

Jan. 3, 1939.

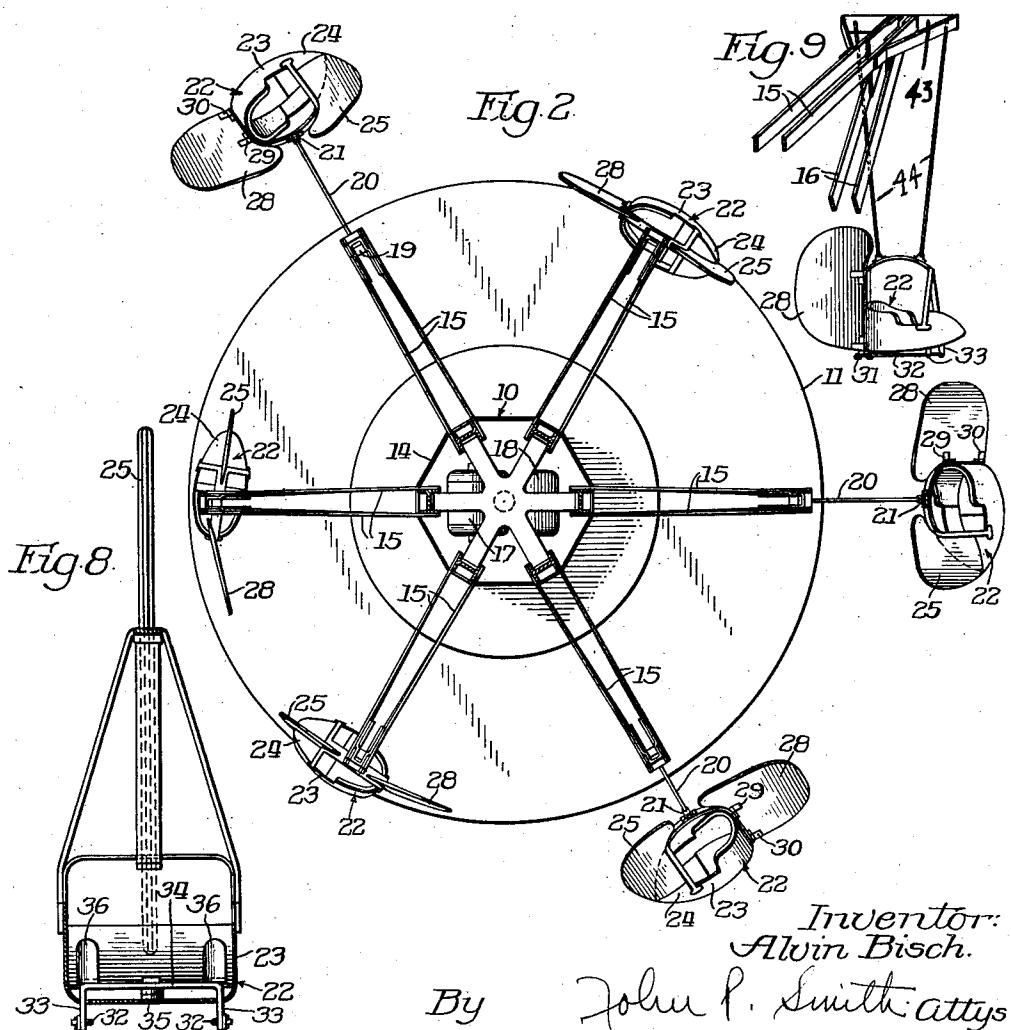
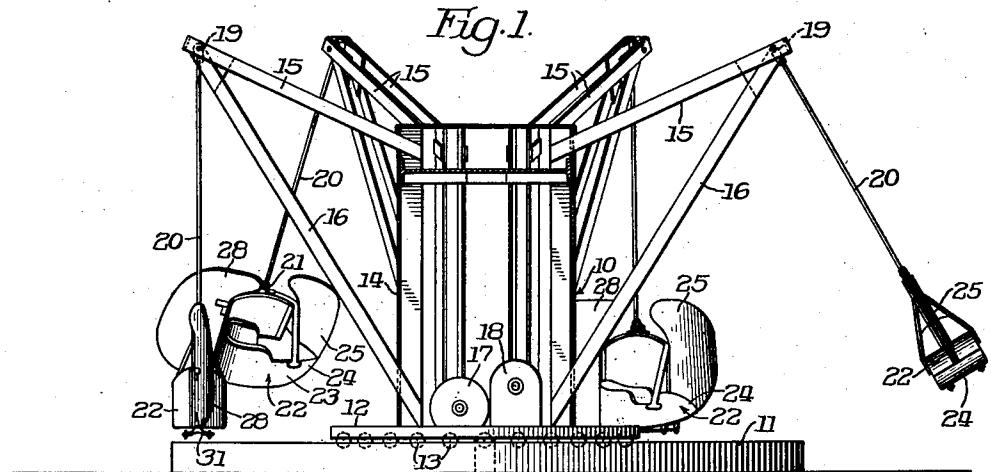
A. BISCH

2,142,169

AMUSEMENT DEVICE

Original Filed July 21, 1934

2 Sheets-Sheet 1



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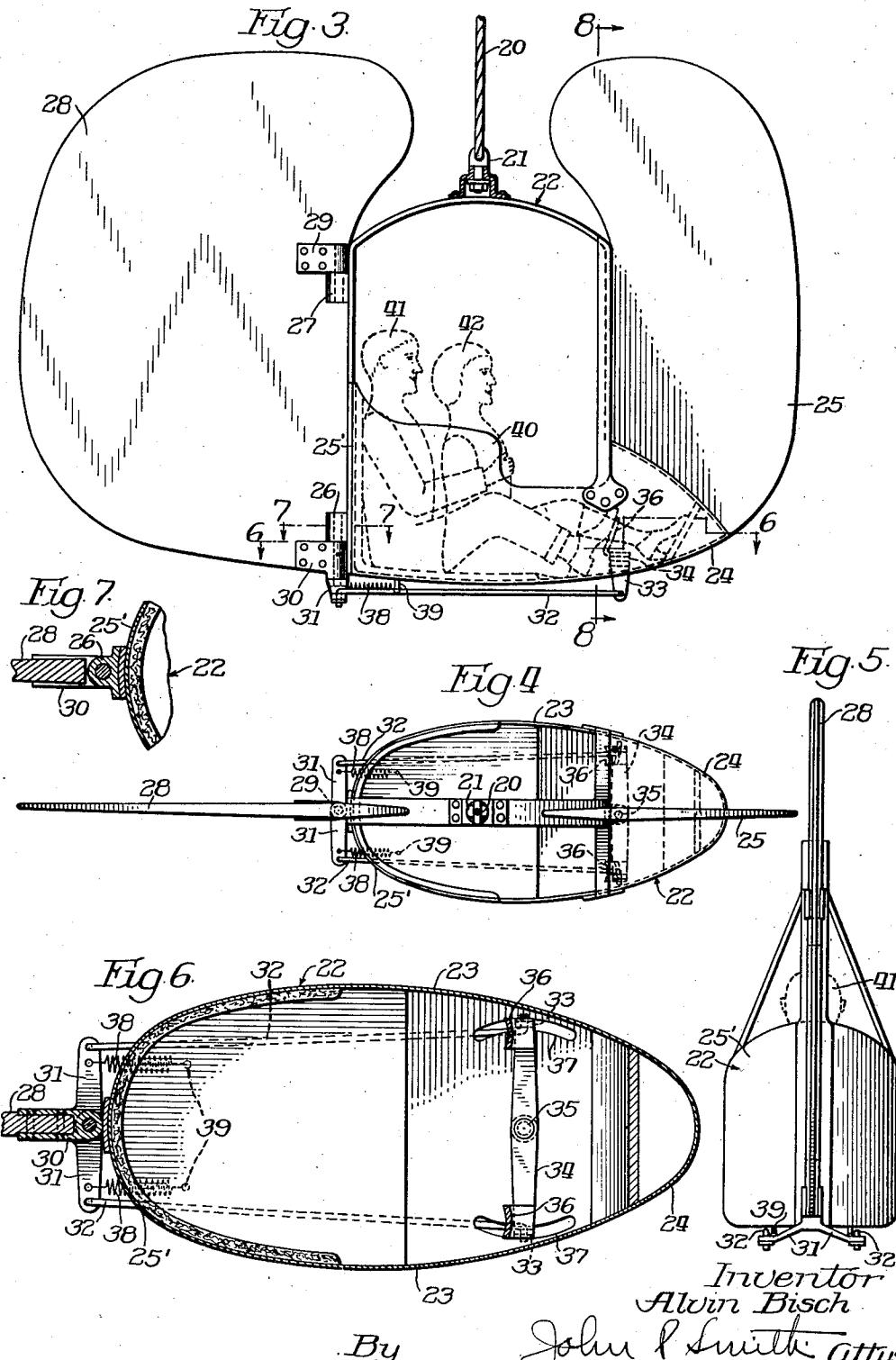
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UNITED STATES PATENT OFFICE

2,142,169

AMUSEMENT DEVICE

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Application July 21, 1934, Serial No. 736,314
Renewed March 28, 1938

16 Claims. (Cl. 272—41)

The present invention is related generally to amusement devices, but more particularly to one which to a certain extent, is under control of the individual operator so that in the skillful operation of the control thereof, a novel thrill is experienced by those operating the device.

The primary object of the present invention is to provide novel and improved type of an amusement device in which a new ride or thrill is experienced by the operator thereof by travelling over a constantly changing path under the control of the operator in each individual conveyance.

Another object of the invention is to provide a novel and improved amusement device in the form of a "flying cab" in which a rudder and a stabilizer occupy planes having areas substantially equal to or larger than the area of a longitudinal cross section of the cab renders the same very effective to change the position of the cab upon the manipulation of the rudder.

A further object of the invention is to provide a novel and improved amusement device in the form of a cab which is suspended from a cable attached to an overhead hanging and revolving structure and in which the path traveled by the revolving cab may deviate from its normal path by the control within the hands of the operator.

Another object of the invention is to provide a novel and improved amusement device of the revolving anchored type in which a swivel forms the connection between the cab and a suspended cable; the cab being provided with a relatively large stabilizer and a relatively large rudder so that upon the proper manipulation of the rudder the cab may be revolved around the axis of the swivel at the time the cab is travelling in a circular path.

A still further object of the invention is to provide a novel and improved construction of an amusement device in which a cab is suspended from a single cable attached to an overhanging revolving structure, with the cab proper provided with a stabilizing device and a movable rudder. The stabilizing device maintains the cab so that the forward end thereof remains generally in the direction of travel while the rudder permits the cab to deviate from the normal path so that the cab may follow in an irregular course by manipulating the controls of the rudder.

Another object of the invention is to provide a captive flying cab in which the flight varying means are in the form of a relatively large stabilizer and a large pivoted rudder. The stabilizer and rudder automatically become a sus-

taining plane and an elevator respectively when the supporting cable and cab assume an elevation substantially horizontal with respect to the revolving structure.

These and other objects are accomplished by providing a construction and arrangement of the various parts in the manner hereinafter described and particularly pointed out in the appended claims.

Referring to the drawings:

Fig. 1 is a side elevational view of a conventional form of rotating structure showing my improved amusement device in connection therewith;

Fig. 2 is a top plan view of the device shown in Fig. 1;

Fig. 3 is a side elevational view showing the general construction of my improved riding cab;

Fig. 4 is a top plan view of the same;

Fig. 5 is a rear elevational view of the device shown in Figs. 3 and 4;

Fig. 6 is a cross sectional view taken on the line 6—6 in Fig. 3;

Fig. 7 is a detailed cross sectional view taken on the line 7—7 in Fig. 3;

Fig. 8 is a cross sectional view taken on the line 8—8 in Fig. 3; and

Fig. 9 is a perspective view of a modified form of my invention.

The invention in this instance is directed to an amusement device which is primarily intended to provide a new ride and a new thrill for amusement centers and at the same time to permit the operators thereof to manipulate the controls so that the cab may deviate from its normal course so that the same will travel over an irregular or up and down path within certain limits.

In illustrating one embodiment of my invention, I have shown the same in connection with more or less a conventional type of overhead structure, but it will of course, be understood that various other types of revolving structures may be used in connection with my invention. For example, my amusement device may be used in connection with a revolving structure disclosed in my prior Patent No. 1,791,655 issued on the 10th day of February, 1931, but for the purpose of making a complete disclosure of my invention, I have shown the same in connection with a revolving structure generally designated by the reference character 10. This revolving structure comprises stationary base or foundation 11 on which is revolvably mounted a rotat-

ing base 12 supported on a plurality of rollers 13. Secured to the revolving base 12 is a revolving tower 14 of any well known construction. Extending from the revolving tower 14 and upwardly with respect thereto, are a plurality of beams 15 of which there may be any number depending on the size and diameter of the type of device constructed. Supporting these beams are individually and angularly disposed brace members 16 which extend from the lower end of the tower to the outer ends of each of the upwardly extending beams 15. The revolving tower in this instance is driven by an electric motor, generally indicated by the reference character 17, which in turn, operatively drives a transmission mechanism, generally indicated by the reference character 18 for supplying the motor power for revolving the rotary structure. Suspended from each of the beams 15 on suitable swivels, as shown at 19, are cables 20. Connected to the free ends of the cables by means of swivel brackets 21 are cabs, generally indicated by the reference character 22. These cabs 22 are provided with substantially oval shaped bodies 23 with the forward portion thereof, as shown at 24, more pointed than the rear portion thereof as shown at 25'. Secured to the front portion and extending vertically on the longitudinal center thereof is a stabilizer 25. The forward portion of the stabilizer is relatively thin and gradually enlarges in thickness towards the cab proper. This stabilizer extends from the bottom of the cab to a point above the same. Pivotally secured to the rear end of the cab on vertically spaced apart brackets 26 and 27 is a relatively large and vertically extending rudder 28. This rudder 28 is hinged to the end brackets 26 and 27 by somewhat similar brackets 29 and 30 secured to the rudder. Formed integrally with or secured to the lower hinge bracket 30 are oppositely projecting offset arms 31, the outer ends of which are connected by means of cables or rods 32 to two downwardly extending arms 33 secured to or formed integrally with a horizontal lever 34. The lever 34 is pivoted as shown at 35 in the longitudinal center of the cab and is provided with, on the opposite ends thereof, foot rest or peddles 36. The arms 33 extend through arcuate slots 37 in the floor of the cab. The rudder 28 is normally held in longitudinal center line of the cab by extension springs 38 which have their rearward ends connected to the opposite arms 31 and their forward ends secured to brackets 39 attached to the underside of the bottom or floor of the cab proper. The cab proper is provided on the opposite sides thereof with relatively high side walls 40. The cab is sufficiently large so as to accommodate two persons, as shown at 41 and 42, arranged one in front of the other in the manner clearly disclosed in Fig. 3 of the drawings.

In the modified form of my invention shown in Fig. 9 of the drawings, I have provided the outwardly extending beams 15 with transverse members 43, to the outer end of which are attached two downwardly converging cables 44. The lower ends of the cables 44 are connected to the forward and rearward portions of the cab respectively. This arrangement obviously dispenses with the use of the stabilizer and keeps the forward end of the cab foremost. The cab 22 and rudder 28 in the modified form are substantially the same as in the other figures.

The operation of my improved amusement device is as follows:

From the above description it will be readily seen that when the revolving cab is rotated at sufficient speed it will swing outwardly on the suspended cables to assume an angle outwardly with respect to the vertical dependent upon the speed of rotation. When it attains sufficient height or angularity such as the rotating cab shown on the right in Fig. 1, the operator therein may manipulate the foot levers so as to swing the rudder 28 to the right or left and obviously deflect the cab further outwardly or in a direction towards the rotating structure. Obviously by the continuous manipulation of the foot levers first one way and then the other, the cab will travel over an ever-changing path so as to give the riders therein an up and down or irregular path and the variation of the path and the numbers of ups and downs dependant upon the manipulation of the rudder by the operator. In this connection it will be observed that by reason of the large stationary stabilizer and relatively large pivoted rudder as well as the shape of the cab proper, the cab will travel with forward ends of the cab foremost and will deviate from the normal smooth path only to the extent of the manipulation of the controls by the operator.

In addition to manipulating the rudder to cause the cab to travel over an irregular course, it will be noted that when the rudder is operated to elevate the cab to a maximum elevated position during its revolving motion and the rudder is immediately reversed or turned in the opposite direction, the cab will revolve about the swivel 21 after it descends to its lower position, giving an added thrill to the occupants in the cab.

When the flying cab is rotated by the revolving structure to a position in which the suspended cable and cab proper assumes a horizontal position on its side or nearly so, the stationary stabilizer then performs the function of a sustaining plane and the pivoted rudder then performs the function of an elevator for increasing or decreasing the altitude of the cab above or below the point of attachment of the cable with the revolving structure. In other words, the relatively large areas of the stabilizer and rudder permit the operator to manipulate the controls so that the cab may raise a considerable distance above its point of attachment with the revolving structure.

While in the above specification I have described one embodiment which my invention may assume in practice, it will of course be understood that the same is capable of modification and that modification may be made without departing from the spirit and scope of the invention as expressed in the following claims.

What I claim as my invention and desire to secure by Letters Patent is:

1. An amusement device comprising a revolving structure, a passenger cab suspended by a cable from said structure, flight varying means on said cab comprising a stabilizer and a rudder, said stabilizer being fixedly mounted on one end of and directly to said cab, said rudder being pivoted on the other end of and direct to said cab, the major portion of said stabilizer and rudder extending above the passengers in said cab and adapted to function respectively as a sustaining plane and an elevator when said cab and cable are horizontally suspended from said revolving structure.

2. An amusement device comprising a revolving structure, a passenger cab suspended by cable from said structure, flight varying means

on said cab of substantially greater over-all area than the size of said cab, the major portion of said flight varying means projecting above the passengers in said cab, said flight varying means comprising a stationary stabilizer secured directly to said cab and a rudder pivoted directly to said cab, and means for controlling the rudder from said cab.

3. An amusement device comprising a revolving structure, a wingless passenger cab suspended by a cable from said structure, flight varying means on said cab of substantially greater over-all area than the size of said cab, said flight varying means comprising a stabilizer secured to one end of and extending therefrom to a point above the passengers in said cab, a rudder pivoted to the other end of and extending from said cab to a point above the passengers in said cab, and means for controlling the rudder from said cab.

4. An amusement device comprising a revolving structure, a passenger cab suspended by a cable from said structure, flight varying means on said cab of substantially greater over-all area than the size of said cab, said flight varying means comprising a stabilizer rigidly secured to the end of said cab and extending therefrom to a point above the passengers in said cab, a rudder pivoted to the other end of and extending from said cab to a point above the passengers in said cab, and means for controlling said rudder from said cab.

5. An amusement device comprising a revolving structure, a passenger cab suspended by a cable from said structure, and flight varying means carried by and normally occupying a single plane perpendicular to the horizontal plane of said cab, said flight varying means comprising a movable plane and a fixed plane, the major areas of said planes extending above said cab, said planes adapted to sustain the flight of said cab at an elevation approximately above said revolving structure.

6. An amusement device comprising a revolving structure, a passenger cab carried by said structure, means for connecting said cab to said revolving structure for free movement with respect thereto, and flight varying means carried by and normally occupying a single plane perpendicular to the horizontal plane of said cab, said flight varying means comprising a movable plane and a fixed plane, the major areas of said planes extending above said cab, said planes adapted to sustain the flight of said cab at an elevation approximately above said revolving structure.

7. An amusement device comprising a revolving structure, a passenger cab carried by said structure, means for connecting said cab to said revolving structure for free movement with respect thereto, flight varying means carried by said cab of substantially greater over-all area than the size of said cab, said flight varying means comprising a stabilizer secured to one end of said cab, a rudder pivoted to the other end of said cab, and means for manipulating said rudder from said cab, said flight varying means being adapted to sustain the flight of said cab at an elevation approximately above said revolving structure.

8. The combination with a suspended element from a revolving structure, a cab connected to

the free end of said element, a vertically extending relatively thin stabilizer secured to one end of said cab, a vertically extending rudder pivoted to the other end of said cab, said stabilizer and rudder located in relatively close proximity with respect to each other, and means for operating said rudder from said cab for guiding said cab over an irregular path.

9. An amusement device comprising a revolving structure, a passenger cab carried by said structure, means for suspendingly connecting said cab for free movement with respect to said revolving structure, and vertically disposed flight varying means including relatively large area stabilizer and rudder mounted on said cab, whereby said flight varying means is adapted to sustain the flight of said cab at an elevation approximately above said revolving structure.

10. The combination with a revolving structure, of a cab suspended therefrom, a stabilizer secured to one end of said cab, and a rudder pivoted to the other end of said cab having one of its ends extending above said cab.

11. A captive scooter comprising a cab having a seat therein for an operator, a relatively large stabilizer secured to the front end of said cab in a vertical longitudinal center thereof, a major portion of said stabilizer extending above said cab, and a vertical rudder pivoted on the vertical axis at the rearward end of said cab, a major portion of said rudder extending above said cab.

12. An amusement device comprising a revolving structure, a passenger cab carried by said structure, means for connecting said cab to said revolving structure for free movement with respect thereto, vertically disposed flight varying means carried by said cab, said flight varying means including at least one rudder pivoted to said cab and having the major area thereof extending above said cab.

13. An amusement device comprising a revolving structure, a passenger cab suspended from said structure for free movement with respect thereto, and flight varying means carried by said cab and normally occupying a vertical plane in substantially the longitudinal center of said cab, said flight varying means including at least one rudder pivoted to one end of said cab and having the major area thereof extending above said cab.

14. The combination with a revolving structure, of a passenger cab suspended therefrom, and flight varying means carried by said cab and normally occupying a vertical plane in substantially the longitudinal center of said cab including at least one rudder pivoted to said cab, said rudder having the major area thereof extending above said cab.

15. The combination with a revolving structure, of a cab suspended therefrom, and flight varying means including a vertical stabilizer and a rudder pivoted to said cab for guiding the path traversed by said cab and for performing the function of an elevator when said cab assumes substantially a horizontal position with respect to said revolving structure.

16. The combination with a revolving structure, of a cab suspended therefrom, a stabilizer secured to one end of said cab, and a rudder pivoted to the other end of said cab having one of its ends extending over said cab.

ALVIN BISCH.