

June 11, 1935.

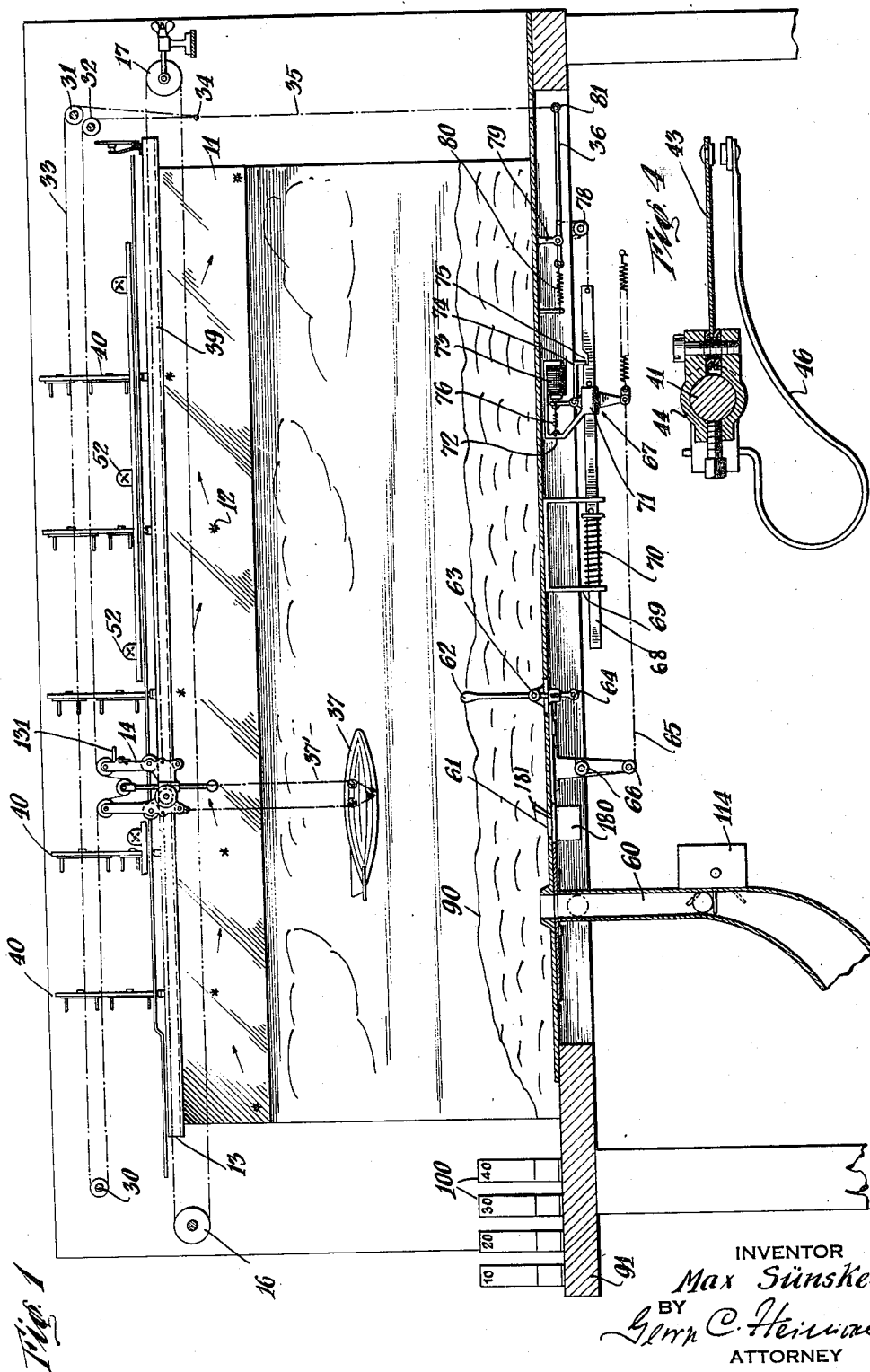
M. SÜNSKES

2,004,591

AMUSEMENT DEVICE

Filed Jan. 16, 1934

3 Sheets-Sheet 1



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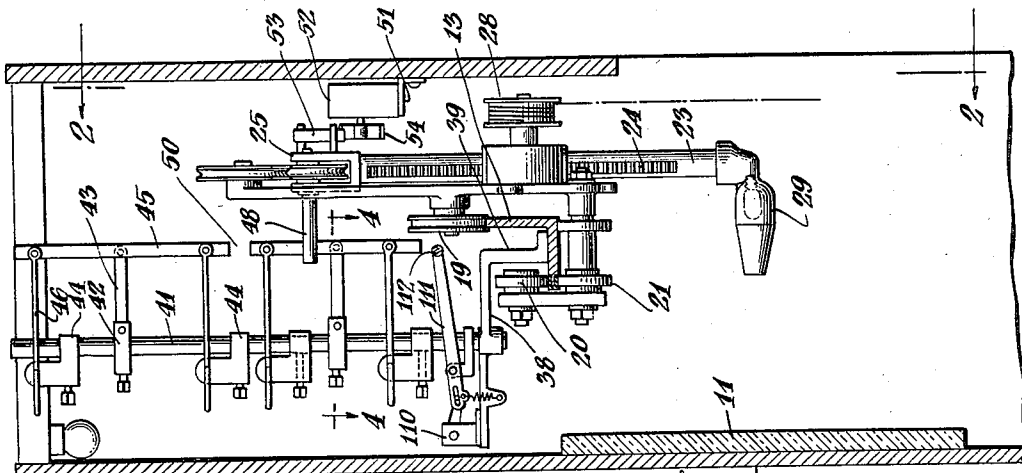


Fig. 3

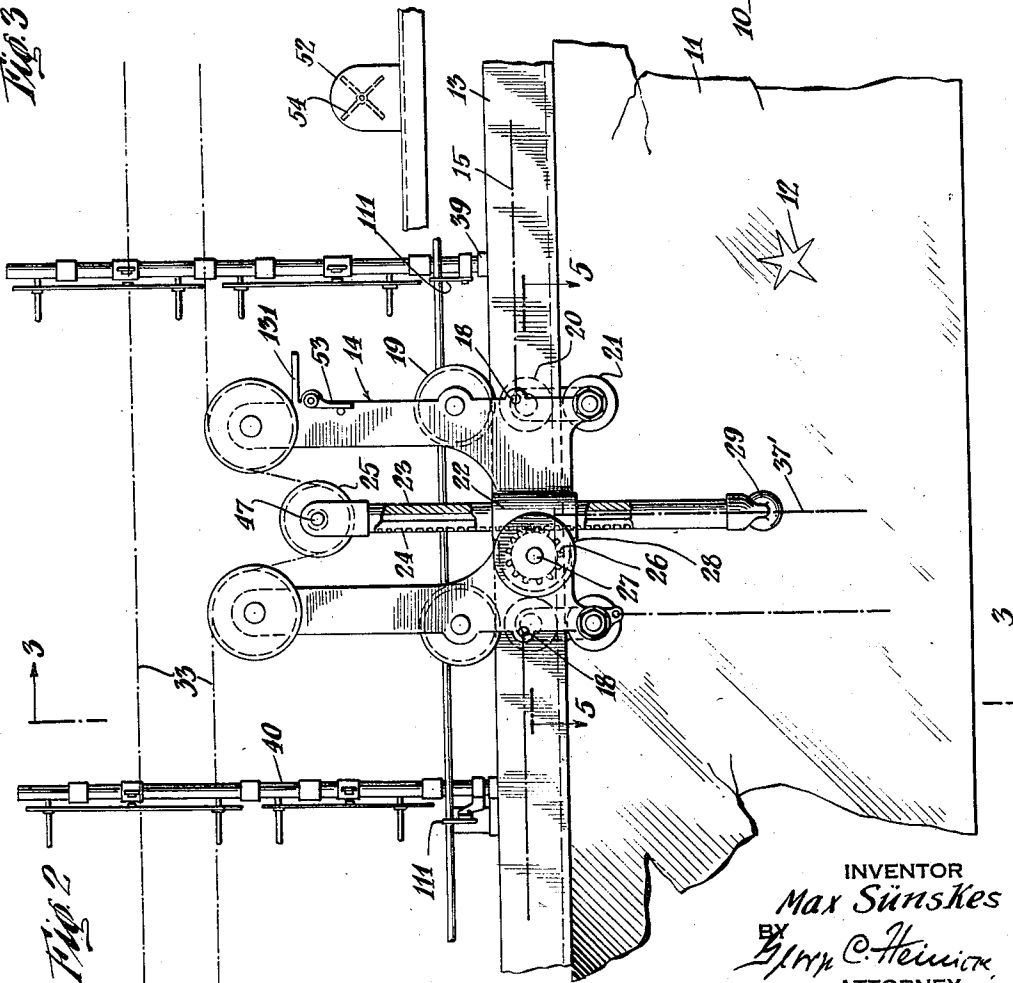


Fig. 2

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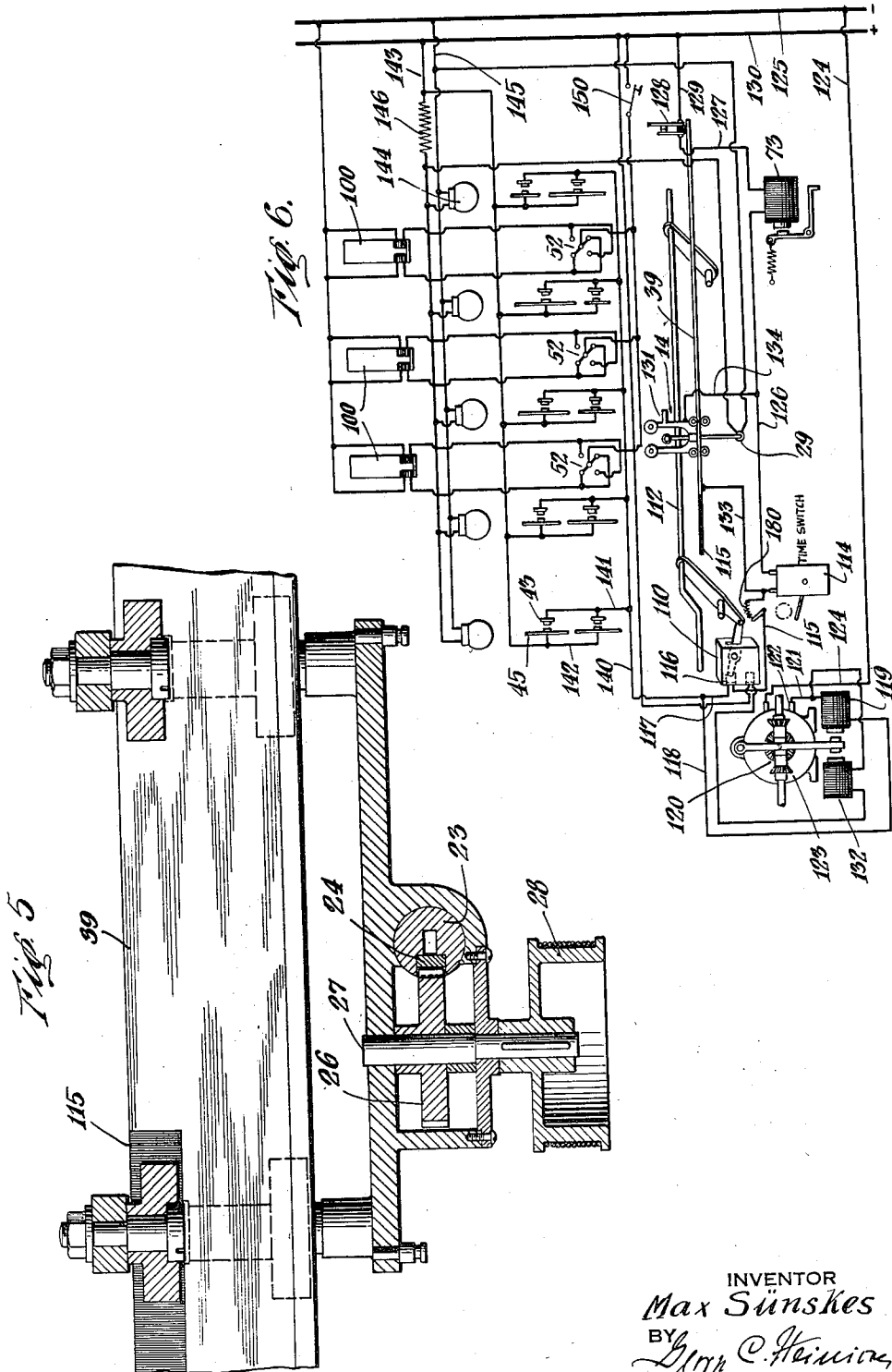
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UNITED STATES PATENT OFFICE

2,004,591

AMUSEMENT DEVICE

Max Sünskes, New York, N. Y.

Application January 16, 1934, Serial No. 706,800

6 Claims. (Cl. 273—1)

This invention relates to an amusement device requiring a certain skill for its successful and proper operation and it is the principal object of my invention to provide an electrically controlled device including a traveling carriage from which a lamp and an airship are suspended from a vertically displaceable bar and which must be guided through a path indicated by stars of plain glass formed in a mirror. The electrical circuit will remain closed during the proper guiding of the light but will be opened as soon as the player deviates from the path indicated by the stars, the lamp will be extinguished and allow the airship to drop into what appears to be the representation of water painted on the rear wall of the device.

Another object of my invention is the provision of suitable contact means of a novel and specific construction opening and closing the circuits according to the progressive movements of the carriage and light.

Still another object of my invention is the provision of a coin operated amusement device in which the insertion of a proper coin will release a clutch mechanism releasing an operating lever for the manual operation of the device.

A still further object of my invention is the provision of an amusement device the various operative steps of which are controlled by suitable throw switches regulating the motor operation to reverse the same at the end of the game to allow a return of the carriage into its original position for a new play. The light thrown at the mirror will always appear in its true position no matter at what angle you look upon it so that the player will never be misled as to the proper position of the stars.

These and other objects and advantages of my invention will become more fully known as the description proceeds and will then be specifically defined in the appended claims.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a front elevation of an amusement device constructed according to my invention, partly in section.

Fig. 2 is a fragmentary front elevation of the central part of my device on an enlarged scale, seen in the direction of arrows 2—2 of Figure 3.

Fig. 3 is an end elevation in section on line 3—3 of Figure 2.

Fig. 4 is a sectional detail view of a contact device, the section being taken on line 4—4 of Figure 3.

Fig. 5 is a section on line 5—5 of Figure 2. Fig. 6 shows a wiring diagram.

As illustrated, the rear wall 10, Figure 3, of the device supports on its inner face a mirror 11 having a plurality of stars 12 of clear glass provided therein by removing the mirror amalgam.

Above the mirror, a rail 13 is mounted on which the wheels of a carriage 14 run back and forth, the carriage being drawn by a cable 15 guided over a driving pulley 16 which is operated from a suitable motor and an idler 17, both ends of the cable are attached, as indicated at 18 Figure 2, to opposite sides of the carriage.

A series of guiding rollers 19, 20 and 29 keep the carriage properly guided during its to and fro movements.

The carriage is formed with a central boss 22 in which a slotted hollow bar 23 is vertically reciprocating containing a rack 24, the teeth of which protrude through the slots in bar 23. On top of bar 23 is mounted a lifting pulley 25, and an idler gear 26 on a stud 27 meshes with rack bar 24, and stud 27 carries also a wire drum 28 for a purpose later to be described.

A light 29, Figure 3, is provided at the lower end of bar 23.

Idler rollers 30, 31, 32 (Figure 1) guide a cable 33, both ends of which are combined, as at 34, and are then continued as one unit connected to a lever 36.

On cable 33 the pulley 25 is supported in such a manner that a pull exerted on cable 33 will lift bar 23 and an airship 37 suspended from cable 37', as the sliding motion of rack 24 will turn idler gear 26 and the cable drum 28 over which cable 37' is guided, so as to either lower or lift the airship.

At the same time it is the aim of the player to bring the light from lamp 29 into accurate position to be directed onto one of the stars 12. This operation is done manually while the carriage moves forward under the operation of pulley 16 from a motor not shown.

The return movement of the carriage is effected by the reverse motion of the motor as will later be described and for the purpose of resetting the device for a new play.

On a bracket 38 (Figure 3) supported by angle irons 39 and 13 are supported a series of contact carriers generally designated 40, each comprising a vertical rod 41 carrying a plurality of superposed spaced sleeve members 42 adjustably held on the rod, each holding a contact

plate 43 insulated from the frame work of the device.

Brackets 44 on posts 41 support by means of the flexible wires 46 contact plates 45. These contact arrangements are duplicated on each post and spaced from one another by a space 50.

Carriage 14, specifically an extension 47 of the shaft of roller 25 has a rearwardly extending pin 48 sliding at the correct operation of the device between the contacts through space 50. At an incorrect operation of the device this pin 48 will strike either section of the contacts and short circuit the lights and thus extinguishing lights 29 which are then switched on again on the reverse motion of the motor, and thus resetting the device as will be described later on.

An angle iron 51 is mounted on the frame of the device (Figure 3) and supports a series of throw switches 52.

A pawl 53 mounted on carriage 14 operates the switch lever 54 which actuates a ticket discharge device during the forward travel of the carriage to eject reward tickets in case of proper manipulation as will hereafter be more fully described.

A coin drop 60, Figure 1, is supported by a platform 61 and closes upon the insertion of a proper coin the motor circuit, to move the carriage.

A hand lever 62 is mounted on a pivot 63 on a bracket, secured to the frame of the device, and has an extension 64 (Fig. 1) to which a cable 65 is secured. Said cable being guided therefrom over a number of guide rollers 66 to an electrically controlled clutch generally designated 67.

This clutch device comprises a flat bar 68 mounted on a bracket 69 at the bottom of platform 61 and a spring 70 wound about bar 68 between brackets 69 and a pin on said bar has the tendency to throw the clutch to the right. A sleeve 71 is slipped over bar 68 and carries an extension bracket 72 supporting an electromagnet 73.

Bell-crank lever 74 is pivoted to sleeve 71 and engages a notch 75 in bar 68 when electromagnet 73 is energized, while in its de-energized condition the spring 76 will disengage the clutch. A wire 77 leading over a pulley 78 is secured to lever 36 pivoted at 79, while a spring 80 tends to balance lever 36 in its neutral position, the other end of lever 36 has attached thereto the cable 35.

The rear wall of the device behind mirror 11 has at its front painted a scene 90 representing sky and water.

The energization of the magnets takes place intermittently.

On bracket 38, Figure 3, is supported a double acting switch 110' which is operated by a pivoted lever 111 carrying a bar 112 extending across the entire device.

This switch controls the forward and reverse movements of the carriage 14 by pin 48 in other words, if the game is over, and rod 23 as well as airship 37 are at their lowermost position, pin 48 moves bar 112 downward therefore reversing and throwing switch 110' into the reverse position.

Rail 39 has its left hand end insulated for a purpose explained in the circuit diagram.

The coin drop 114 has a time switch connected to it which may be of any well known construction serving the purpose of keeping the circuit closed long enough to allow carriage 14 to pass the insulated section 115 (Figure 5) of

rail 39 and therefore completes the circuit through said carriage.

As shown in Figure 6, current flows from drop 114 through connection 115' into the forward switch 116 from there through wire 117, and wire 118 into magnet 119 to operate clutch 120 to operate the motor in one direction. At the same time lead 121 leads to terminal 122 of motor 123 and out through lead 124, to again supply main line 125. Lead 126 leads to magnet 73 and a switch 128 through lead 127, therefore engaging clutch mechanism 67. Lead 129 connects with positive wire 130 thus completing the circuit.

Extension 131 on carriage 14 in the furthest position thereof will open switch 128 and therefore interrupt or break the circuit and stop the motor. As described above, at this point pin 48 will drop onto bar 112 and therefore throw switch 110' into reversed position, and by this movement electromagnet 132 will be energized and clutch 120 thrown the other way, the motor reversed and the carriage returned into its original position.

As soon as the time switch connected to drop 114 is released and carriage 14 on the metallic part of rail 39, the circuit is complete through wire 133 through the carriage and through wire 134 back to lead 126 therefore bridging the switch of 114.

The control switches are connected as follows: off line 117 current is taken through wire 140 and wire 141 to one side of the control switch 43. At the other side of switch 43, wire 142 connects control switch 45 with line 143 to main supply line 130.

As the circuit diagram shows, a series of the switches described may be connected in parallel. To illuminate the device a series of electric lamps 144 is branched off the main line through wires 143 and 145; behind the wire 142 a resistance coil 146 is interposed, so that by the closing of contacts 43 and 45 respectively the current is short circuited and lights 144 and 29 are extinguished.

A series of throw switches 52 are connected to the main line and will energize the magnets 107 and 108 of the ticket discharge device alternately so that the operation of its armature in one or the other direction will attract the lowermost ticket of the respective stack to be issued through opening 102.

In case it is not intended to use this section of the circuit, a manually operated switch 150 is provided in the side line.

The device operates as follows:

As soon as the motor is started by the insertion of a coin to guide the carriage and its airship towards the right, the closed circuit will illuminate the lamp. It is now the task of the player to accurately guide the lamp by the proper operation of its rod suspended from the carriage during the travel of the same along a path indicated by the stars. If this is properly done, the pin 48 will always be between the sets of contacts. If however the player deviates by oversight or neglect from the prescribed path, the pin 48 will engage one or the other set of contacts, normally keeping the circuit closed, and will break the circuit, thus extinguishing the light and the airship will drop apparently into the water.

If the player fails to safely guide the airship through the prescribed path or at the end of the game the operation of the hand lever 62

will operate the clutch to allow a return of the parts into their original position for a new play.

If the electrically operated ticket or token dispenser is to be used, the successive energization of electromagnets 107, 108 will cause the issue, of as many reward tickets from the casing 101 as the player has earned according to predetermined rules of the game.

It will be understood that I have described and shown the preferred form of my device only as an example of the many possible ways to practically construct the same, and that I may make such changes in its general arrangement and in the construction of its minor details as come within the scope of the appended claims without departure from the spirit of my invention, and the principles involved.

For regulating the speed of the carriage, I use lever 181 controlling a resistance 180 in its housing. By this means the skill of the player is tested.

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

1. An amusement device comprising a motor operated carriage, a means for supporting the motor operated carriage for movement, a circuit, a lamp within said circuit, a holder for said lamp, cables by means of which said holder is vertically displaceable suspended from said carriage, a prescribed path through which said lamp must be guided, means to interrupt said circuit to extinguish the lamp if the lamp deviates from the said path, and means to allow a return of the carriage into its original position at the end of each play.

2. In an amusement device of the class described a casing, a mirror on which a plurality of plain glass stars are formed to indicate a path, a scene having the sky and water painted thereon on the rear wall of said casing, and a motor operated carriage from which a light and an airship are suspended to be manually guided through said path during the travel of said carriage and means for supporting the motor operated carriage.

3. In an amusement device of the class described, a mirror having a plurality of stars of clear glass formed therein to indicate a path, a rail, above the mirror, a motor operated carriage having wheels running on said rail, a means for supporting the motor operated carriage for movement, a central boss having a central bore on said carriage, a slotted hollow bar vertically movably guided through the bore in said boss, a lifting pulley on cables forming part of the carriage moving means from which said bar is suspended, a rack in said hollow bar, a gear in mesh with said rack, a light on said bar and an airship suspended therefrom, said light to be manually guided through a prescribed path, means to keep the airship up while traveling along the prescribed path, and means to lower the same and extinguish the lamp as soon as it deviates from the path.

4. In an amusement device of the class described, a bracket secured to the frame of the device, a circuit, lights within said circuit, a plurality of sets of contact carriers carried by said bracket, a carriage, a rearwardly extending pin on said carriage normally gliding between said contacts, but engaging said contacts to short circuit the lights upon an incorrect operation of the device.

5. In an amusement device of the class described, a plurality of sets of contacts, each comprising a post or rod, a plurality of superposed, spaced sleeves adjustably held on said post, a contact plate on each sleeve, brackets on said posts and other contact plates, and flexible wires supporting said contact plates on said brackets.

6. In an amusement device of the class described including an operating circuit for the same, a coin drop to close the operating circuit upon the drop of the proper coin, a time switch connected therewith to keep the circuit closed, and a means to open the circuit to allow a return of the parts of the amusement device into their original position after each operation.

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