C. A. SNIDER.

REVOLVING SWING.

APPLICATION FILED MAR. 24, 1920. RENEWED DEC. 7, 1921.

1,403,205. Patented Jan. 10, 1922.

3 SHEETS—SHEET 1.

Fig. 1.

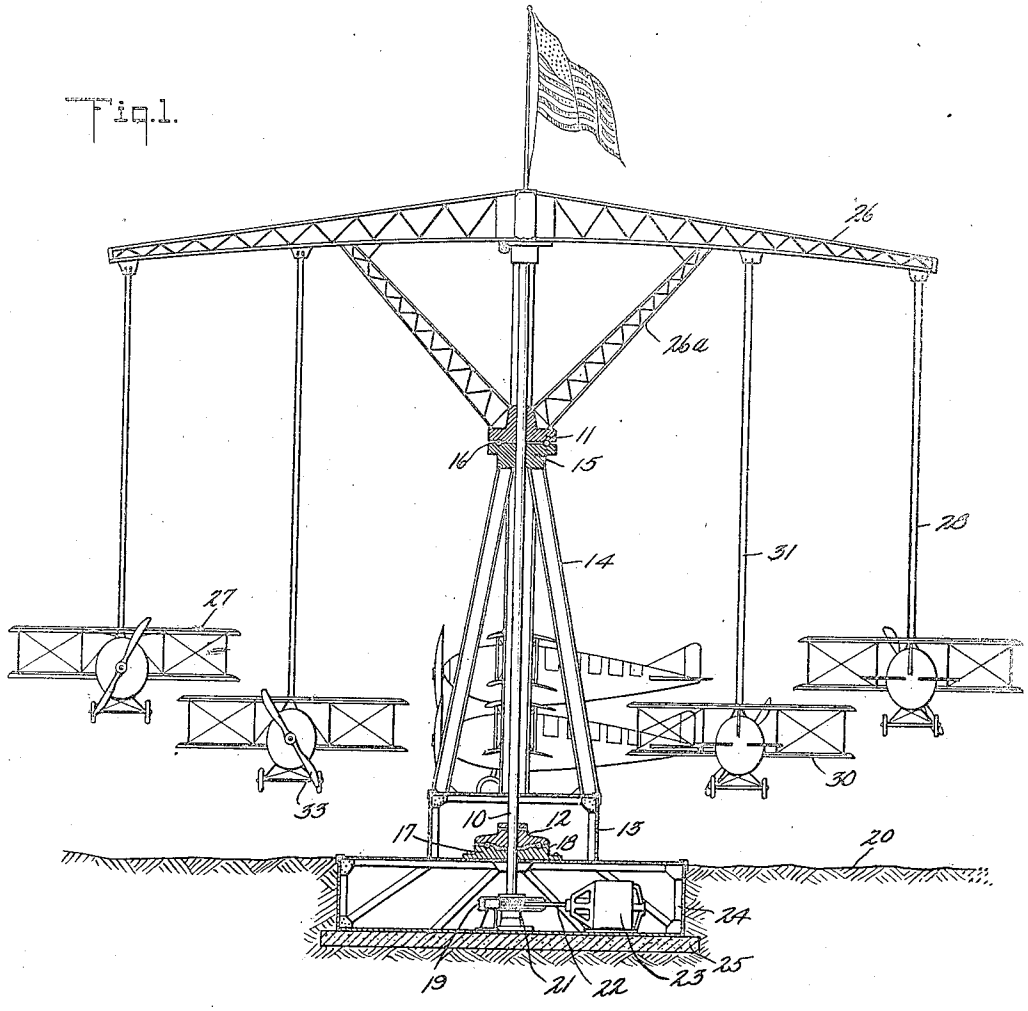
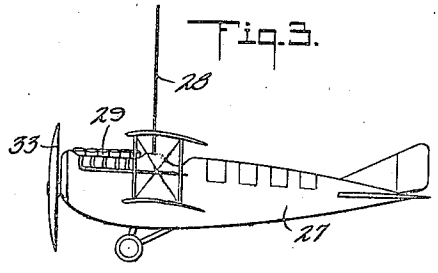


Fig. 3.



WITNESSES

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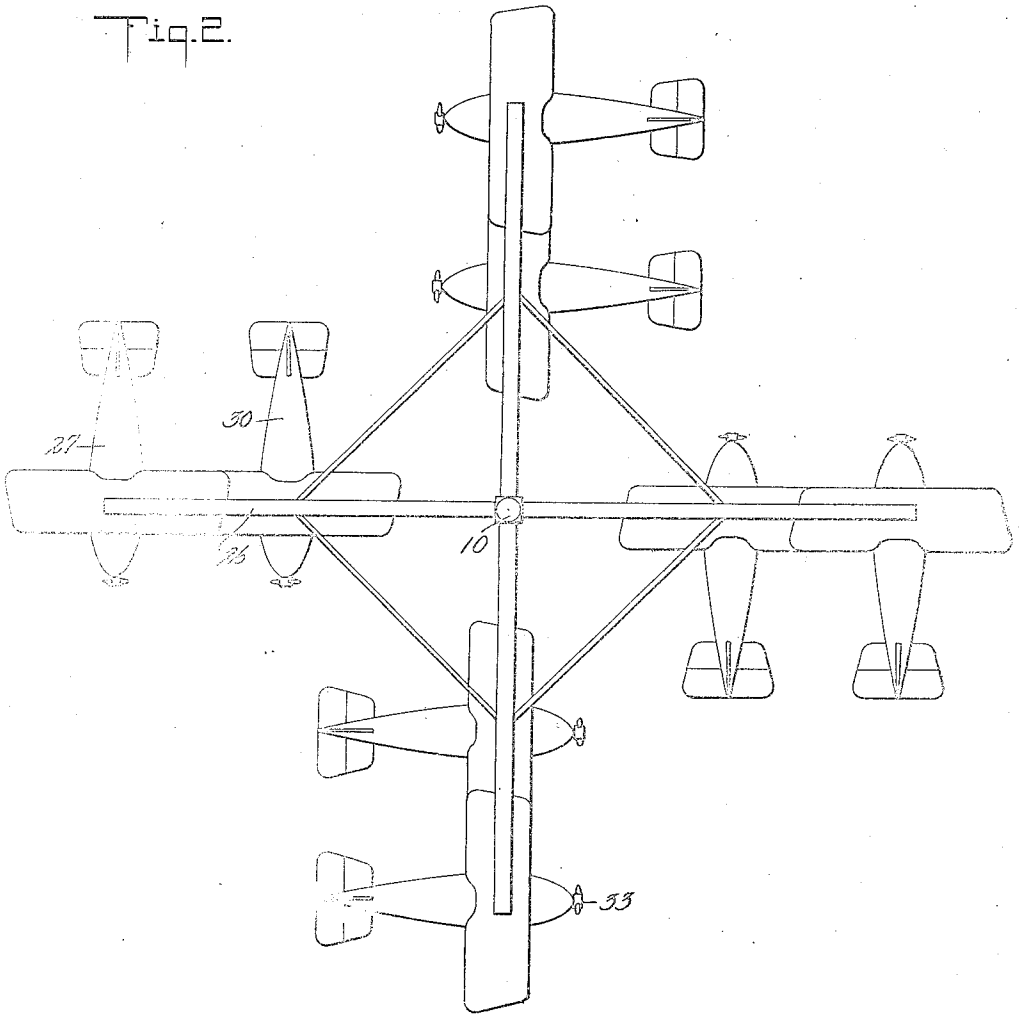
3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 5.

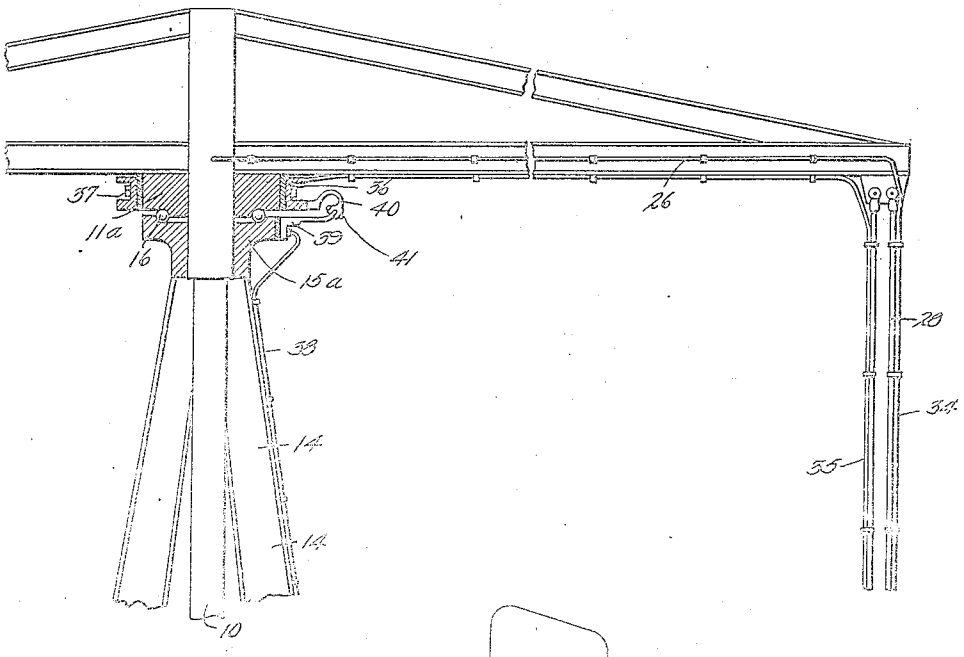
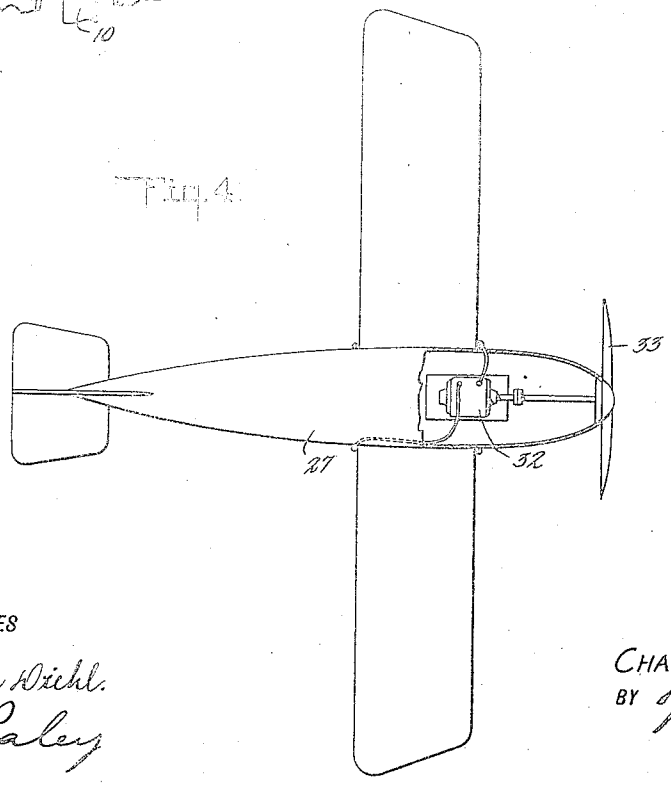


Fig. 4.



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UNITED STATES PATENT OFFICE.

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REVOLVING SWING.

1,403,205. Specification of Letters Patent. Patented Jan. 10, 1922.

Application filed March 24, 1920, Serial No. 368,474. Renewed December 7, 1921. Serial No. 520,763.

To all whom it may concern:

Be it known that I, CHARLES A. SNIDER, a citizen of the United States, and a resident of Atlanta, county of Fulton, and State of Georgia, have invented a new and Improved Revolving Swing, of which the following is a full, clear, and exact description.

This invention relates to revolving swings, and has reference more particularly to a revolving swing having a plurality of aeroplanes, dirigibles, or balloons suspended from radial arms so that the propellers in said air ships will cause or assist the swing to rotate.

An object of this invention is to provide an amusement device which will be simple of construction and which will give amusement to both old and young.

Reference is to be had to the accompanying drawing forming a part of this specification, in which it is understood that the drawing illustrates only one form of the invention with certain modifications, and in which—

Figure 1 is a central sectional view through the revolving swing.

Figure 2 is a plan view of the rotating swing.

Figure 3 is a side elevation of one of the aeroplanes provided with an internal combustion engine for operating the propeller.

Figure 4 is a plan view of one of the modified aeroplanes provided with an electric motor, portions of said aeroplane being broken away to disclose the construction.

Figure 5 is a central sectional view on a large scale through the upper end of a modified revolving swing showing the arrangement of the electrical connections.

Referring to the accompanying drawing by numerals, 10 indicates the center pole of the revolving swing to which is secured an upper ball race 11 and a lower ball race 12. The center pole is supported by means of a lower frame work 13 from which oblique standards 14 extend upwardly to support a bearing 15, so that ball bearings 16 or any other anti-friction device can be placed between said ball race 11 and bearing 15. The lower ball race 12 is supported by means of a lower bearing 17, and ball bearings 18 are placed therebetween. Any suitable driving mechanism or source of energy may be used to rotate the center pole 10, and as illustrated a worm wheel 19 is secured to the lower end of the pole 10 below the surface 20 of the ground. A worm 21 engages the worm wheel 19 and is mounted on a motor shaft 22 which is rotated by means of a motor 23. The frame work 13 may be supported by any underground frame work 24, which may be supported by a concrete base 25. A plurality of radially extending arms 26 may be secured to the upper end of the pole 10 and these arms are supported by oblique struts 26_a. An aeroplane 27, airship, balloon, or a car of any kind adapted to carry passengers may be supported from the end of each arm 26 by means of cables 28, and each car may be provided with an internal combustion engine 29 as shown in Figure 3, or only one aeroplane may be provided with an engine. Furthermore, aeroplanes 30, or other objects can be suspended from the arms 26 at any point intermediate the end and the pole 10 by means of cables 31. In Figs. 4 and 5 the device is modified so that an electric motor 32 will be placed in one or more of the aeroplanes to operate propeller 33. One electric wire 34 may lead up the cables 28 and be connected to the rotating pole 10. A second electric wire 35 may lead up the cables 28 from the motor 32 and be electrically connected to a slip ring 36 secured to a ball race 11_a by means of bolts 37. An electric wire 38 may lead up the oblique standards 14 and be secured electrically to a bracket 39 secured to and electrically insulated from a bearing 15_a. A brush 40 may be removably and adjustably secured to the bracket 39 by means of a bolt 41, and the end of said brush opposite the bolt 41 may make contact with the slip ring 36 as the swing rotates, so that current will be continuously supplied to the electric motor 32. A similar contact device may be provided on the lower bearing of the pole 10 so that current may be supplied to said pole.

In operation a variety of combinations can be obtained with my device; one of the aeroplanes may be provided with an internal combustion engine as shown in Figure 3 or a motor as shown in Figure 4, which will operate the propeller of said aeroplane, thus causing the swing to rotate and pulling the other suspended aeroplanes around with the rotating swing; all of the aeroplanes may be supplied with motors or engines so that all will act to cause the swing to rotate; the motor may be provided for rotating the center pole as shown in Figure 1 which may act independently by rotating the swing

without assistance from the motors in any of the aeroplanes, or one or more aeroplane motors or engines may assist the motor 23 in causing the swing to rotate.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the mechanical details herein illustrated, since manifestly the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a device of the class described, a rotatably mounted center pole, an upper ball race secured to the upper end of said center pole, a lower ball race secured near the lower end of said center pole, a bearing associated with each ball race, a plurality of ball bearings between said ball races and said bearings, a plurality of radial arms secured to the upper end of said center pole, an oblique supporting strut between said upper bearing and each of said arms, a worm engaging said worm wheel and mounted on a power shaft, means for rotating said power shaft so that said center pole and said arms will be rotated, aeroplanes suspended from said arms constrained to rotate therewith, a motor provided in one of said aeroplanes and connected with the propeller thereof, said motor being adapted to aid said power shaft in causing the rotation of said center pole, and means associated with said electric motor for supplying current from a source of energy on the ground.

2. In a device of the class described, a support, a vertical center pole rotatably mounted in upper and lower bearings of the support, means for rotating the pole, a plurality of radial arms on the pole, aeroplanes suspended by cables from the ends of the arms, an electric motor in one of the aeroplanes, a ring mounted on one of the upper bearings of the pole to turn therewith, a bracket secured to the other upper bearing, a brush mounted on the bracket and engaging the said ring, an electrical connection between the electric motor and ring, and an electric wire leading from the bracket down the support, and adapted to be connected with a source of electrical energy on the ground.

CHARLES ALBERT SNIDER.