ADJUSTING DEVICE OF A COIN OPERATED AMUSEMENT ASSEMBLY

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ABSTRACT

An adjusting device of a coin operated amusement assembly includes a drive device mounted onto a back of a horizontal board of the coin operated amusement assembly. A transmission device is connected to the drive device. Two adjusting plates are respectively and wiggly mounted to two opposite side of the horizontal board and inserted into a corresponding one of two return passages of the coin operated amusement assembly. Two driven devices are respectively connected to the transmission device and a corresponding one of the two adjusting plates for lifting the two adjusting plates and adjusting the odds of the coin operated amusement assembly.
ADJUSTING DEVICE OF A COIN OPERATED AMUSEMENT ASSEMBLY

BACKGROUND OF THE INVENTION

[0001] Field of the Invention

The present invention relates to an adjusting device, and more particularly to an adjusting device for use in a coin operated amusement assembly.

[0002] Description of Related Art

A conventional coin operated amusement assembly in accordance with the prior art comprises a main frame having an operating room defined therein. A horizontal board is disposed in the operating room for collecting coins and a pusher is reciprocally moved on a top surface of the horizontal board. A coin collection box is mounted to a front portion of the horizontal board for collecting the token coin and two return passages respectively extend to two opposite sides of the horizontal board.

[0005] The coin operated amusement assembly is operated when the user inputs token coin into the coin operated amusement assembly. The input token coin falls to the horizontal board and the pusher will push and squeeze the token coins on the horizontal board. The token coin is used as a reward for the user when falling into the coin collection box and the token is retrieved in the machine when pushed into the return passages.

[0006] However, the horizontal board of the conventional coin operated amusement assembly is directly connected to a bottom of each of the two return passages and there is no hindrance formed front of the return passages. Consequently, most of the token coins will be retrieved into the machine and a small number of token coins fall into the token collection box. As a result, the player will be disheartened because the probability of win is low.

[0007] The present invention has arisen to mitigate and/or obviate the disadvantages of the conventional coin operated amusement assembly.

SUMMARY OF THE INVENTION

[0008] The main objective of the present invention is to provide an improved adjusting device for use in a coin operated amusement assembly and adjusting the probability of falling token coin.

[0009] To achieve the objective, the adjusting device in accordance with the present invention comprises a drive device mounted onto a back of a horizontal board of the coin operated amusement assembly. A transmission device is connected to the drive device. Two adjusting plates are respectively and wiggly mounted to two opposite side of the horizontal board and inserted into a corresponding one of two return passages of the coin operated amusement assembly. Two driven devices are respectively connected to the transmission device and a corresponding one of the two adjusting plates for lifting the two adjusting plates and adjusting the odds of the coin operated amusement assembly.

[0010] Further benefits and advantages of the present invention will become apparent after a careful reading of the detailed description with appropriate reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 is a perspective schematic view of an adjusting device of a coin operated amusement assembly in accordance with the present invention;

[0012] FIG. 2 is a perspective view of an adjusting device of a coin operated amusement assembly in accordance with the present invention;

[0013] FIG. 3 is a front plan view of the adjusting device in FIG. 2;

[0014] FIG. 4 is a first operational view of the adjusting device in accordance with the present invention;

[0015] FIG. 5 is a second operational view of the adjusting device in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0016] Referring to the drawings and initially to FIG. 1 that an ordinary coin operated amusement assembly (20) having a main frame (20) and an operating room (200) defined in the main frame (20). A horizontal board (22) is disposed in the operating room (200) and a pusher (21) is movably mounted on the horizontal board (22) for pushing the token coins on the horizontal board (22). A collecting passage (23) is defined in a front portion of the horizontal board (22) and two return passages (24) respectively defined in two opposite sides of the horizontal board (22). The adjusting device (1) in accordance with the present invention is mounted on the back of the horizontal board (22).

[0017] With reference to FIGS. 2 and 3, the adjusting device (1) in accordance with the present invention comprises a drive device (10) secured on the back of the horizontal board (22), a transmission device (11) connected to the drive device (10). Two adjusting plates (220) respectively wiggly mounted to two opposite sides of the horizontal board (22) and inserted into a corresponding one of the return passages (24). Two driven devices (12) respectively connected to the transmission device (11) and a corresponding one of the two adjusting plates (220).

[0018] The drive device (10) is a step motor and secured on the back of the horizontal board (22) by a seat (101). The drive device (10) has a drive shaft (100) extending therefrom.

[0019] The transmission device (11) includes a rotary plate (110) co-axially and securely mounted to a distal end of the drive shaft (100). A drive linkage (111) includes a first end pivotally connected to a periphery of the rotary plate (110) and a second end having a pivot (112) perpendicularly extending therefrom. The drive linkage (111) is reciprocally moved when the drive device (10) is operated and the rotary plate (110) is rotated.

[0020] The driven device (12) includes two driven linkages (120) each having a middle portion is pivotally connected to the back of the horizontal board (22) by a connect rack (121). Each driven linkage (120) includes a first end having a longitudinal groove (124) defined therein for allowing the pivot (112) extending through the first end of each of the two driven linkages (120). The pivot (112) is moved within the longitudinal groove (124) of each of the two driven linkages (120). Each driven linkage (120) includes a second end pivotally connected to a first end of a connecting linkage (122). The connecting linkage (122) has a second end pivotally connected to a back of a corresponding one of the two adjusting plates (220) by a connecting seat (123).

[0021] The adjusting device (1) in accordance with the present invention further comprises an index plate (13) co-axially secured on a back of the rotary plate (110). The index plate (13) has a brake device (not shown) and a control circuit (not shown). The index plate (13) includes first indentation (130) and a second indentation (131) respectively defined in a periphery thereof. The first indentation (130) and the second
indentation (131) define a circumferential angle that is the rotary range of the index plate (13). The brake device is an electromagnetic mechanism that includes a rod (132) selectively extending into a corresponding one of the two indentations (130, 131) for holding the index plate (13) in place. On the contrary, the index plate (13) with the rotary plate (110) is in a free condition when the rod (132) is disengaged from the first/second indentation (130/131). The control device can send an electric signal for driving the brake device due to a system order from the coin operated amusement assembly (2).

[0022] With reference to FIG. 4, when using the drive device (10) and the transmission device (11) to lift the two adjusting plates (220), the rod (132) is disengaged from the first indentation (130) of the index plate (13) to make the rotary plate (110) with the index plate (13) in a free condition such that the rotary plate (110) is rotated with the index plate (13) when the drive device (10) with the drive shaft (100) is operated. The drive linkage (111) is downward moved and the pivot (112) is moved toward the first end of each of the two driven linkages (120) along the longitudinal groove (124) when the rotary plate (110) is rotated anti-anticlockwise, as shown in FIG. 4. The second end of each of the two driven linkages (120) is upwardly moved to lift the corresponding adjusting plate (220) when the first end of each of the two driven linkages (120) is downward moved due to the limited middle portion of each of the two driven linkages (120). The index plate (13) with the rotary plate (110) is positioned again when the rod (132) extends into the second indentation (131). Consequently, the lifted adjusting plates (220) can reduced the amount of falling token coins through the two return passages (24).

[0023] With reference to FIG. 5, the adjusting plates (220) are moved to their original horizontal position when the rotary plate (110) with the index plate (13) is rotated clockwise and the rod (132) is engaged to the first indentation (130) again.

[0024] As described above, the odds of the coin operated amusement assembly is adjustable due to an angle of an elevation of the adjusting plate (220) in accordance with the present invention. Consequently, the coin operated amusement assembly becomes more interesting to the player.

[0025] Although the invention has been explained in relation to its preferred embodiment, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of the invention as hereinafter claimed.

What is claimed is:

1. An adjusting device of a coin operated amusement assembly, comprising:

   a drive device adapted to be mounted onto a back of a horizontal board of the coin operated amusement assembly;
   a transmission device connected to the drive device;
   two adjusting plates adapted to be respectively and wiggly mounted to two opposite side of the horizontal board and inserted into a corresponding one of two return passages of the coin operated amusement assembly; and
   two driven devices respectively connected to the transmission device and a corresponding one of the two adjusting plates for lifting the two adjusting plates and adjusting the odds of the coin operated amusement assembly.

2. The adjusting device as claimed in claim 1, wherein the drive device is a step motor and has a drive shaft extending therefrom, the transmission device including a rotary plate co-axially secured to a distal end of the drive shaft, a drive linkage including a first end pivotally connected to a periphery of the rotary and a second end having a pivot extending therefrom, wherein the drive linkage is reciprocally moved when the drive device is operated and the rotary plate is rotated.

3. The adjusting device as claimed in claim 2, wherein the drive device comprises two driven linkages each including a first end having a longitudinal groove defined therein for allowing the pivot extending through the first end of each of the two driven linkages, each driven linkage including a second end pivotally connected to a first end of a connecting linkage that has a second end pivotally connected to a back of a corresponding one of the two adjusting plates for lifting the two adjusting plates when the driven device is operated.

4. The adjusting device as claimed in claim 3, wherein each driven linkage has a middle portion adapted to be pivotally connected to the back of the horizontal board by a connect rack that is adapted to be secured on the back of the horizontal board.

5. The adjusting device as claimed in claim 2 further comprising an index plate co-axially secured on a back of the rotary plate.

6. The adjusting device as claimed in claim 5, wherein the index plate includes a first indentation and a second indentation respectively defined in a periphery thereof, the first indentation and the second indentation defining a circumferential angle that is the rotary range of the index plate.

7. The adjusting device as claimed in claim 6, wherein the index plate includes a brake device that is an electromagnetic mechanism including a rod selectively extending into a corresponding one of the first indentation and the second indentation for holding the index plate in place.

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