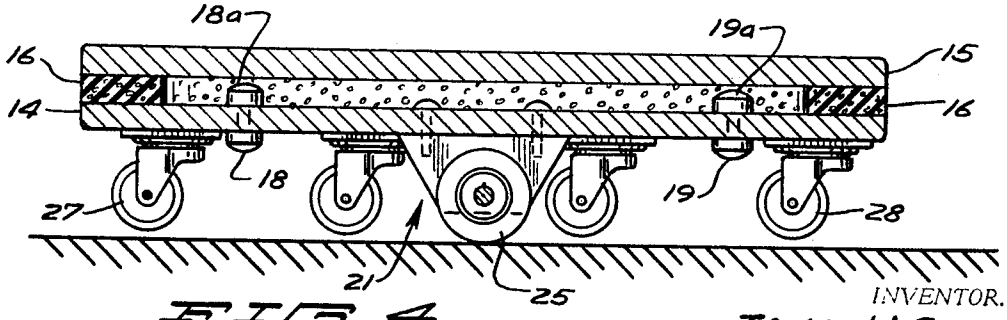


FIG. 4

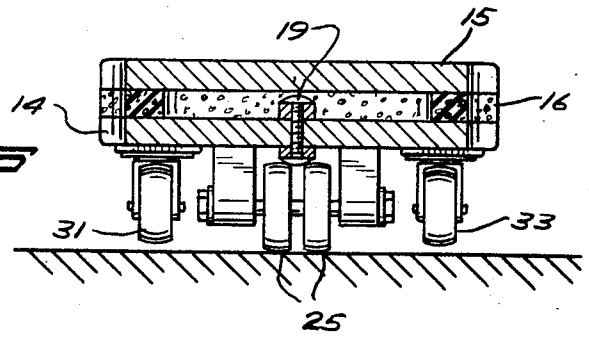
INVENTOR.
JAMES W. SCHINKE
BY
Rifkind Gregory
ATTORNEYS

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FIG. 5



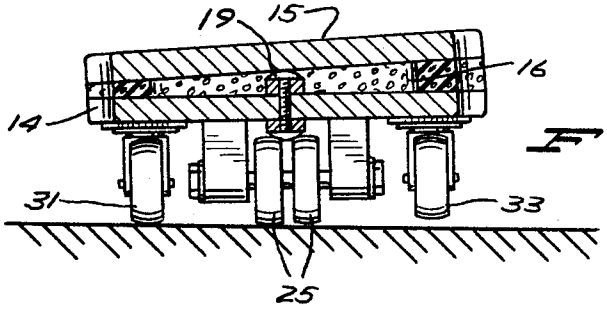


FIG. 6

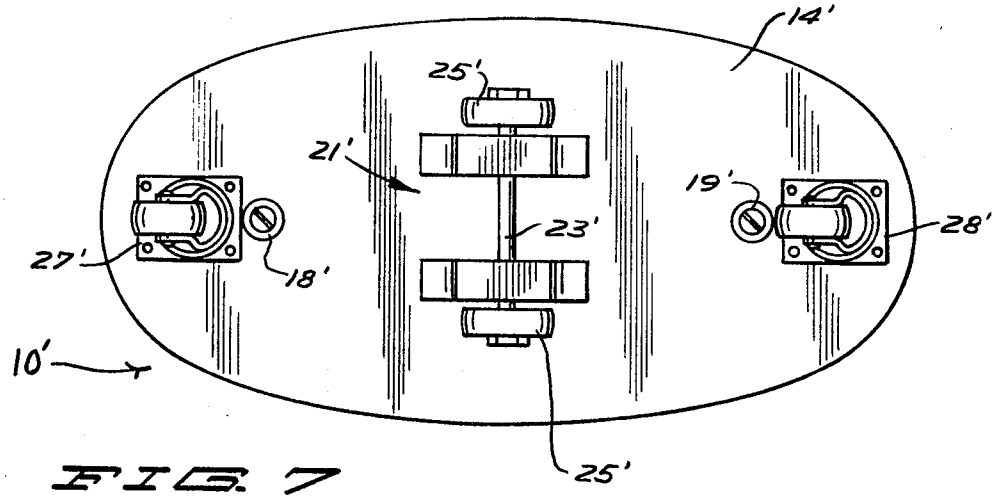


FIG. 7

INVENTOR.
JAMES W. SCHINKE
BY
Rufus Gregory
ATTORNEYS

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SKATE BOARD STRUCTURE

James W. Schinke, R.R. 3, Rochester, Minn. 55901

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5 Claims. (Cl. 280—87.04)

ABSTRACT OF THE DISCLOSURE

A skate board having a support member having spaced underlying casters, with the central of said casters providing a rocking movement, said support member consisting of a pair of superposed plate members having a resilient spacing member therebetween, and means disposed therebetween for the tiltable support of the upper of said plate members with respect to the lower one thereof.

The invention herein relates to improvement in a skate board. A skate board is a board mounted on small wheels or swivel wheels such as casters with the board being of a size to accommodate either one foot or both feet of an operator and which can be manipulated for movement by the use of the feet, legs and body of the operator. More specifically the invention herein relates to a skate board particularly arranged and constructed for turning and spinning on a very small radius.

It is an object of this invetnion to provide a skate board having swivel type of wheels such as casters for general operation, and one or more centrally located non-swivel wheels upon which said skate board may be balanced for turning or spinning.

It is another object of this invention to provide a skate board having an arrangement of underlying casters and wheels such as to permit sharp turns and spinning and having a top supporting member comprising spaced portions having a tiltable relation with respect to one another to facilitate turning, spinning and maneuvering.

These and other objects and advantages of the invention will be set forth in the following description made in connection with the accompanying drawings in which like reference characters refer to similar parts throughout the several views and in which:

FIGS. 1, 2 and 3 are respectively views in top plan, side elevation and a bottom plan view on an enlarged scale;

FIG. 4 is a view in vertical section on an enlarged scale taken on line 4—4 of FIG. 1 as indicated;

FIG. 5 is a view in vertical section taken on line 5—5 of FIG. 2 as indicated;

FIG. 6 is a view similar to that of FIG. 5 showing a tiltable relation between portions thereof; and

FIG. 7 is a bottom plan view showing a modification.

With reference to the drawings, the device comprising the subject matter of the invention herein and referred to as a skate board, is indicated by the character **10**. Said skate board is here shown being generally an elongated oval in form. Said skate board comprises a platform or support member **12** which may take various specific forms and which may vary as to specific construction all within the scope of the invention as disclosed therein.

In the instant embodiment of the invention, said platform **12** comprises a pair of vertically spaced plate members **14** and **15** in superposed relation, with plate member **14** being indicated as the lower plate. Said plate members may be formed of any suitable rigid material such as of wood.

Disposed between said plate members is a resilient cushion **16** which has been found to be very suitably made of a foam rubber sheet material which will be secured to the facing sides of said plate members **14** and **15** by the use of a suitable adhesive.

Disposed through the plate member **14** and spaced along the longitudinal axis thereof are pivot members **18** and **19** in the form of nutted bolts having enlarged upwardly extending head portions **18***a* and **19***a* projecting above the upper surface of said plate member **14**. Said head portions spaced apart and spaced along said longitudinal axis of said plate member **14** provide pivot points upon which the upper plate member **15** may be tilted with respect to said lower plate member **14**. Said pivot members are spaced to provide tilting along the longitudinal axis of said plate member **14** to one side or the other thereof by depressing said upper plate member **15** accordingly with a shifting of the weight of the operator. Said plate member **15** may also be tilted on a transverse axis running through the pivot members by depressing one end portion or the other of said plate member **15**. A tilting action along the longitudinal axis of plate member **14** is indicated in FIG. 6.

Depending from said lower plate member **14** centrally thereof is a wheel supporting bracket **21** comprising spaced depending side members **22** having an axle **23** disposed therethrough transversely of said plate member. Said axle is here shown very simply in the form of a nutted bolt.

Secured to the underside of said plate member **14** adjacent either end thereof are casters **27** and **28** here shown to be of conventional design.

Spaced apart at either side of said bracket **21** are pairs of casters **30–31** and **32–33** identical to said casters **27** and **28**. Said casters are all shown to be of uniform size.

Said wheels **25** have a somewhat larger radius than the wheels of said casters and are so disposed that when said support member **12** is balanced on said wheels, said casters will be free of ground engagement, as shown in FIG. 4. Thus a rocking effect is achieved by means of said wheels.

Operation

The skate board above described may be used for operation by one foot or by both feet of an operator. It may be sized accordingly.

Skate boards of conventional design are adapted for straight travel or for turning on a relatively long radius. Generally wheels are provided at either end of the device.

The structure herein embodies centrally disposed wheels of a size to provide for a rocking effect whereby the device may be sharply turned on said wheels or the operator may spin on said wheels.

In traveling forwardly or rearwardly, the casters either fore or aft of said wheels **25**, as the case may be, will have ground engagement. The operator very readily can balance the device on the rocking wheels **25** for maneuvering on the ground in such a manner that figures may be formed in this manner on the order of what is accomplished by the use of figure skates or conventional roller skates.

By the use of the tiltable upper plate member **15**, the operator can readily shift his weight as to various portions of his operating foot or his feet which will cause the upper plate **15** to tilt accordingly. This permits the operator to lean with his body more than otherwise to apply more specific direction than otherwise in the operation of the device.

Modification

With reference to FIG. 7, a modified form of the device herein is shown of identical construction thereto with the exception that the centrally located casters **30–33** have been omitted and the wheels **25** here indicated as **25'** are spaced further apart being journaled on the axle **23** at either outer side of the bracket **21**. The other portions shown bear the same characters as the like parts above described with a prime added.

This modified device in operation requires a more skillful operator and its structure lends itself to more intricate maneuvering than the device first above described.

This device has proved to be very successful in operation and represents substantial improvement over what can be accomplished by the use of a conventional type of skate board.

It will of course be understood that various changes may be made in the form, details, arrangement and proportions of the parts, without departing from the scope of applicant's invention which, generally stated, consists in a device capable of carrying out the objects above set forth, in the parts and combinations of parts disclosed and defined in the appended claims.

What is claimed is:

1. A skate board having in combination,

a support member comprising a pair of plate members in superposed position,

resilient means spacing said plate members,

a pair of caster wheels spaced at opposed ends of said support member along one axis thereof,

a bracket underlying said support member centrally thereof,

a wheel journaled in said bracket, said wheel having its axis normal to the axis along which said casters are aligned, and

said wheel being disposed in such a manner that said support member may be supported on said wheel with said casters free of ground engagement.

2. The structure set forth in claim **1**, including means

disposed betwen said plate member along an axis thereof for tiltable support of the upper of said plate members with respect to the lower of said plate members.

3. The structure set forth in claim **1**, including tilting means disposed between said plate members supporting the upper of said plate members for tilting along more than one axis with respect to the lower of said plate members.

4. A skate board having in combination,

a support member,

said support member comprising underlying caster wheels, and a pair of plate members in superposed position,

resilient means spacing said plate members, and

tilting means disposed between said plate members to support the upper of said plate members for tilting along more than one axis.

5. The structure set forth in claim **4**, wherein said resilient means comprises a foam rubber cushion.

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LEO FRIAGLIA, *Primary Examiner.*