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2,646,645

TOY AIRPLANE AND TRACK

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2 Sheets-Sheet 1

Fig. 1-

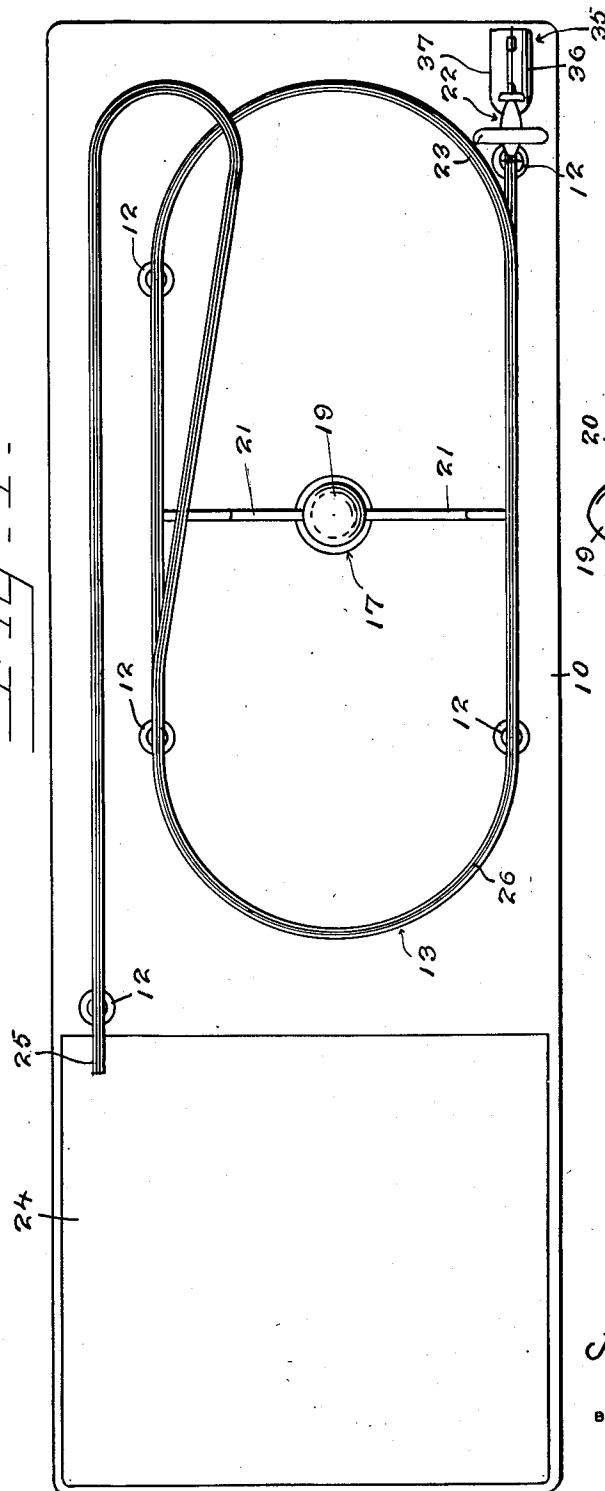
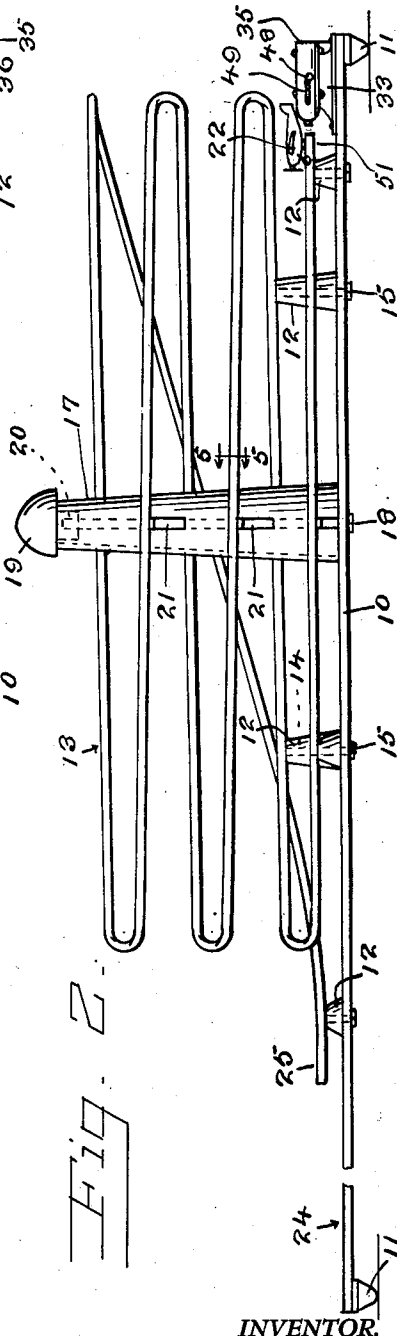


Fig. 2-



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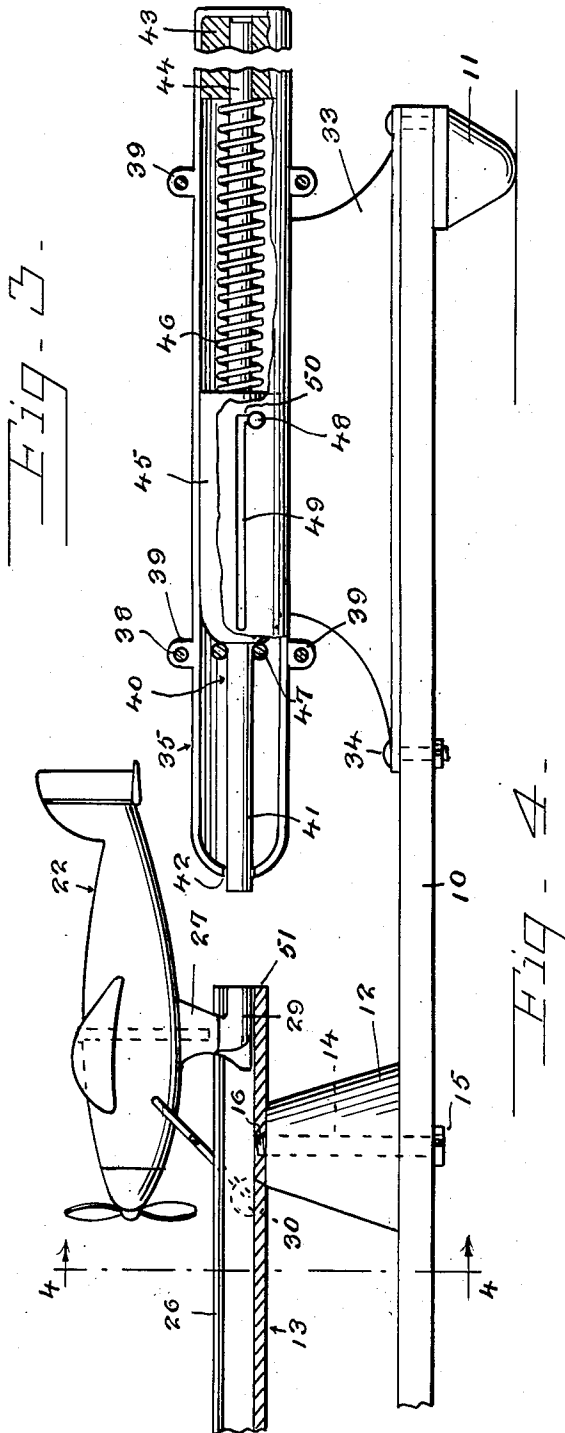
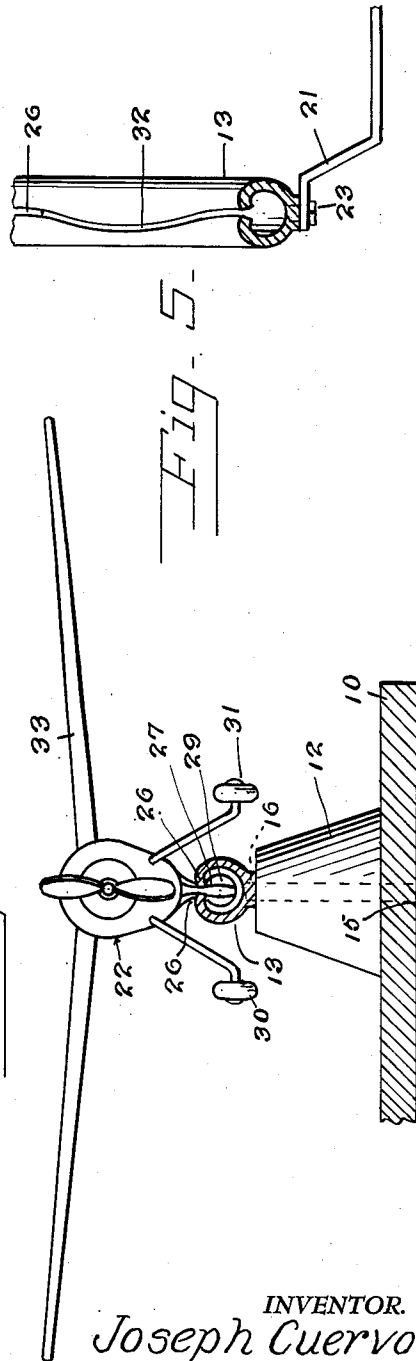
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## UNITED STATES PATENT OFFICE

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## TOY AIRPLANE AND TRACK

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4 Claims. (Cl. 46—76)

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This invention relates to a toy, and more particularly to a toy amusement device simulating an airplane in flight.

The object of the invention is to provide an amusement device in which a toy airplane is caused to travel along a circuitous track or rail to thereby stimulate and satisfy the child using the device.

Another object of the invention is to provide an amusement device whereby a toy airplane is propelled along a circuitous track to thereby simulate the movements of an airplane in flight.

A further object of the invention is to provide a toy amusement device which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Figure 1 is a top plan view of the toy amusement device, according to the present invention;

Figure 2 is a side elevational view of the toy amusement device;

Figure 3 is an enlarged side elevational view of a portion of the amusement device, with parts broken away, and in section showing the propelling mechanism; and

Figure 4 is a sectional view taken on the line 4—4 of Figure 3; and

Figure 5 is an enlarged sectional view of the device taken on the line 5—5 of Figure 2.

Referring in detail to the drawings, the numeral 10 designates a horizontally disposed platform which may be fabricated of any suitable material. The platform 10 is supported on a horizontal supporting surface by means of a plurality of spaced feet 11. Projecting upwardly from the platform 10 are a plurality of spaced blocks or posts 12 for supporting thereon a rail or track 13 which is arranged in a circuitous path. The blocks 12 are each provided with a longitudinally extending bore 14 and a headed bolt 15 projects through the platform 10 and through the bore 14 in each of the blocks 12, the upper end of the bolt 15 being arranged in threaded engagement with a threaded aperture 16 in the bottom portion of the rail 13 for maintaining the rail immobile. The blocks 12 are of varying heights, in order to support and maintain the rail 13 in its proper position.

Arranged at the center of the platform 10 is a vertically disposed pylon 17, and for securing the pylon 17 to the platform 10, an elongated securing element such as a bolt 18 projects longi-

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tudinally through the pylon 17. A cap 19 has a portion thereof arranged in threaded engagement with the threaded end 20, Figure 2, of the bolt 18. The cap 19 is adapted to be gripped by the user so that the amusement device can be readily moved from place to place as desired. Further, the pylon 17 has secured thereto a plurality of braces 21 which have their outer ends secured to portions of the rail 13 to thereby help to brace and support the rail 13. The braces 21 are shaped so that they will not interfere or obstruct the movement of the toy airplane 22 during its travel along the rail 13. The rail 13 is secured to the braces 21 by means of securing elements, such as screws 23, Figure 5. Arranged along one end of the platform 10 is a landing area 24 for receiving the airplane after it leaves the end 25 of the rail 13.

The rail 13 is provided with a slot 26 which extends longitudinally along the top thereof. Depending from the bottom of the airplane 22 is a shank 27 which projects through the groove 26, the shank 27 being secured to the body of the airplane 22. Formed integral with or secured to the lower end of the shank 27 is a hammer head 29 which is slidably arranged within the rail 13. The airplane 22 also includes a pair of forwardly extending wheels 30 and 31 so that when the toy airplane leaves the end 25 of the rail 13 the airplane 22 will roll for a short distance along the landing area 24. Further, the slot 26 is so formed that there are a plurality of curved arcuately extending sections 32, Figure 5, arranged therein, so that as the airplane 22 travels therealong, the wings 33 of the airplane will periodically dip to thereby simulate the realistic flight of an airplane.

A propulsion means is provided for causing the airplane 22 to travel along the circuitous rail or track, and this propulsion means comprises a base 33 which may be secured to the platform 10 by suitable securing elements such as bolt and nut assemblies 34, Figure 3. The base 33 supports a hollow casing 35, the casing 35 including a pair of opposed sections 36 and 37. Suitable pins or rivets 38 project through registering apertured ears 39 for maintaining the sections 36 and 37 of the casing 35 in assembled relation.

Slidably arranged in the casing 35 is a plunger 40 which is provided with a forwardly extending shank 41. The shank 41 slidably projects through an opening 42 in the front of the casing 35, and the shank 41 is adapted to strike the hammer head 29 to cause the airplane 22 to be propelled or travel along the rail 13. A bushing 43 is seated in the rear end of the casing 35 and the

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bushing 43 slidably receives the rear end of the arm 44 when the plunger 40 is in its rearmost position, the arm 44 being secured to the rear end of the plunger 40. Arranged intermediate the ends of the plunger 44 is an enlarged shoulder portion 45 and a coil spring 46 is interposed between the shoulder portion 45 and the bushing 43 for normally urging the plunger 40 into striking engagement with the hammer head 29. A rubber bumper 47 is circumposed on the shank 41 and the rubber bumper 47 serves as a shock absorber when the plunger 40 moves forwardly. For actuating the plunger 40, a projecting pin 48 is secured to the shoulder portion 45 of the plunger 40, and the pin 48 slidably projects through a slot 49 in the casing 36. The slot 49 terminates in a right angular notch 50 for receiving therein the pin 48 in order to maintain the plunger 40 in its cocked or rearmost position.

The operation of the toy amusement device is as follows:

The user moves the pin 48 rearwardly in the slot 49 to thereby compress the coil spring 46. Then the airplane 22 is arranged so that it is at the starting end 51 and with its shank 27 projecting through the slot 26 in the rail 13. The plunger 40 is thus cocked and it can be maintained in this position, as shown in Figure 3, by positioning the pin 48 in the notch 50. To cause the airplane 22 to travel along the rail 13, the pin 48 is disengaged from the notch 50 so that the coil spring 46 will quickly propel the plunger 40 forwardly whereby the front end of the shank 41 will strike the hammer head 29 and cause the airplane to travel along the track 13. As the plane travels along the track it will follow the circuitous path thereof, and by means of the arcuate portions 32 in the slot 26, the wings 33 will periodically dip so that the toy airplane will simulate the realistic flight of an airplane. Finally, the airplane will be discharged off of the end 25 of the rail 13 and the plane will alight on the landing area 24 where it will roll to a stop. The airplane 22 can then subsequently be replaced on the starting end 51 of the rail and the operation can be repeated as desired. The cap 19 on the pylon 17 serves to provide a means whereby the device can be readily moved around or carried as desired. The shank 27 is of a size to readily slide in the slot 26, and the rail 13 can be oiled as desired in order to insure that the shank 27 and hammer head 29 smoothly slide therealong.

It is to be understood that the form of the invention shown and described is to be taken as a preferred embodiment and that various changes in the shape, size and arrangement of parts may be made without departing from the scope of the subjoined claims.

I claim:

1. In a toy amusement device, a platform, a rail supported above said platform, a toy airplane mounted for travel along said rail, a plunger supported on said platform for engagement with said airplane, a landing area arranged on said platform for receiving said airplane after the airplane leaves said rail, and a plurality of blocks projecting upwardly from said platform for supporting said rail thereon, said rail having an end adjacent the landing area and having an undulating slot receiving a shank depending from the airplane, whereby the wings of the airplane will periodically dip upon movement of the airplane therealong to thereby simulate a realistic flight of an airplane.

2. In a toy amusement device, a platform, a

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rail supported above said platform, a toy airplane mounted for travel along said rail, a plunger supported on said platform for engagement with said airplane, a landing area arranged on said platform for receiving said airplane after the airplane leaves said rail, a plurality of blocks projecting upwardly from said platform for supporting said rail thereon, said rail having an end adjacent the landing area and having an undulating slot receiving a shank depending from the airplane so that the wings of the airplane will periodically dip upon movement of the airplane therealong to thereby simulate a realistic flight of an airplane, and a pylon secured to said platform and supporting said rail.

3. A toy amusement device comprising a platform, a plurality of spaced blocks projecting upwardly from said platform and secured thereto, a circuitous rail supported by said blocks, said rail being provided with a longitudinally extending undulating slot, an airplane mounted for travel along said rail, a shank dependingly carried by said airplane and projecting into said slot, a hammer head secured to the lower end of said shank and slidably positioned within said rail, a landing area arranged on said platform for receiving said airplane, a pylon projecting upwardly from said platform and supporting said rail, and propulsion means for causing said airplane to travel along said rail, said propulsion means comprising a base secured to said platform and arranged adjacent an end of said rail, a casing supported on said base, a plunger slidably arranged in said casing and adapted to strike said hammer head, a coil spring circumposed on said plunger for normally urging said plunger into striking engagement with said hammer head, and manually operable means for controlling the actuation of said plunger.

4. A toy amusement device comprising a platform, a plurality of spaced blocks projecting upwardly from said platform and secured thereto, a circuitous rail supported by said blocks, said rail being provided with a longitudinally extending undulating slot, an airplane mounted for travel along said rail, a shank dependingly carried by said airplane and projecting into said slot, a hammerhead secured to the lower end of said shank and slidably positioned within said rail, a landing area arranged on said platform for receiving an airplane, an end of said rail being arranged adjacent the landing area and a pylon projecting upwardly from said platform and operatively connected to said rail.

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