Dec. 13, 1960

H. J. GARIEPY

2,964,094

SWIVEL HINGE SUPPORT

Filed Jan. 6, 1959

FIG. 1

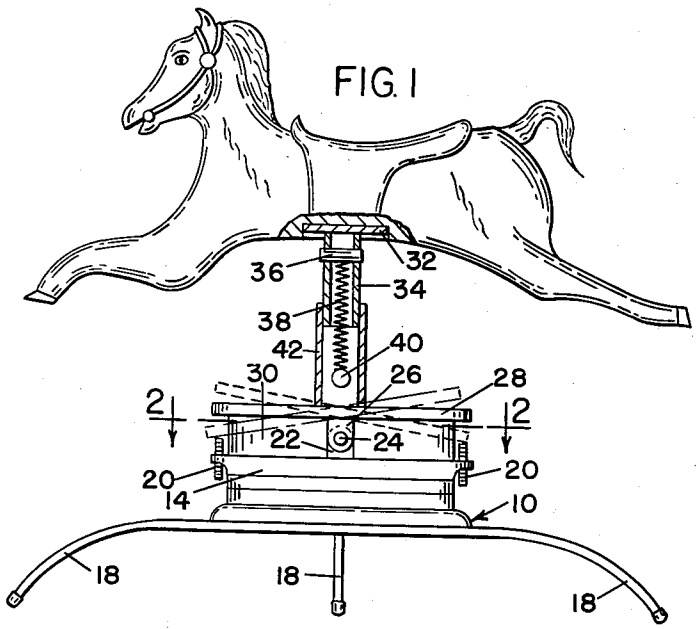


FIG. 2

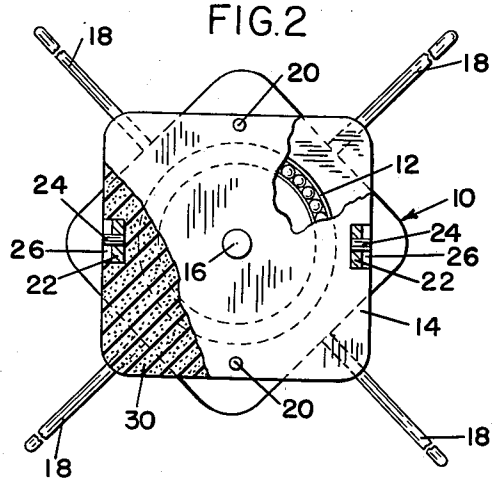
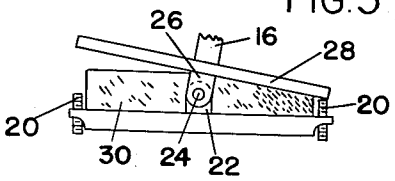


FIG. 3



INVENTOR.
HENRY J. GARIEPY

BY Charles R. Fay

ATTORNEY

United States Patent Office

2,964,094

Patented Dec. 13, 1960

2,964,094

SWIVEL HINGE SUPPORT

Henry J. Gariepy, % Gariepy Products Inc., South Ashburnham, Mass.

Filed Jan. 6, 1959, Ser. No. 785,194

6 Claims. (Cl. 155—69)

This invention relates to a new and improved supporting means for an amusement device such as a hobby-horse; the provision of a swivelly supported novel hinge construction; and the provision of a base or standard having mounted thereon a swivel and there being supported on the swivel a hinged base-plate or the like mounted to pivot on a horizontal axis, said base-plate mounting an amusement device, chair, or other desired object.

Further objects of the invention include the provision of a supporting device of the class described comprising a base, a block of resilient rubber-like material, etc., sponge-rubber or the like mounted thereon, a second plate above the rubber-like material and hingedly connected through the lower plate at the sides thereof to pivot thereon and with respect thereto, said pivot axis being located intermediate the side edges of the upper and lower plates, so that when the upper plate is pivoted on its axis, it must compress one side of the rubber-like material, the rubber-like material acting in the nature of a spring and yieldingly maintaining the upper plate in normal horizontal position except when the same is disturbed by any action made by a user of the supported device.

The invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly set forth in the appended claims.

Reference is to be had to the accompanying drawings, in which:

Fig. 1 is a view in side elevation of the device according to the present invention, parts being broken away and parts being in section;

Fig. 2 is a section on line 2—2 of Fig. 1; and

Fig. 3 is a diagrammatic view illustrating the action of the device.

In carrying out the present invention, there is preferably provided a plate generally indicated at **10**. This plate is generally square and is provided with a circular groove or race **12** for mounting anti-friction means such as ball bearings therein, see Fig. 2. Mounted upon the lower plate **10**, there is a plate **14** which is similar thereto but reversed and is swivelly connected to plate **10** by a central pin **16**. It will be seen that plate **14** is swivelly mounted on plate **10** and if plate **10** is maintained generally horizontally, the axis of the plate **14** is vertical.

If desired, certain conventional extending legs such as at **18** may be bolted or otherwise secured to the lower surface of plate **10** in order to form a foundation for the device. Also, if desired, plate **14** may be provided with threaded, adjustable stop pins **20** for a purpose to be described, these stop pins extending generally above the upper surface of the plate **14** adjacent certain edges thereof.

Mounted at opposite edges of plate **14**, there are provided a pair of upright members generally indicated at **22**. These members are vertical and short and mount axially aligned pivot-pins **24** thereon which in turn provide a pivot support for straps or ears **26**, straps **26** depending from and supporting an upper plate **28**. Upper plate **28** may be of any size or shape desired, but it is conveniently made in square form more or less of an outline to conform to the plates **10** and **14** and being mounted upon the ears or straps **26** and swivelled on pins **24**. It will be seen that plate **28** is constrained to move with plate **14** on a vertical axis and swivels independently thereof on a horizontal axis formed by pins **24**.

Plate **28** is spaced from the top surface of plate **14** and between these two plates, there is provided a block **30** of resilient rubber-like material such as for instance sponge rubber or the like. This material is obtainable in different degrees of densities so that the action thereof may be varied according to the specific requirements encountered. In any event, this sponge rubber is more or less in the same block-like shape as that of plates **10**, **14** and **28** and is constrained to move with plate **14** and to be partially compressed by plate **28** when the latter is swivelled to pivot on the axis of pins **24** as is clearly brought out in Fig. 3. In this figure, the right-hand side of the rubber block is stippled in order to show a greater concentration or compressing of the sponge rubber when the plate **28** is swivelled in a clockwise direction. Of course, this compressed sponge rubber then causes the plate **28** to resume its normal or horizontal position upon the release of the pressure that caused plate **28** to tilt as shown. The action in the opposite direction as indicated by the arrow in Fig. 3 will of course be the same at the opposite side of the pivot axis. The vertical adjustable stop pins **20**, **20** may be moved up or down and are herein shown as threaded for this purpose. As clearly shown in Fig. 1, adjustment of the pins will result in variation of the limits of pivotal action of plate **28**.

Any object desired may be mounted directly upon the plate **28** or through intermediary means. The amusement device here shown is a horse's body provided with a plate **32** secured therewithin by any desired or convenient means. To this plate there is attached a tube **34** having a cross pin **36** forming an end abutment for a spring **38**. The other end of the spring **38** rests on a pin **40** in a tube **42**, the tube **42** being mounted at its lower end directly on plate **28**. Thus it will be seen that the horse figure may be sat upon and will resiliently move vertically up-and-down and at the same time the operator of this device may cause the entire horse body to swivel about axis of pin **16** and about the horizontal axis of the pins **24** as above described with relation to the action of plate **28**.

It is to be understood that the swivel base described above may also be used as a base for any other object desired such as a platform rocker type of chair, etc. It is to be understood as regards Fig. 1, the figure of the horse is extremely small in proportion to the supporting base compared to the actual manufacture of this device. These proportions were used in order to illustrate the invention because the horse's figure would run off the sides of the drawing, and it is therefore to be noted that far larger members to be supported such as such horse's figures, chairs, etc. may be used than is shown in the drawing in Fig. 1, and the proportions in Fig. 1 were made in the manner shown merely for purposes of illustration of the invention in this case.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. A device of the class described comprising a pair of plates in general flatwise contacting relation, a swivel pin connecting said plates together for swiveling motion on the axis of the pin by one plate relative to the other, supporting legs for one of said plates, a pair of upstand-

ing spaced members on the other plate, said members being located adjacent the edges of the latter, and a third plate, said third plate having a pair of depending ears thereon adjacent opposite edges thereof extending into cooperative relationship with the upstanding members on the other plate, pivot-pins connecting the ears and upstanding members together in pairs on a common axis, said third plate being spaced from the first-named plates, and a resilient member interposed therebetween so that said third plate may be pivoted with relation to the first-named plates but is normally held in parallelism therewith by said resilient member.

2. A device of the class described comprising a pair of plates in general flatwise contacting relation, a swivel pin connecting said plates together for swiveling motion on the axis of the pin by one plate relative to the other, supporting legs for one of said plates, a pair of upstanding spaced members on the other plate, said members being located adjacent the edges of the latter, and a third plate, said third plate having a pair of depending ears thereon adjacent opposite edges thereof extending into cooperative relationship with the upstanding members on the other plate, pivot-pins connecting the ears and upstanding members together in pairs on a common axis, said third plate being spaced from the first-named plates, and a resilient member interposed therebetween so that said third plate may be pivoted with relation to the first-named plates but is normally held in parallelism therewith by said resilient member, a tubular member mounted on said third plate, a spring in the tubular member, another tubular member telescopingly mounted with the first tubular member and engaged with

the spring for normally holding said tubular members in an extended relation, and an object mounted on the second tubular member and adapted to be operated for swiveling on a vertical axis, on a horizontal axis, and capable of up-and-down motion due to said telescoping construction.

3. The device of claim 1 wherein the resilient member comprises a block of rubbery material.

4. The device of claim 2 wherein the resilient member comprises a block of rubbery material.

5. The device of claim 1 including adjustable means for varying the degree of pivotal action of said third plate.

6. The device of claim 2 including adjustable means for varying the degree of pivotal action of said third plate.

References Cited in the file of this patent

UNITED STATES PATENTS

384,608	Bunker	June 19, 1888
1,338,555	Cooke et al.	Apr. 27, 1920
1,437,848	Kisor et al.	Dec. 5, 1922
1,961,530	Spanenberg	June 5, 1934
2,059,848	Cavitt	Nov. 3, 1936
2,746,754	Martel	May 22, 1950
2,779,642	Mathews	Jan. 29, 1957
2,788,842	Ohlenkamp	Apr. 16, 1957

FOREIGN PATENTS

498,671	Canada	Dec. 22, 1953
1,104,940	France	June 22, 1955