

July 7, 1936.

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2,046,678

AIRPLANE AMUSEMENT DEVICE

Filed Feb. 19, 1935

2 Sheets-Sheet 1

FIG. 1.

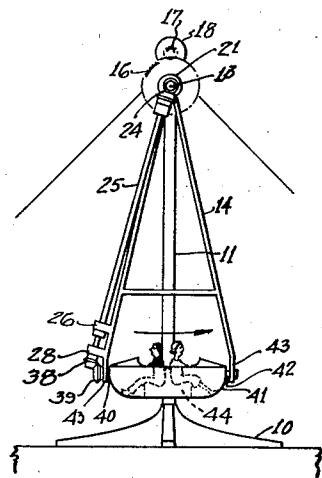


FIG. 2.

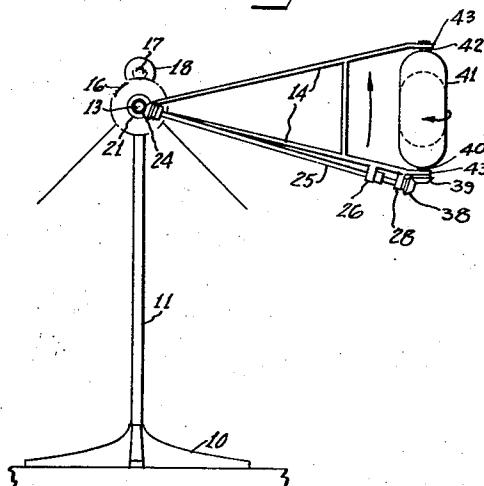


FIG. 3.

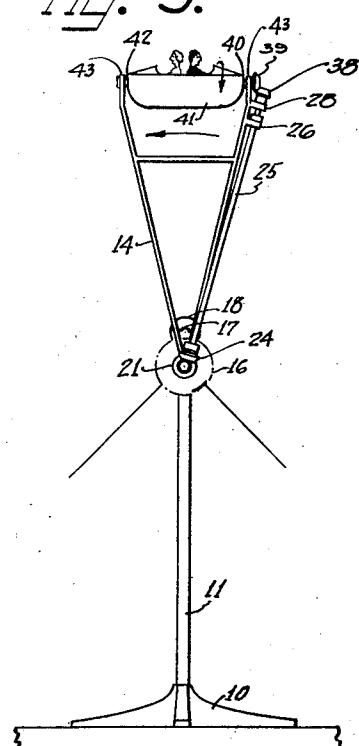
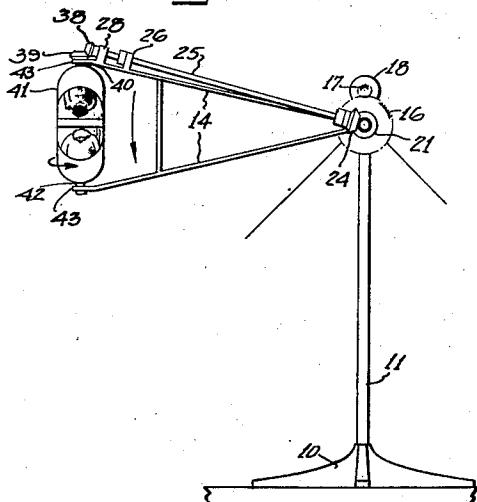


FIG. 4.



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FIG. 5.

FIG. 6.

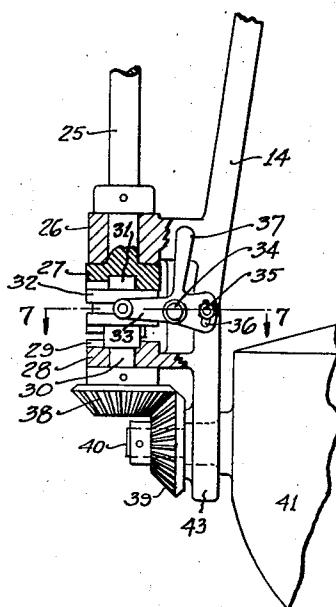
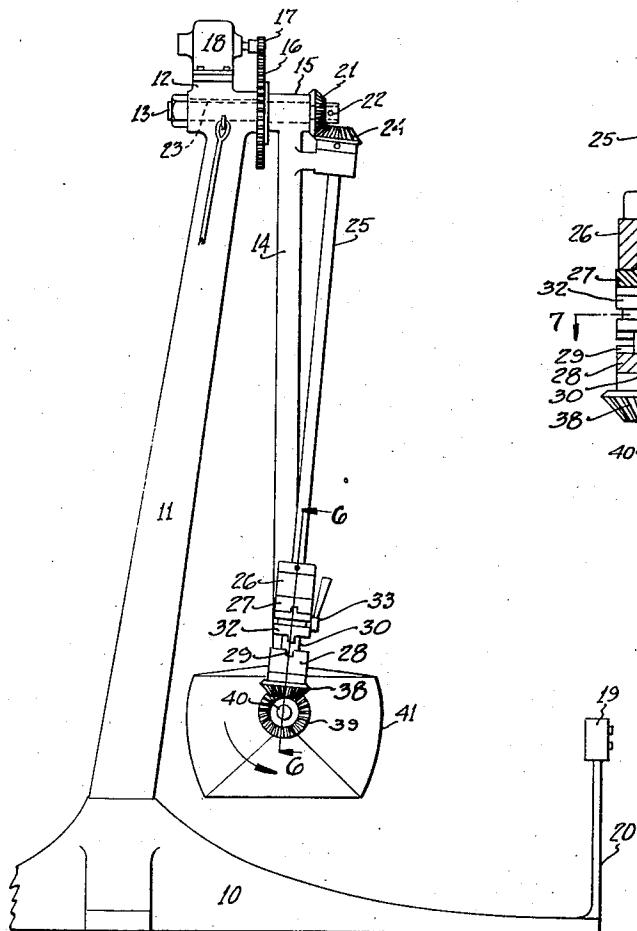
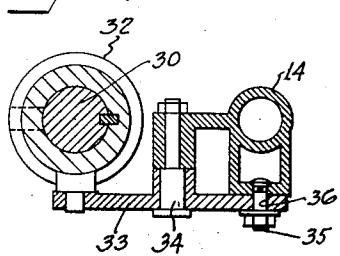


FIG. 7.



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## UNITED STATES PATENT OFFICE

2,046,678

## AIRPLANE AMUSEMENT DEVICE

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Application February 19, 1935, Serial No. 7,241

4 Claims. (Cl. 272—38)

This invention relates generally to an amusement device, and particularly to an airplane amusement device.

The main object of this invention is the construction of an extraordinarily simple and efficient form of amusement device, which will give the user thrills similar to those experienced in an airplane.

The second object is to produce an amusement device in which a car can be swung in a circular orbit in a vertical plane, and in which a rotating movement can be imparted to the car on its longitudinal axis while traveling about in its circular orbit.

15 The third object is to construct a device of the type referred to which is selectively usable in a manner to permit the car to be fixed with relation to its supporting arm, or to revolve on the longitudinal axis of the car as may be desired.

20 I accomplish these and other objects in the manner set forth in the following specification as illustrated in the accompanying drawings, in which:

Fig. 1 is a front elevation of the device showing same in a rotating position.

25 Fig. 2 is a view similar to Fig. 1 showing the position of the car at its first quarter of a revolution of travel.

Fig. 3 is a view similar to Fig. 2, but showing 30 the car at the halfway position, that is, at its uppermost position of travel.

Fig. 4 is a view similar to Fig. 3, but showing the car at the third quarter of travel.

Fig. 5 is a side elevation of the device showing 35 the parts in the position corresponding with those shown in Fig. 1.

Fig. 6 is a section taken along the lines 6—6 in Fig. 5.

Fig. 7 is a section taken along the lines 7—7 40 in Fig. 6.

Similar numbers of references refer to similar parts throughout the several views.

Referring in detail to the drawings, there is shown a base 10, which may be secured to a 45 foundation in any convenient manner. From the base 10 rises the slightly inclined mast 11 through whose head 12 extends the horizontal, stationary, shaft 13 upon which the arm bifurcated 14 is revolvable. Attached to the hub 15 of the arm 14 is a gear 16 which meshes with the pinion 17 of the driving motor 18, which is controllable 50 from the box 19 on the upright 20.

Secured to the stationary shaft 13 is a beveled gear 21, which is also stationary since it is 55 secured to the shaft 13 by means of a pin 22, and

the shaft 13 is secured to the head 12 by means of a key 23.

The gear 21 meshes with the gear 24, which is secured on the shaft 25, which journals in the bearing 26. The shaft 25 has formed on the end thereof a clutch jaw 27. In alignment with the bearing 26 is a bearing 28 on whose side facing the clutch jaw 27 is formed a slot 29. Journaling in the bearing 28 is a shaft 30 whose end 31 also journals in the clutch jaw 27. On the shaft 30 10 is slidably keyed a clutch jaw 32, which can be moved into engagement with either of the members 27 or 28 by the forked arm 33, which is pivotally mounted on the pin 34, and may be held in any desired position by means of the bolt 15 35, which passes through the slot 29. A hand lever 37 is formed integral with the forked arm 33, and facilitates the movement of the clutch jaw 32.

On the shaft 30 is also secured a bevel gear 38, 20 which meshes with a bevel gear 39 on the trunnion 40 of the car 41, whose opposite end is supported by a trunnion 42. The trunnions 40 and 42 journal in the outermost ends 43 of the arm 14. The arrangement of the seats 44 in the car 41 25 may of course be varied greatly without departing from the spirit of this invention.

Attention is drawn to my copending application, Ser. No. 719,874, issued Jan. 8, 1935, as 30 Patent 1,987,004 over which this device is an improvement.

The operation of the device is as follows: Assuming that it is desired to operate the device in the manner described in my above identified application, the operator moves the lever 37 so that the clutch jaw 32 will engage the slot 29, the bearing 28 thereby locking the gears 38 and 39, and preventing the rotation of the car 41 with relation to the arm 14. If, however, the car 41 is to be rotated on its trunnions 40 and 42, the lever 37 is moved to the position shown in Fig. 6. In this event, the shaft 25 is enabled to rotate the car 41 at a speed which will hold the car 41 upright in its lowermost and uppermost positions as shown in Figs. 1 and 3, and to turn it to intermediate positions as shown in Figs. 2 and 4.

It will be observed that the arm 14 is in the form of a triangle, of which the car 41 forms 50 the base, which naturally provides the greatest amount of rigidity for a given weight.

While the clutching mechanism has been shown adjacent to the car 41, it is obvious that it can be placed near the upper end of the drive 55

without departing from the spirit of this invention.

I claim:

1. In an amusement device of the class described the combination of an upright mast, a stationary, horizontal shaft disposed at the upper end of said mast, a bifurcated arm having its closed end revolvably attached to said stationary shaft, a prime mover for revolving said arm in a vertical plane, a car revolvably mounted on a longitudinal axis between the bifurcated ends of said arm, said axis lying within said vertical plane, a gear secured on said stationary shaft and a gear drive meshing with said stationary gear extending to said car whereby said car will be revolved at the same rate on its longitudinal axis that it is revolved in said vertical plane.
2. The device described in claim 1 in combination with clutch means adapted to render inoperative the gearing for rotating said car on its longitudinal axis and to lock said car against rotation with relation to said arm.
3. A device of the class described having an A-shaped frame revolvably mounted in a vertical plane with the vertex of said frame at the

axis of rotation, both arms of said frame lying within said plane, a car rotatably mounted between the outermost ends of said A-shaped frame along the longitudinal axis of the car, said car axis lying within the plane of rotation of said frame and normal to the radius of rotation of said frame together with gearing for rotating said car in a manner that it will be right side uppermost in vertically opposite positions and in reverse positions in horizontally opposite positions.

4. An amusement device having in combination an upright supporting standard, a horizontal shaft disposed at the upper end of said standard, an arm revolvably mounted on said shaft, a prime mover for revolving said arm, a car mounted on an axis lying within the plane in which said arm swings and normal to the radius of said arm permitting said car to rotate on its longitudinal axis and means for selectively locking said car against rotation on its longitudinal axis, or causing same to be rotated thereon in a manner that said car will be upright in its uppermost and lowermost positions.

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