

Nov. 5, 1929.

J. IRSCH

1,734,856

AMUSEMENT RIDE

Filed Nov. 12, 1928

3 Sheets-Sheet 1

Fig. 1.

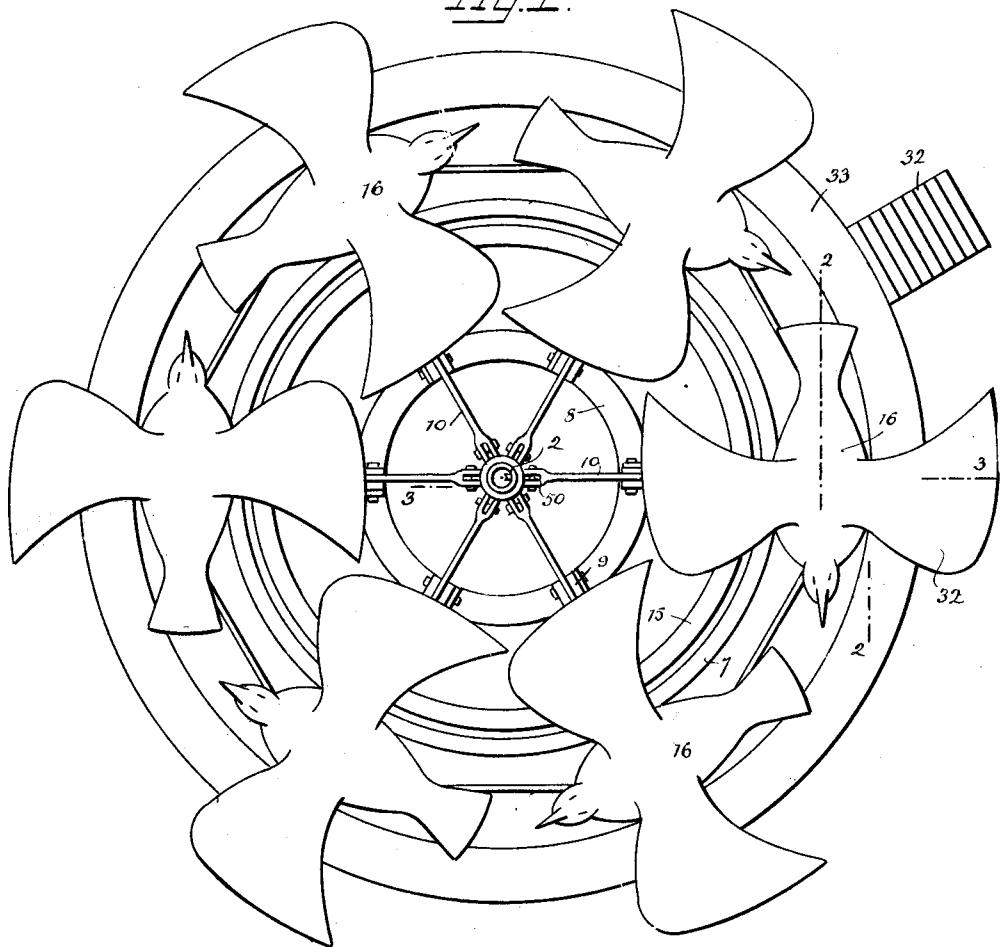
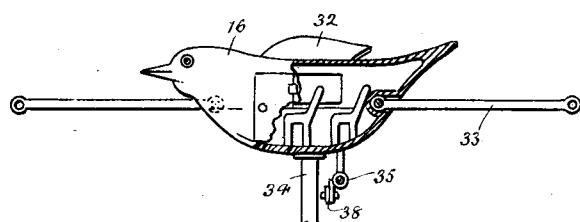


Fig. 2.



WITNESSES

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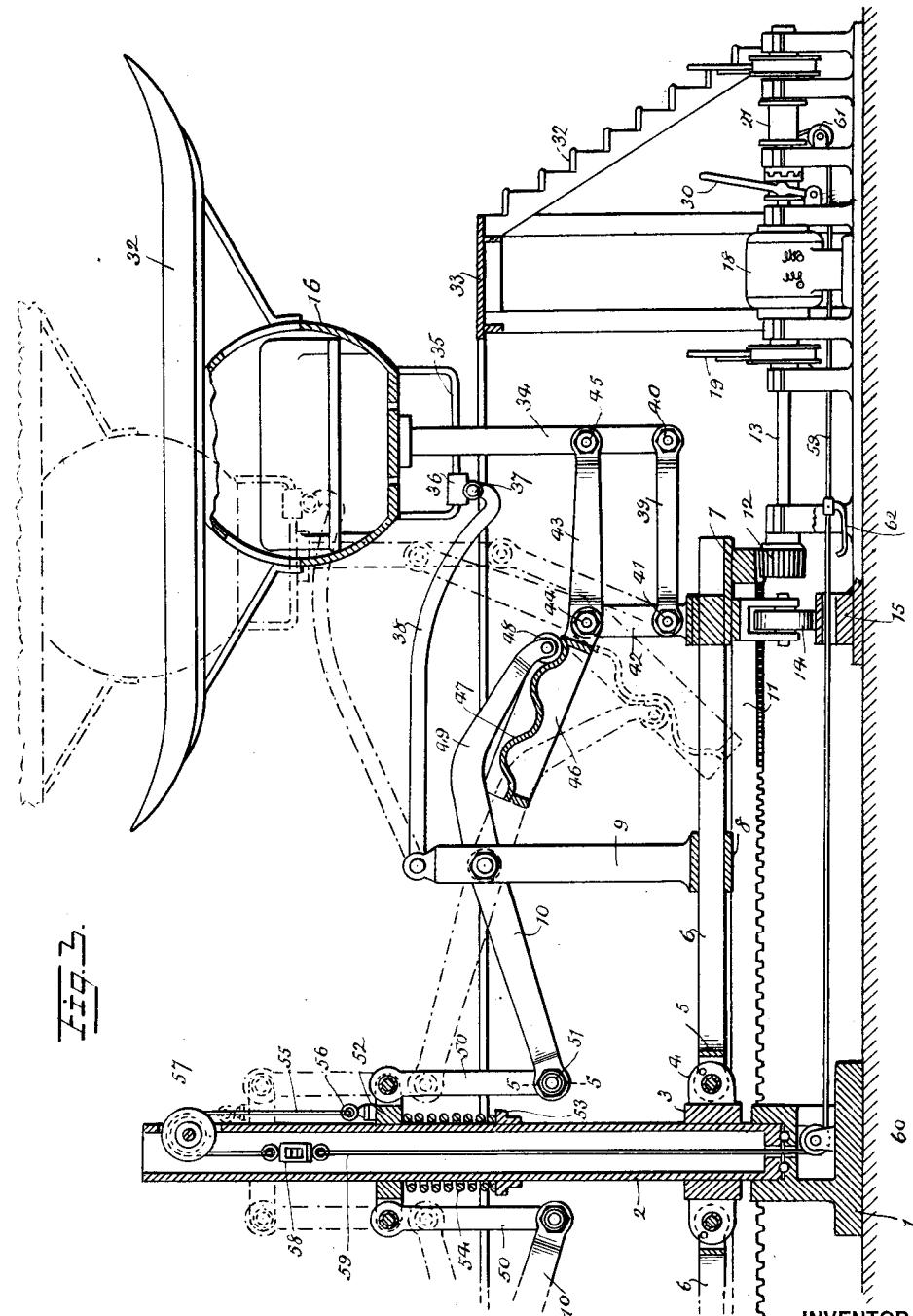
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3 Sheets-Sheet 2



WITNESSES

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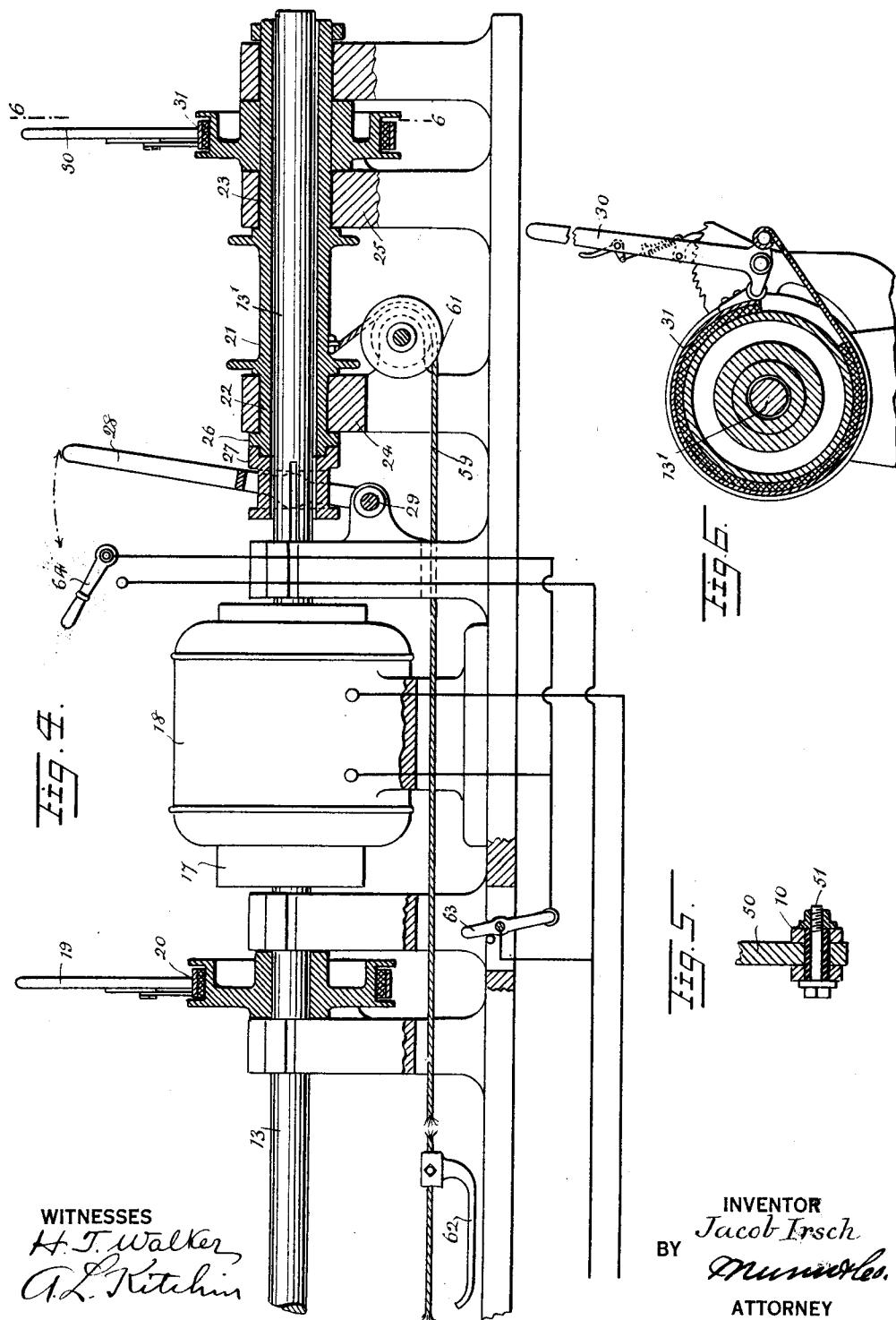
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AMUSEMENT RIDE

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3 Sheets-Sheet 3



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AMUSEMENT RIDE

Application filed November 12, 1928. Serial No. 318,861.

This invention relates to amusement rides, and has for an object to provide an improved construction wherein means are provided which will not only give the usual sensations of a ride but will give to a limited extent the sensation of flying.

Another object of the invention is to provide a ride wherein the carriages or cars may be moved up and down as they move in a circle or may be moved upwardly and then moved in a circle.

A further object of the invention is to provide a ride wherein the carriages or cars are caused to sail through the air and are caused to have a slight up and down movement as they gradually rise.

In the accompanying drawings,—

Figure 1 is a top plan view of an amusement ride disclosing an embodiment of the invention;

Figure 2 is a side view of one of the cars shown in Figure 1, said parts being broken away for illustrating certain details;

Figure 3 is an enlarged sectional view through Figure 1 approximately on the line 3—3;

Figure 4 is an enlarged view of the power and control mechanism shown in Figure 3, certain parts being shown in section;

Figure 5 is a fragmentary sectional view through Figure 3 on the line 5—5;

Figure 6 is a fragmentary sectional view through Figure 4 on the line 6—6.

Referring to the accompanying drawings by numerals, 1 indicates a base on which is rotatably mounted a hollow standard 2. Rigidly secured to the standard near the bottom is a ring 3 having ears 4 adapted to receive the bifurcated ends 5 of the arms 6.

Arms 6 at the ends are connected together with a suitable link 7 and also by an intermediary ring 8, said ring being secured to the arms by bolts in any desired manner. A standard 9 is mounted on top of each arm 6 in line with ring 8 and acts to pivotally support the various power levers 10. The members 3 to 8 inclusive form what may be termed a platform or frame carrying a gear ring 11. This ring continually meshes with pinion 12 which is driven by shaft 13. A number of

wheels 14 are connected with the ring 7 and rest on a track 15, whereby the peripheral part of the frame is supported. Carried by the frame, by a post 9 and by the standard 2, are certain parts hereinafter fully described, including the various cars 16 designed to receive passengers. The cars 16 and associated parts are rotated with the platform and the platform described is driven through the action of shaft 13. This shaft is preferably directly connected to the armature 17 of the electric motor 18, so that whenever the motor is functioning shaft 13 will be rotated. Sometimes it is desirable, as hereinafter described, to turn off the power from motor 18 and permit the armature 17 to spin. When this occurs the brake handle 19 is moved to cause the brake 20 to function so that the speed of shaft 13 may be regulated and may be stopped, whenever desired. A shaft 13' is also connected with armature 17 and extends loosely through a drum 21, which drum is provided with extensions 22 and 23 rotatably mounted in standards 24 and 25. Extension 22 is provided with a clutch face 26 adapted to interlock with the clutch 27 splined to shaft 13'. A lever 28 is pivotally mounted at 29 and is operatively connected with clutch 27 so as to shift the clutch to a closed or clutched position, as shown in Figure 4, or shift the same to an open position. The armature is coupled with the drum 21 so that this drum will rotate at the same speed as shaft 13. Whenever desired, clutch 27 will be moved to an unclutched or open position and when this is the case brake lever 30 is operated for causing the brake 31 to function and thereby hold drum 21 from rotating. This action is very desirable as will hereinafter be fully set forth.

When the parts are in the position shown in Figure 3, the device is ready to receive passengers. Preferably, the passengers pass up the steps 32 onto an annular platform 33 and by walking around this platform the passengers may select any car 16. The seating arrangement in the cars may be of any desired kind but preferably each car is formed with seats facing in opposite directions and of a size to accommodate two peo-

ple in each seat. Also, the size and shape of the cars may be varied, that shown being in the shape of a bird with suitable members 32 formed to resemble wings. Links 33 are provided, as shown in Figure 2, said links connecting the respective birds so that they will always remain in proper alignment and properly spaced. Each car has a supporting standard 34 rigidly secured to the center of the bottom. Also, connected to the bottom of each car is a U-shaped rod 35 on which the sleeve 36 slidably fits. Said sleeve is pivotally connected at 37 to a balancing arm or lever 38 which at the inner end is pivotally connected with the standard 9. As the car 16 moves upwardly and downwardly sleeve 36 slides back and forth on bar 35 and assists in limiting the up and down movement, as well as in holding the car in proper horizontal position. A link 39 is pivotally connected at 40 at the lower end of supporting standard 34 and is also pivotally connected at 41 to a post 42 rigidly secured to one of the arms 6 and to the ring 7. A lever 43 is pivotally connected at 44 at the upper end of post 42 and at 45 to the standard 34. Link 39 always remains parallel with the outer end of lever 43, whereby the standard 34 is held in a vertical position as it moves upwardly and downwardly and as it rotates with the ring 7 and associated parts. The inner end or section 46 of lever 43 is provided with a corrugated face 47 adapted to receive a roller 48 rotatably mounted on the curved end section 49 of lever 10, which lever is pivotally mounted on the standard 9. A link 50 is pivotally connected at 51 to lever 10 so that when this link is moved upwardly, as shown by dotted lines in Figure 3, the end section 49 will be depressed and roller 48 will move over certain of the corrugations 47 and thereby give an intermittent up and down movement to lever 43 and associated parts, while said lever is gradually swinging upwardly. Link 50 at the upper end is pivotally connected with a ring 52 slidably mounted on the standard 2 and limited in its downward movement by the stop 53, said downward movement being cushioned by the spring 54. A cable 55 is connected to ring 52 at 56 and extends over a pulley 57 and thence down to a swivel connection 58. A second cable 59 is connected to swivel 58 and extends downwardly through suitable apertures in the bottom of standard 2 so that it may pass over the pulley 60 and thence horizontally to the pulley 61 and finally be secured to the drum 21. When the drum 21 is rotated a certain amount of the cable will be wound thereon and as the cable is wound ring 52 will be raised and the various levers 10 and associated parts will be caused to function for raising the cars 16 to substantially the dotted position shown in Figure

3. When this occurs the trip 62 strikes the switch lever 63 (Figure 4) and moves the same to an open position. This will deprive the motor 18 of current so that the various moving parts will stop unless further adjustment is made. Preferably when this occurs the various cars 16 are at their highest point and the operator quickly moves lever 28 for disengaging clutch 27. At the same time the operator removes clutch lever 30 over to an operated position for quickly stopping the rotation of the drum 21, whereby cable 59 cannot be wound to any greater extent nor can it become unwound. In this way the cars 16 are held in their elevated position. By performing this action immediately after switch 63 has been opened the momentum of the various parts will keep the cars 16 moving and if the operator should desire to give an additional ride to the passengers he will move the hand switch 64 (Figure 4) to a closed position. This will cause motor 18 to function again and thereby move the various cars and associated parts and when a sufficient time has elapsed or when it is desired to stop the machine hand switch 64 is opened and the brake 20 applied, preferably gradually. By this action the rotation of the cars will gradually cease and as the speed decreases clutch 30 is gradually released so that the cars will gradually move downwardly under the action of gravity and unwind drum 21. The movement of the cars 16 should be stopped at or before the complete unwinding of drum 21. After the device has been stopped and it is again desired to start the machine switch 63 is closed by hand, while switch 64 remains open. As soon as switch 63 has been closed motor 18 will begin to function and ring 7 and associated parts, including cars 16, will begin to move and at the same time drum 21 will begin to wind cable 59, so that the cars 16 will begin to rise as they move forwardly. The parts are stopped as heretofore set forth and each succeeding operation is merely a repetition. It will be seen that when the cars 16 have been elevated to their extreme upper position or to almost their extreme upper position the power is thrown off. This will prevent any accident and if the attendant is not performing his function the cars will merely rotate a few times and gradually move down to their former position. If the attendant is properly functioning the cars will be held in an upper position and caused to move for a desired period of time in order to give the passengers a desired ride.

What I claim is:

1. An amusement ride, including a rotating frame, a standard carrying said frame, means acting as cars, pivotally mounted members carried by the frame supporting said means, a cable for acting on said supporting mem- 125
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bers for raising said cars, a driving mechanism for rotating said frame and the parts carried thereby, and means for throwing to a non-functioning position said cable.

5 2. An amusement ride, including a platform, a driving means operatively connected with the platform for rotating the platform, a plurality of cars carried by the platform, a plurality of lever members for raising and 10 lowering the cars as they rotate, a cable for moving the lever members in one direction, and manually actuated means for connecting and disconnecting said cable with the power means.

15 3. An amusement ride, including a rotatable standard, a platform rigidly secured to said standard, a plurality of cars carried by the platform, a lever mechanism for each car for raising and lowering the cars as the platform moves, a cable connected to all of said lever mechanism, a drum for winding said cable, a power member, means for independently connecting the power member with the drum and with said platform for rotating 20 the platform.

25 4. An amusement ride, including a plurality of cars adapted to travel in a circle, means for raising and lowering the cars while moving, said last-mentioned means including a lever and a corrugated extension coacting therewith for causing an oscillation of the cars as they move up and down.

30 5. An amusement ride, including a plurality of cars adapted to move in a circle, means for driving the cars, and a lever mechanism for raising and lowering the cars as they move, said lever mechanism including a standard connected with each car, a pair of parallel levers connected to each standard, 35 and a swinging power lever for swinging said parallel levers upwardly.

40 6. An amusement ride, including a plurality of cars, a lever mechanism for raising and lowering the cars, a power lever for actuating said lever mechanism, a cable for actuating the power lever, a drum for winding said cable for causing said cable to function, a clutch connected with the drum for locking the drum against rotation and thereby holding the power lever and associated parts in a desired elevated position, a motor, means for connecting the motor with the cars so as to cause the cars to move in a circle, a hand brake for stopping the rotation of the movement of the cars and a clutch positioned to connect and disconnect said drum with the motor.

45 7. An amusement ride, including a rotatable frame, means for rotating said frame, a plurality of cars, means for mounting the cars on a frame so as to rotate therewith, said means including a standard for each car, a post mounted on the frame, a pair of parallel levers pivotally connected with the post and 50 standard, one of said levers having a cor-

rugated extension, a power lever for each of the corrugated extensions, each of said power levers having a roller adapted to roll over the corrugated extension as the lever is moved, a link connected to each of said power levers, a 55 ring connected to the upper end of each of said links, a rotatable standard extending through said ring, means for limiting the downward movement of the ring, said means including a spring, a pulley carried by said standard near the upper end, a cable connected with said ring and extending over said pulley, said cable extending through the standard, and means for pulling said cable to cause said lever to function, said means being capable of being released so that the lever and associated parts may be moved back under the action of said spring and gravity.

60 8. An amusement ride, comprising a rotatable body, a plurality of cars, means for mounting the cars on the body so that the cars will move with the body, said means including lever members adapted to raise and lower the cars independently of the rotary movement of the body, a power lever for each car 65 for moving the car upwardly, said cars moving downwardly under the action of gravity, a power member for rotating said body, and means for connecting the power member with said levers for causing the levers to function.

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