June 24, 1930. B. WILSON 1,767,496

PLAY AIRWAY FOR AMUSEMENT PURPOSES

Filed July 12, 1928

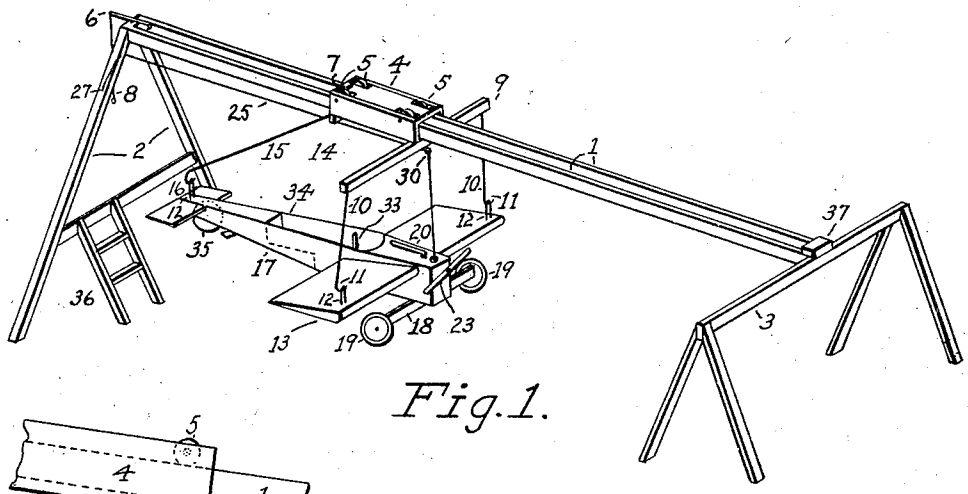

Fig. 1.

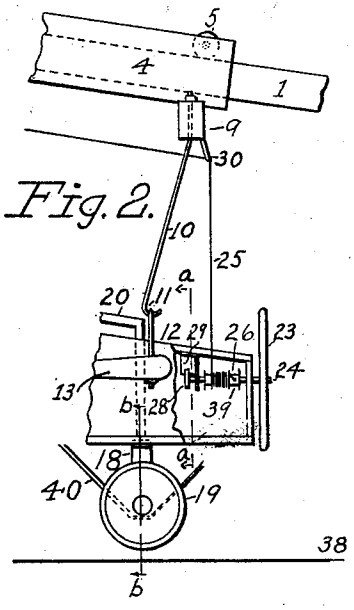

Fig. 2.

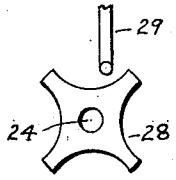

Fig. 4.

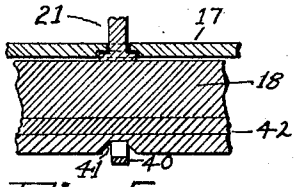

Fig. 5.

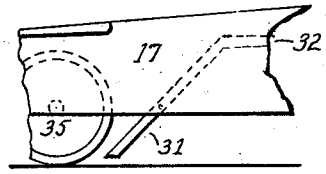

Fig. 3.

Broadus Wilson

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Patented June 24, 1930 1,767,496

UNITED STATES PATENT OFFICE

BROADUS WILSON, OF RALEIGH, NORTH CAROLINA

PLAY AIRWAY FOR AMUSEMENT PURPOSES

Application filed July 12, 1928. Serial No. 292,317.

My invention relates to a novel play airway for amusement purposes and the object of the invention is to provide a plaything that will closely simulate flying by aeroplane, but which will be safe for children to use; and to provide an improved method of launching an aeroplane. Other objects will be in part apparent from the annexed drawings, in part pointed out in the following description in connection therewith. While, as stated above, the primary object of this invention is to provide a novel plaything the invention is adapted as well to larger aeroplanes, and is not restricted to playthings.

In order that the invention may be so fully disclosed, to those skilled in the art, that they may be enabled to embody the same in the various forms and modifications to which it is subject, drawings exemplifying a preferred form have been appended as a part of this disclosure, and in such drawing like characters of reference denote corresponding parts throughout all the views, of which:—

Figure 1 is a perspective view of the complete airway.

Figure 2 is a section of the track and hanger, and the front part of the aeroplane, part of the side of which has been cut away to show construction of the propeller shaft and motor simulator.

Figure 3 is a section of the side of the aeroplane taken near the rear to show the operation of the tail slide or brake.

Figure 4 shows the noisemaker or motor simulator and is taken on the line *a. a.* Figure 2.

Figure 5 shows the safety locking device for steering and is a section taken on the line *b. b.* Figure 2.

Coming to the detailed description of the figures, Figure 1 shows my preferred form of the invention. A double runner track 1 is mounted on a higher stand 2 and a lower stand 3 at its ends forming an incline runway. Mounted on the track 1 is a carriage 4, having wheels five which run along the top of the track 1. At the upper extremity of the track 1 is a locking device 6 hinged near the middle and formed so that the forward or hooked end falls in the hole 7 on the carriage 4 when the carriage reaches the top of the track. On the rear end of this locking device is a cord 8 which hangs in reach of the occupant of the aeroplane, and which when pulled causes the lock to rise out of the hole 7, and thereby releases the carriage 4. At the forward end of the carriage 4 is a horizontal crossbar 9 having downwardly extending support rods 10, 10 secured at either end. These rods have hooks 11, 11 formed on their lower ends which releasably engage the U bolts 12, 12 which are secured in the forward section of the wing of the aeroplane. At the rear of the carriage 4 is another crossmember 14 carrying another downwardly extending support rod 15 having a hook 16 at its lower end formed for engagement with another U bolt 12. Mounted pivotally on the underside of the fuselage 17 is a cross bar 18 having wheels 19, 19 mounted at either end. This crossbar may be turned for purposes of steering the model aeroplane by means of the handle and steering rod 20 formed at the upper end of connecting rod 21. The Figure 5 shows the operation of the safety locking device for the steering arrangement, cross bar 18 being in the relation shown to the bottom of the fuselage when the aeroplane is on the ground. In this position the lock 40 clears the notch 41 so that the cross bar 18 may be turned for steering. The weight of the wheels and cross bar 18 causes this assembly to drop when the aeroplane is lifted so that the notch 41 engages the lock 40. The angular formation of the lock 40 forces the cross bar 18 to come to a position at right angles to the center line of the aeroplane when the aeroplane is lifted and also acts as a stop when steering on the ground. This makes the wheels hit the ground in a straight line parallel to the line of the track and prevents a sudden turn which might upset the car.

Mounted on the front of the fuselage 17 is the propeller 23 on shaft 24, and inside the fuselage 17 on the same shaft a spool 39 is rigidly mounted, on this spool is wound the

propeller string 25 which has its free end passed thru hole 26 in the spool 39 and its other end passed thru eyelet 30 on cross bar 9 and rigidly attached to the upper track stand 2 at point 27. On the rear end of shaft 24 is a notched wheel 28, which when rotated strikes spring wire 29 causing a noise simulating the running of a motor. It should be noted that the screw eyelet 30 has the same rate of movement along the track as does the aeroplane so that the direction of pull on the string is the same throughout its travel. In Figure 3 is shown the tail slide brake 31 which is operated by connecting rod 32 and brake handle 33 in Figure 1, in which figure is also shown the passenger seat 34 and the rear supporting wheel 35 and the ladder 36 and the bumper 37 which acts as a stop for the carriage. This bumper might be made solid as shown or with a spring.

In operation the U bolts 12 on the wings 13 and fuselage 17 are caused to engage their corresponding supporting hooks on the carriage supporting rods, and the aeroplane and carriage pushed to the top of the runway until the lock 6 engages the hole 7. The rider then climbs the ladder 36 and enters the seat 34. The free end of cord 25 is then threaded thru hole 26 in spool 39 and the propeller 23 is revolved until the string or cord 25 is wound tight on spool 39. The release cord 8 is then pulled and the carriage 4 carrying the aeroplane rolls down the track 1 pulling cord 25 off spool 39 and causing propeller 23 and noisemaker 28 to revolve rapidly. Near the lower end of the track 1 the wheels 19 and 35 of the aeroplane strike the ground 38 and, as will be readily appreciated by reference to Figure 2 which shows that the plane of the ground 38 and the track 1 get closer together, lift off the hooks 11 and 16 and the carriage 4 stops against the bumper 37 and the aeroplane taxies away on the ground 38 with propeller whirring and motor simulator humming.

My invention is subject to many changes in actual construction without affecting the scope and spirit of my invention so that I do not limit myself to the exact form shown in the drawing, as for instance the track might have only a single runner or a wire cable might be used for a track, and a one or two wheeled carriage might be used, or the carriage might have only one support in front as in the rear and these supports might be rigidly attached to the aeroplane, and constructed to leave the track at its lower end, or a boat might be substituted for an aeroplane without changing the invention.

Having thus described my invention, I claim:—

1. In a device of the kind described a gravity locking device adapted to align wheels and to prevent changing line of wheels while said device is suspended, and adapted to automatically release and permit steering within determined limits when the device is on the ground.

2. In a device of the kind described a model aeroplane having supporting wheels adapted to be guided over a desired course, braking means for regulating travel of said aeroplane, and means adapted to automatically align said wheels when said aeroplane is raised from the ground.

3. In a device of the kind described an inclined trackway terminating at a point above the ground, an aeroplane suspended from the under side of said trackway for free movement therealong and adapted to release itself from said trackway when its wheels touch the ground.

4. In a pleasure device the combination with an inclined trackway terminating above a flat surface, of an aeroplane adapted to swing from a carrier on said trackway and to be detached therefrom upon contact with said flat surface.

5. In a device of the kind described a roller coaster mounted on an inclined trackway, said roller coaster having three suspending members adapted to cooperate with corresponding attaching members on an aeroplane to securely support said aeroplane when its wheels are above the ground, and adapted to release said aeroplane when its weight is supported by its wheels.

6. In a device as described an inclined trackway, a roller carrier supported on said trackway for free movement therealong, three downwardly extending suspending members on said carrier adapted to cooperate with the corresponding suspending members on an aeroplane, to suspend said aeroplane for movement along said trackway, and adapted to release said aeroplane when its wheels touch the ground.

7. In a device of the kind described an aeroplane suspended from an inclined trackway and adapted to be released therefrom upon contact with a substantially flat surface.

8. A trackway supported above a substantially plane surface, an aeroplane supported for free movement therealong and adapted to be released from said trackway by action of the wheels of said aeroplane upon said plane surface.

9. In an aeroplane, means to automatically align the supporting wheels of said aeroplane with the fuselage thereof when said wheels are lifted from the ground.

10. In an aeroplane, means to automatically align the supporting wheels and axle thereof with the fuselage of said aeroplane when the weight of said aeroplane is removed from said wheels.

11. In an aeroplane, means to automatically align the supporting axle and wheels thereof when the weight of said aeroplane is removed from said axle and wheels, said aligning means adapted to permit steering of said aeroplane by means of its wheels while on the ground.

In testimony whereof I affix my signature.

BROADUS WILSON.