Dec. 26, 1933.

V. STANZEL

1,941,024

AMUSEMENT APPARATUS

Filed June 26, 1933

3 Sheets-Sheet 1

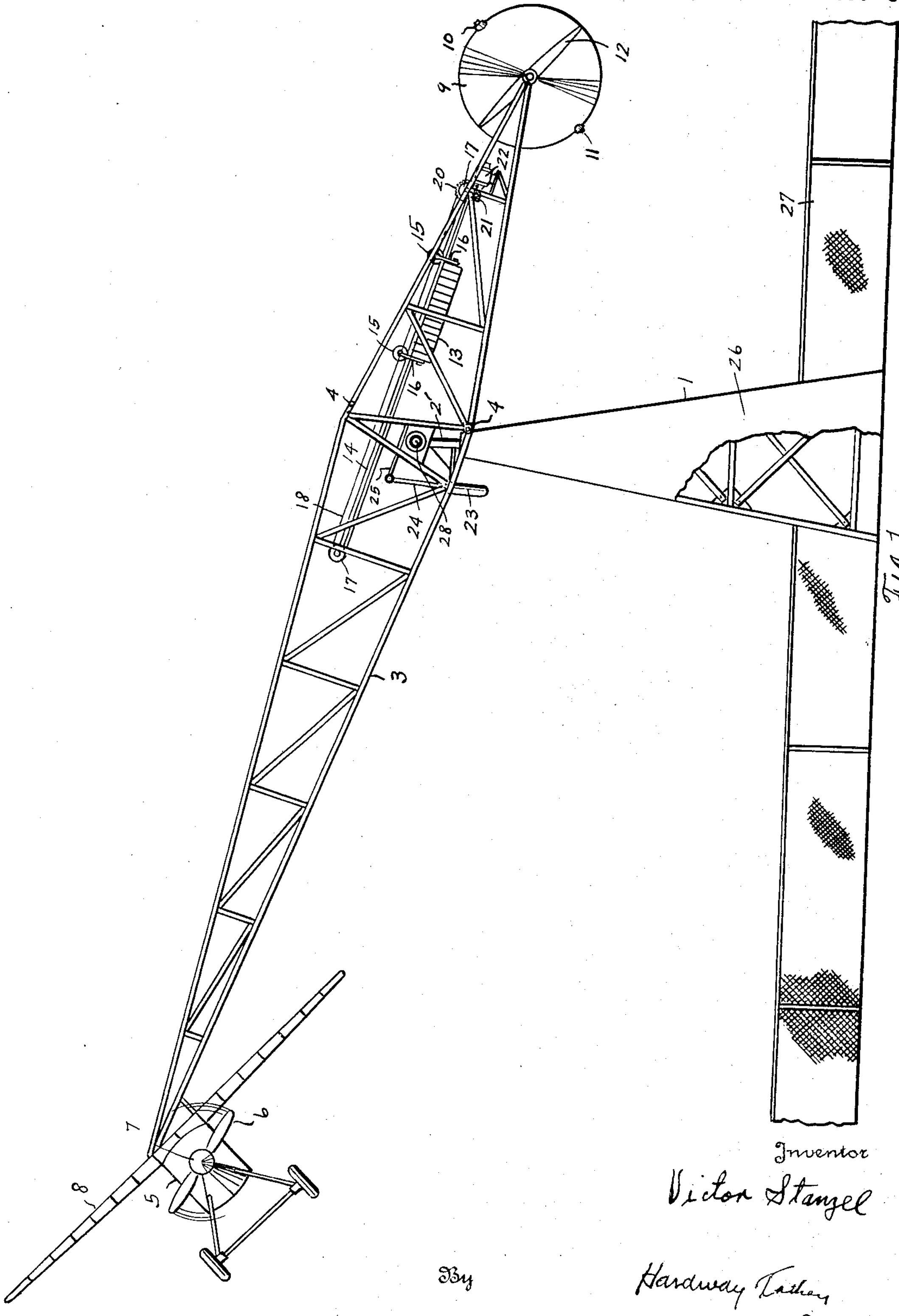

Fig. 1

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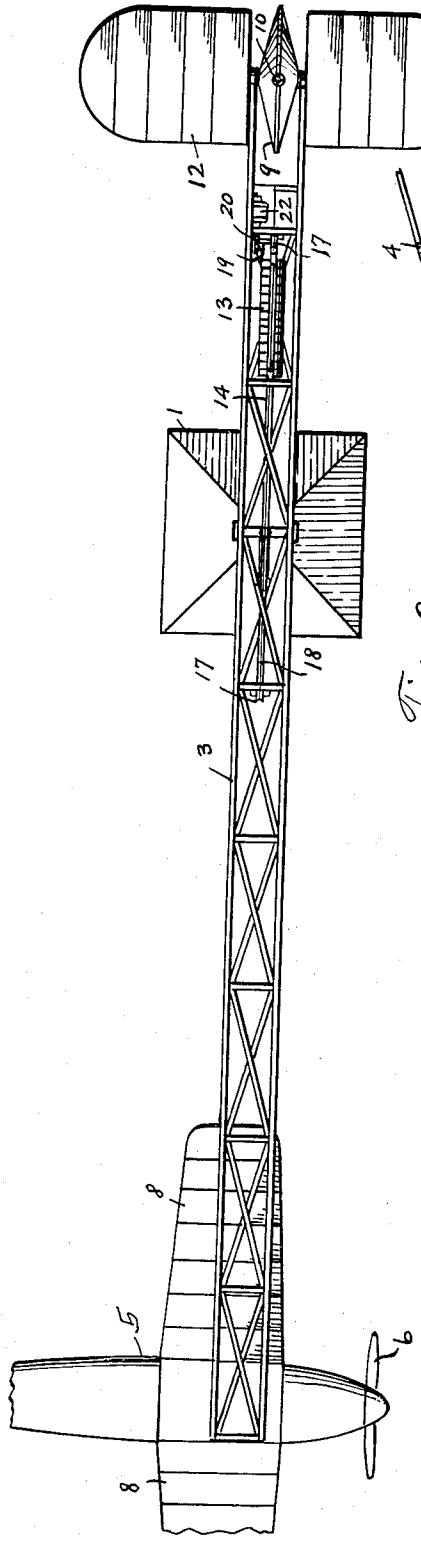

Fig. 2.

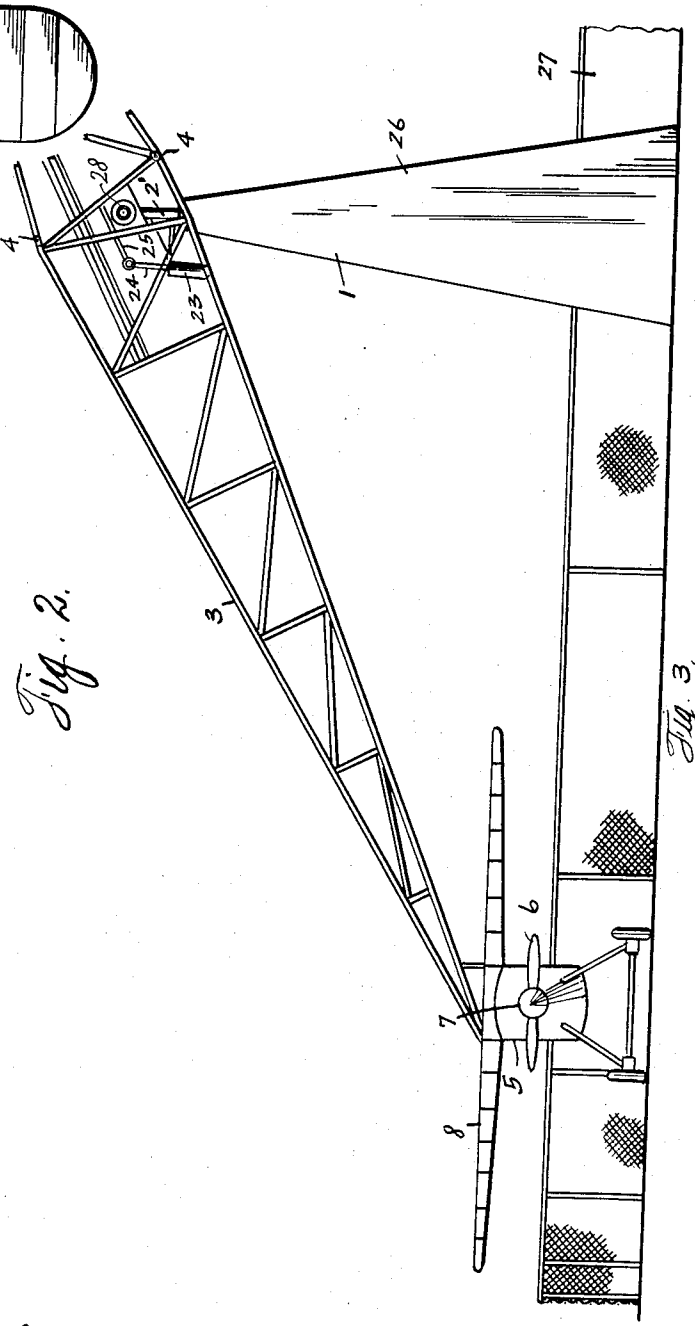

Fig. 3.

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AMUSEMENT APPARATUS

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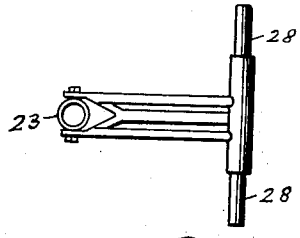

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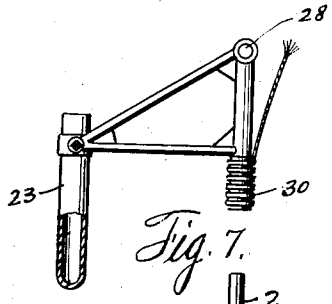

Fig. 7.

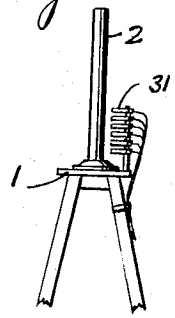

Fig. 6.

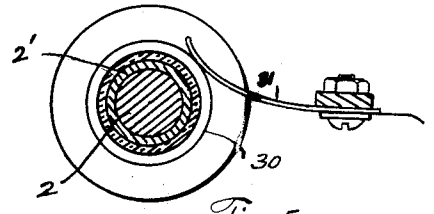

Fig. 5.

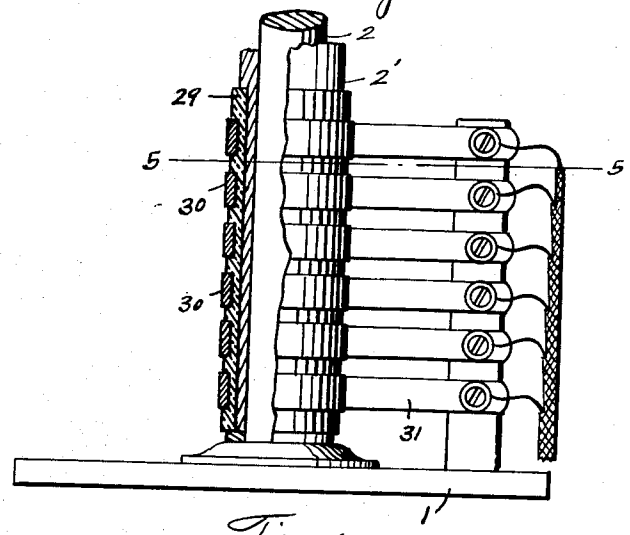

Fig. 4.

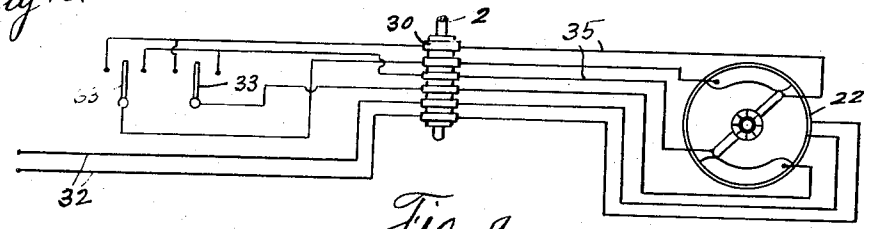

Fig. 9.

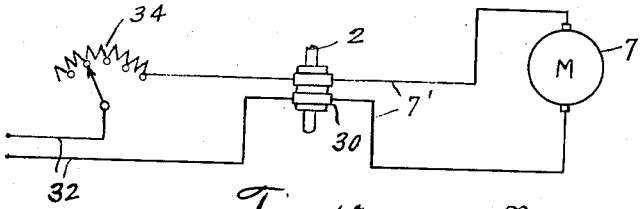

Fig. 10.

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UNITED STATES PATENT OFFICE

1,941,024

AMUSEMENT APPARATUS

Victor Stanzel, Schulenburg, Tex.

Application June 26, 1933. Serial No. 677,666

7 Claims. (Cl. 272—36)

This invention relates to an amusement apparatus.

An object of the invention is to provide an airplane of conventional design constructed to carry one or more passengers and suitably attached to one end of a supporting beam so mounted on a stand or derrick like support that said beam may revolve with the plane and may also move up and down in a vertical plane to permit the airplane to land and to take off.

Another object of the invention is to provide an amusement apparatus of this character having vertical and horizontal stabilizers for the airplane.

A further object is to provide an apparatus of this character having a movable weight which may be so adjusted on the beam as to counterbalance the weight of the plane.

A still further feature is to provide a suitable check device to control the up and down movements of the beam.

With the above and other objects in view the invention has particular relation to certain novel features of construction, operation and arrangement of parts, an example of which is given in this specification and illustrated in the accompanying drawings, wherein:—

Figure 1 shows a side view of the apparatus, partly broken away,

Figure 2 shows a plan view, partly broken away,

Figure 3 shows a fragmentary side view showing the plane in ground position.

Figure 4 shows a fragmentary side view of the bearing post for supporting the beam showing the associated sleeve, partly in section, and the electrical connections.

Figure 5 shows a transverse sectional view thereof taken on the line 5—5 of Figure 4.

Figure 6 shows a fragmentary side view of the stand showing the post mounted thereon.

Figure 7 shows a side elevation of the rotatable sleeve and associated parts.

Figure 8 shows a plan view thereof.

Figure 9 shows a wiring diagram through a reversible electric motor employed, and

Figure 10 shows the wiring diagram of the circuit into which the main airplane motor is connected.

Referring now more particularly to the drawings wherein like numerals of reference designate similar parts in each of the figures, the numeral 1 designates the stand which is of a derrick-like construction. This stand may be built up in any desirable manner to give the required strength but which is preferably a steel tube structure welded or bolted together. Upstanding from the top of the stand there is a fixed bearing post 2 on which there is a rotatable sleeve 2' and the beam 3 is pivotally mounted, by trunnion bearings 28, 28 on the sleeve to move up and down in vertical planes. This beam may be also built up in any desired manner and is preferably formed of steel tubing welded or bolted together. The beam may be formed of two sections, said sections being bolted together at the points 4, 4 so as to be readily separated for transportation purposes.

Fixed to one end of the beam there is the airplane designated generally by the numeral 5 and which is of conventional construction and of a size to accommodate any desired number of passengers. This plane is equipped with the propeller 6 driven from a suitable electric motor as 7 of any conventional construction and which is connected by the circuit 7' with a source of electrical supply in the usual manner. The airplane may be of any selected type, a monoplane type having the wings 8, 8 being shown.

Suitably mounted between the side members of the beam and at the end of the beam opposite the plane 5 there is a vertical stabilizer 9 composed of sheet metal and in the form of a double cone tank or drum. The drum may be filled with water to counterbalance the weight of the airplane and is provided with an intake 10 and outlet 11 for filling and emptying purposes. This drum has a sufficient wind resistance area to balance the drag of the airplane as will be necessary when the device is operated in a wind. Otherwise the airplane would be retarded while traveling against the wind and would speed up while traveling with the wind. In other words the vertical stabilizer 9 conduces to the uniformity of the speed of the plane when the same is being used in windy weather.

There is also a horizontal beam stabilizer 12 of the conventional airplane wing type structure. This stabilizer is necessary while operating the device in a wind as it balances the pressure of the wind when banking into or away from the wind. When the airplane is on the ground the stabilizer 12 will be in a substantially horizontal position and as the airplane goes up higher, the wings become correspondingly tilted. The wind blowing against the wings of the airplane tend to throw the plane up or down as the case may be. The stabilizer 12, however, tilts with the airplane as it goes up, this balancing the pressure. There is a movable weight 13 which may be moved along the longitudinal track 14 suitably mounted in the beam 3. Rollers 15, 15 are ar-

ranged to travel along said track and the weight 13 is swung from these rollers by means of the brackets 16, 16. At the ends of the track 14 are the sheaves 17, 17 around which the endless cable 18, works, and said brackets 16 are attached also to the upper run of the cable. One of the sheaves 17 is fixed on a shaft 19 which has a worm gear 20 fixed thereon. This gear 20 is in mesh with the screw gear 21 fixed on the shaft of the reversible electric motor 22. This motor is mounted on the beam and is wired in a conventional manner in an electrical circuit 35 which is equipped with suitable controlling switches 33 whereby the motor 22 may be stopped and started and the weight 13 may be adjusted along the track 14 in accordance with the weight of the load carried by the airplane 5.

The weight 13 may be adjusted out toward the corresponding end of the beam 3 so as to enable the plane 5 to reach the required elevation and may be adjusted in the opposite direction to permit the plane to land under considerable speed.

There is a conventional dash pot arrangement 23 whose cylinder is supported by the sleeve 2' and which has a plunger arrangement 24 which is pivoted to the arm 25 carried by the beam, whereby the vertical movements of the beam is checked particularly when the airplane is near the ground so as to prevent the plane from coming into too sudden contact with the ground surface.

As will be noted from an inspection of Figures 4 and 5 there is a tubular insulator 29 around the sleeve 2' having the spaced contact rings 30 therearound with which the flexible tongues 31 are in contact. Electrical connections are thus provided from the power lines 32 through the respective motors 7 and 22. The circuit 35 through the motor 22 may be controlled by the switches 33, 33 whereby the direction of rotation of said motor may be readily reversed for shifting the weight 13. A rheostat 34 is provided for controlling the speed of the motor 7.

The stand 1 may be covered with suitable fabric, or other covering 26 which may be given any desired color and in use the apparatus may be inclosed by a suitable guard or fence 27 for safety.

In use the weight 13 may be adjusted toward the airplane so that the plane will assume the position shown in Figure 3 on the ground where it may be anchored by any suitable anchoring device during the exit and entrance of the passengers. When the passengers have entered the weight 13 may be adjusted in the opposite direction to permit the airplane to ascend and the motor 7 started whereby the plane will be caused to fly around the circle of the field.

The drawings and description disclose what is now considered to be a preferred form of the invention by way of illustration only while the broad principle of the invention will be defined by the appended claims.

What I claim is:

1. An amusement apparatus comprising a stand, a beam mounted thereon to revolve and to move in vertical planes, an airplane on one end of the beam and horizontal and vertical stabilizers on the other end of the beam.

2. An amusement apparatus comprising a stand, a beam mounted thereon to revolve and to move up and down, an airplane on one end of the beam, a vertical and a horizontal stabilizer on the other end of the beam and a counterweight for the plane longitudinally adjustable on the beam.

3. An amusement apparatus comprising a support, a beam on the support mounted to move up and down and to revolve, an airplane attached to one end of the beam stabilizing means at the other end of the beam and a counterweight for the plane adjustable along the beam.

4. An amusement apparatus comprising a support, a beam mounted to revolve on the support, an airplane attached to one end of the beam, said beam being mounted to rock to permit the plane to ascend and descend, means for checking the descent of the plane.

5. An amusement apparatus comprising a support, a beam mounted to revolve on the support, an airplane attached to one end of the beam, said beam being mounted to rock to permit the plane to ascend and descend, means for checking the descent of the plane, and stabilizing means at the other end of the beam.

6. An amusement apparatus comprising a support, a beam mounted to revolve on the support, an airplane attached to one end of the beam, said beam being mounted to rock to permit the plane to ascend and descend, means for checking the descent of the plane, stabilizing means at the other end of the beam, and counter-balancing means adjustable along the beam.

7. An amusement apparatus comprising a support, a beam mounted to revolve on the support, an airplane attached to one end of the beam and a hollow drum-like stabilizer on the other end of the beam adapted to contain a liquid.

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