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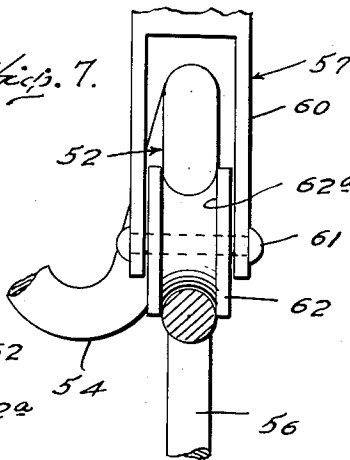
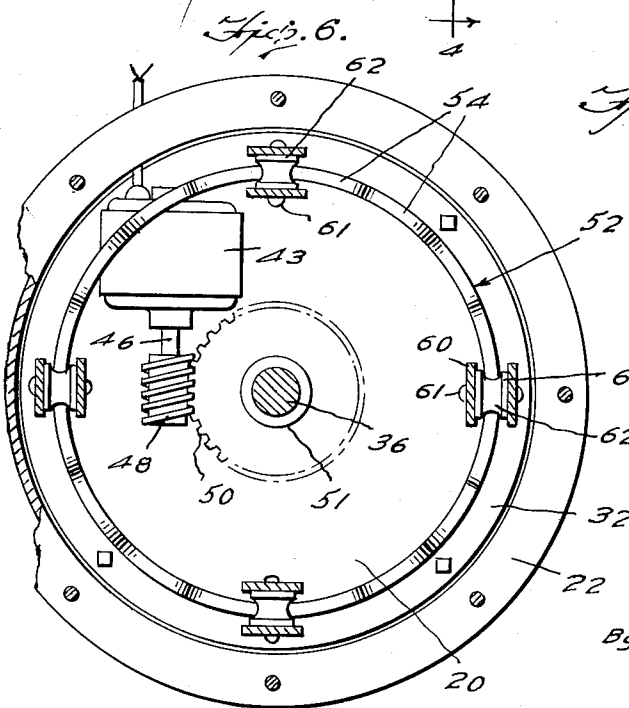
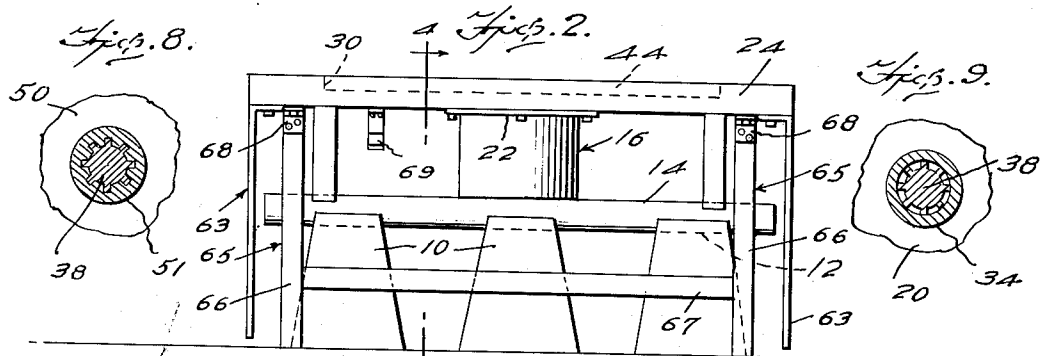
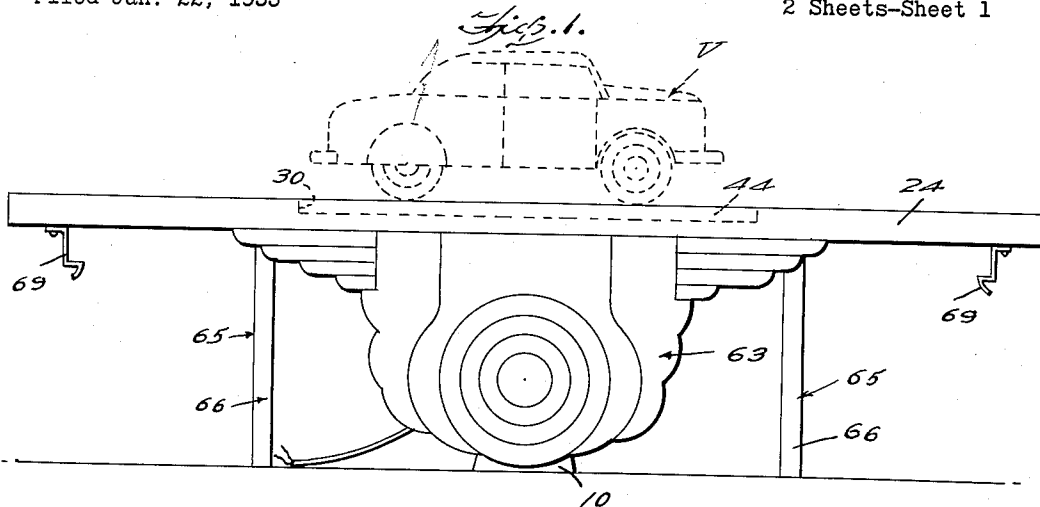
J. J. SKELLEY

2,721,740

ROTATING SUPPORT FOR AN AUTOMOBILE

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2 Sheets-Sheet 1



Inventor
John J. Skelley

By *Wilfred Lawson*

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ROTATING SUPPORT FOR AN AUTOMOBILE

John J. Skelley, Butte, Mont.

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3 Claims. (Cl. 272—1)

The invention relates generally to amusement devices and is directed particularly to an improved and novel balancing device or "teeter-totter."

An object of the present invention is to provide a novel balancing device or apparatus for use in association with an automobile whereby an automobile operator may test his skill in maintaining the vehicle in a predetermined position upon a tilting platform of the nature of a "teeter-totter."

Another object of the invention is to provide in an apparatus of the character stated, a principal platform which is supported to tip on a central transverse axis, with a secondary or auxiliary platform in the center of the first platform which is of a character to support a motor vehicle and which is designed to be moved mechanically with the main platform and in addition to the movements of the latter.

Still another object of the invention is to provide in an apparatus of the character stated, an auxiliary platform which is designed to have both up and down and rotary movement in addition to the tipping or tilting movement of the main platform with which it is connected.

Other objects and advantages of the invention will become apparent as the description of the same proceeds and the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming a part of the specification, with the understanding, however, that the invention is not to be limited to the exact details of construction shown and described since obvious modifications will occur to a person skilled in the art.

In the drawings:

Figure 1 is a view in side elevation of an amusement device constructed in accordance with the present invention showing an automobile in dotted outline thereon.

Figure 2 is a view in end elevation of the apparatus.

Figure 3 is a top plan view of the central part of the two platforms.

Figure 4 is a longitudinal section taken substantially on the line 4—4 of Figure 2.

Figure 5 is a sectional view taken on an enlarged scale substantially on the line 5—5 of Figure 4.

Figure 6 is a horizontal section taken substantially on the line 6—6 of Figure 5.

Figure 7 is a detailed view illustrating the lower portion of a roller bracket showing a portion of the undulating track in section and one of the supporting elements therefor.

Figure 8 is a sectional view taken substantially on the line 8—8 of Figure 5.

Figure 9 is a sectional view taken substantially on the line 9—9 of Figure 5.

Referring now more particularly to the drawings it will be seen upon reference to Figure 2 that the amusement device of the present invention is supported upon a suitable base structure here shown as in the form of three piers 10, each of which is provided across its top

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with a semi-circular channel 12 and the piers are arranged in a row so that the channels will be in alignment.

Extending across the top ends of the piers 10 and resting in the semi-circular channels 12 is the elongate rock shaft 14 which supports all of the hereinafter described structure.

Secured upon the rock shaft midway between its ends is an upright housing which is generally designated 16 and it is preferably in the form of a cylinder, the circular wall 18 of which is closed by a bottom 20 and at its top has a surrounding flange 22 as seen most clearly in Figure 5.

This housing 16 is welded or otherwise suitably secured to the rock shaft.

Extending across the top of the housing 16 and resting upon the flange 22 is the long main or principal platform which is generally designated 24 and which is a width materially greater than a motor vehicle and several times as long. This platform 24 is centrally positioned upon the housing 16, that is, the housing is located exactly at the longitudinal and transverse centers of the platform and is secured thereto by bolts 26 or in any other suitable manner.

The central part of the platform has a circular opening 28 formed therethrough, which opening is of a diameter approximately equal to the inside diameter of the housing and the top surface of the platform 24 has a circular recess 30 formed therein which is concentric with the opening 28.

Fixed in the bottom of the housing 16, upon the floor 20 is a plate 32 and upon the center of this plate is mounted the vertical or upstanding sleeve 34 which is internally smoothed.

Rising vertically in the center of the housing 16 is a post 36, a substantial portion of the lower end of which is of reduced diameter and splined as indicated at 38 and this splined lower portion extends down into or is stepped in the sleeve 34 as shown.

The top end of the post 36 has rigidly secured thereto a head plate 40 and resting upon this head plate and secured by bolts 42 or in any other suitable manner is a circular secondary or auxiliary platform 44 which positions in the circular recess 30 and while it fits snugly therein it is sufficiently free or loose to turn in the recess.

Resting upon the bottom plate 32 at one side of the sleeve 34 is an electric motor 43, the shaft 46 of which carries the worm gear 48.

The numeral 50 designates a worm wheel, the hub 51 of which is splined, as illustrated in Figure 5, and the splined lower portion of the shaft 36 passes through and is keyed by the splines to the hub 51 of the gear 50, the lower portion or underside of the gear hub being supported for rotation upon the top of the sleeve 34 and in a position to mesh with the worm 48 as shown in Figure 6.

The numeral 52 generally designates an annular track formed with undulations 54 throughout the length thereof. These undulations are of uniform character and are disposed so that the valleys are opposite and the hills are opposite. In other words, each valley has a valley at the diametrically opposite side of the track and each hill has a hill at the diametrically opposite side thereof.

This undulating track 52 is positioned in the upper part of the housing 16 concentric with the centrally positioned post 36 and is supported by a plurality of posts 56 which rest upon and are secured to the base plate 32. The upper ends of the supporting posts 56 are secured to the underside of the track 52, certain of the posts 56 being positioned at the underside of a hill and other posts being positioned at the underside of a valley as shown in Figure 5.

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Arranged in a circle concentric with the undulating track 52 and upon the underside of the secondary platform 44 are a number of roller brackets each of which is generally designated 57. Each of these brackets comprises a top plate 58 which is bolted to the underside of the auxiliary platform 44 and a pair of depending legs 60, the lower ends of which are connected by a pivot pin or bolt 61. Upon the pivot pin is mounted a peripherally grooved roller or wheel 62, the groove or channel 62a of which is of proper diameter to receive the track 52 which, as shown in Figure 7, is formed of rod or bar material of circular cross section.

Upon either side of the housing 16 there is secured to the underside of the platform 24 a supporting unit which is generally designated 65 and which provides a brace by which the platform can be maintained in horizontal position, when desired, as illustrated in Figures 1 and 4. Each of these supporting units or braces is here shown as comprising two legs 66 which are disposed at opposite sides of the platform and connected by a cross member 67 and the top ends of the legs are attached to the underside of the platform by hinge 68 whereby the entire supporting unit 65 can be swung from vertical position to a horizontal position beneath the platform, in which latter position the platform is free to swing on its axle 14.

In order to hold the supporting units 65 in raised or out of the way position, any suitable means may be provided such, for example, as a spring hook member 69, secured to the underside of the platform and designed to latch onto the cross member 67 in an obvious manner.

The means here illustrated for supporting the two ends of the platform 24 so that it will be held horizontally is merely illustrative as it will be readily apparent that any other suitable readily adjustable means might be employed.

For decorative effect and in order to hide the piers and mechanism housing, each side of the main platform 24 has secured to the underface thereof a depending shield or skirt 63 as shown in Figures 1, 2 and 4.

In the use of the present invention which, as previously stated, is primarily an amusement device to give thrills and to test the ability of a driver to keep his vehicle in one position, two procedures are followed as hereinafter set forth.

The platform 24 is first lowered at one end, as indicated in dotted lines in Figure 4, and the vehicle is driven up onto the platform until it reaches about the center of the auxiliary platform 44, as illustrated in Figure 1, where the vehicle is generally designated V. When the vehicle reaches the center of the auxiliary platform the main platform will swing to a horizontal position and it is then secured in this position by having the supporting units 65 swung down to the positions shown in Figures 1 and 4.

The driver of the vehicle then stops the motor of the vehicle and the electric motor 43 is put into operation to cause the secondary platform to revolve and to be periodically and alternately raised and lowered, by reason of the rollers 62 moving with the secondary platform around the undulating track 52.

After the foregoing operation has been carried out for the length of time desired by the motor vehicle occupant or the person operating the device, the motor

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43 is stopped and the secondary platform 44 is brought into lowered position so that its top surface is level with that of the main platform, following which the operator of the motor vehicle is given a test to determine his driving ability to maintain the vehicle on the platforms.

In this test the motor vehicle engine is started and the main platform is released by having the supporting units 65 secured in raised position so that the platform can readily tilt or oscillate. The driver then tests his skill by operating the vehicle in a manner necessary to keep the main platform from tipping to an extent where the end thereof touches the ground. However, when an end of the main platform does contact the ground, the test will be at an end.

While no means has been disclosed for indicating when the end of the platform touches the ground it will be readily obvious that some suitable type of signalling system may be employed which will give a signal so that, when either end of the platform contacts the ground, the vehicle driver will understand that the skill test is completed.

I claim:

1. In a device of the class described, an elongated rectangular platform mounted for endwise rocking motions and having a circular recess formed centrally in the top surface thereof, said recess having a centered concentric opening in its bottom, a circular secondary platform seated in said recess with its top surface flush with the top surface normally of the first platform, a powered occupant controlled vehicle supported on said secondary platform, means for imparting rotative motion to said secondary platform, means beneath the secondary platform at said opening for imparting periodic up and down motions to the secondary platform during each cycle of rotation thereof, and displaceable supports beneath said main platform for holding the same level during movements of said secondary platform, powered movements of said vehicle along the length of the main platform act to impart rocking motions to the main platform which are to be counteracted by controlled directional movements of the vehicle.

2. The device as defined in claim 1, with an axle mounted horizontally below the transverse center of the first platform and supporting the same for the aforesaid rocking motions, and said means for effecting the rotation of the secondary platform comprises a vertical shaft depending through the said opening from the center of the lower side of said secondary platform, and a power means operatively connected with said shaft.

3. The device as defined in claim 1, with the means for effecting the up and down motions of said secondary platform, during rotative movements thereof, comprising a circular undulating trackway supported below the said opening, and a plurality of flanged rollers supported from the lower side of the secondary platform and engaged with said trackway.

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