

A ROTARY BETTING GAME DEVICE AND PLAYING METHOD THEREOF

5 FIELD OF INVENTION

The present invention relates to a game device and playing method thereof, and in particular, to a rotary betting game device and playing method thereof.

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BACKGROUND

Dice are a very popular mind challenging and interesting game. It is also an indispensable device for playing mind challenging and interesting games, such as
15 mahjong, monopoly, heaven nine, betting games or Sic Bo, etc.

Among those games, betting games are the simplest, wherein three dice and a dice cup are generally used and various containers can be used as the dice cup, e.g. bowl, bucket or pan... In terms of betting methods, dice are placed in the dice cup and covered. The house shakes the dice cup to move the dice therein. Players
20 place their bets on various bets of the dice, such as the total spot number of the three dice, each dice's spot number (pattern), combinations of the spot numbers (patterns) of the three dice, etc. After the house opens up the dice cup, the house pays out prizes to the winning players and takes the bet placed by those players
25 who did not win according to the combination of the spot numbers (patterns) of the dice. As the dice are shaken in an opaque dice cup in this game, neither the house nor the players know the spot number and combinations of the dice before the cup is open. As a result, the betting game is very mysterious. The house can easily create an atmosphere to make players feel fascinated and excited.

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In the betting game, however, the house manually shakes a dice cup, which leads to a low efficiency of the game. Since the dice cup is shaken manually, moreover, it is possible for the house to control the combination of spot numbers or

patterns of the dice through employing different strengths of the hand and shaking methods, or using special remote controlled dice. As a result, players would distrust the house and the betting game lacks an objective fairness.

5 Therefore, dice cups used in the gambling entertainment industry for betting games have been improved to those that automatically roll dices. However, this type of dice cups is still made of opaque materials. Consequently, players still have concerns with the fairness of the dice cups. Furthermore, the following dice opening, reading of the combination of spot numbers or patterns of the dice, and counting are
10 still performed manually, which still makes the betting game long and of low efficiency. Therefore, the applicant once proposed a patent invention of the Republic of China entitled "Automatic Betting Game Method and Device" (Publication No.: I251505), which provides functions including automatic dice rolling using a transparent dice cup, multiple players in the same game, automatic reading, etc.

15 However, the above patent invention only employed automatic methods to play the traditional betting game without changing playing methods or dice rolling methods thereof. As far as players are concerned, there are still many other types of novel gaming devices in the same gambling venue. If the betting game device is not
20 improved, players may quickly become tired of the game and lose the feeling of freshness, interest and excitement.

SUMMARY

25 In light of the above problems of prior art, one object of the present invention is to provide a rotary betting game device and playing method thereof, so as to solve the problem that known betting games or automatic betting games have gradually lost the feeling of freshness, interest and excitement.

30 According to an aspect of the present invention, a rotary betting game device is provided, comprising a rotatable rotary unit, a plurality of ball-landing points are formed on the surface thereof, each ball-landing point representing a dice spot number. Furthermore, said device comprises a ball-shooting unit disposed close to the rotary unit,

which shoots a plurality of balls when the rotary unit is in rotation, and makes all the balls move on the rotary unit until each ball randomly falls into one of the ball-landing points. Thus, each ball's landing point will be highly uncertain and the combination number of balls landing at different spot numbers will be increased.

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Wherein, all ball-landing points are disposed in equally distance in a circle on the surface of the rotary unit and close to the circumference thereof, so that each ball has an equal and fair probability of falling into each ball-landing point.

10 Wherein, the ball-landing points are distributively disposed on the surface of the rotary unit, so that each ball has an equal and fair probability of falling into each ball-landing point.

15 Wherein, the rotary unit is a cone shaped disk with the circumference thereof being the highest position vertically and the center point thereof being the lowest position vertically. A ball collection point is further disposed to collect those balls that do not fall into any ball-landing point.

20 Wherein, the rotary unit is a cone shaped disk with the center point thereof being the highest position vertically and the circumference thereof being the lowest position vertically.

Wherein, a spot number unit is formed by each ball-landing point on the rotary unit to indicate a dice spot number represented by each ball-landing point.

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Wherein, the ball-shooting unit is a unit driven by air pressure or mechanically, which shoots balls to the surface of the rotary unit, and provides the momentum for the balls to rotate in the rotary unit.

According to another aspect of the present invention, a playing method for the rotary betting game device is further provided, which provides that players place bets in the operation unit during the betting period, the rotary unit continuously rotates, and when the rotary unit is rotating, the ball-shooting unit shoots a plurality of balls, all balls move on the rotary unit until each ball randomly falls into one of the ball-landing points. An identification unit identifies the spot number, total number or spot number combination of each ball-landing point, and then the operation unit automatically pays out prizes to the winning players and takes the bet placed by those players who did not win.

Wherein, when each ball falls into one of the ball-landing points, the operation unit displays the spot number, total number, spot number combination or probable spot number, total number, spot number combination represented by each ball-landing point, as well as each player's score and total score.

Wherein, before the ball-shooting unit shoots balls, the spot number unit by each ball-landing point randomly generates a dice spot number, and there are equal amounts of ball-landing points having each dice spot number.

The rotary betting game device and playing method thereof according to the present invention have the following one or more advantages and functions:

1. The present invention improves the playing method of traditional dice betting games, and adds a rotary unit similar to Russian roulette to bring more excitement and lasting appeal to the game.
2. The present invention improves the game's fairness and objectiveness through the rotary unit and rotation of balls, as well as their random and free fall into any of the ball-landing points.

3. According to the present invention, the balls randomly and freely fall into any of the ball-landing points, which bring more excitement to the game.
4. Any of the balls can fall into any of the ball-landing points, which can solve problems of broken dice or dice stacking in traditional dice betting games or automatic dice rolling devices.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic of the rotary betting game device according to the present invention;

Fig. 2 is a schematic of ball-landing points in an embodiment according to the present invention;

Fig. 3 is a schematic of ball-landing points in another embodiment according to the present invention;

Fig. 4 is a schematic of the air pressure type ball-shooting unit according to the present invention;

Fig. 5 is a schematic of the mechanical type ball-shooting unit according to the present invention; and

Fig. 6 is a flow chart of the playing method of the rotary betting game device according to the present invention.

Description of Major Component Legends

- 1: game machine
2: rotary unit
20: ball collection point
22: spot number unit
200: ball-landing point
3: ball-shooting unit
30: air blower

300: air outlet
 32: guide track
 35: discharging gear
 36: elastic component
 5 37: guide barrel
 38: buffer member
 4: ball
 5: ball-returning unit
 6: operation unit
 10 7: identification unit
 S10 ~ S70: steps

DETAILED DESCRIPTION

15 Please refer to Fig. 1, which is a schematic of the rotary betting game device according to the present invention. In the figure, the rotary betting game device comprises at least a game machine 1, a rotary unit 2 and a ball-shooting unit 3, wherein the rotary unit 2 is disposed on the surface of the game machine and capable of
 20 continuous rotation, a plurality of ball-landing points 200 are formed on the surface of the rotary unit 2, each ball-landing point 200 representing a dice spot number. Moreover, a ball-shooting unit 3 is disposed inside the game machine 1 and close to the rotary unit 2, which can shoot a plurality of balls 4 and make the balls 4 move inside the rotary unit 2. While each ball 4 is rotating continuously in the rotary unit 2, it will randomly fall into one
 25 of the ball-landing points 200. Through the rotary unit 2 and the ball-shooting unit 3, the traditional dice game is improved so that players can see the process from a ball 4 being shot to falling into a ball-landing point 200. Thus, the game becomes more interesting and fair.

30 Furthermore, the rotation direction of the rotary unit 2 is different from that of each ball 4. The balls 4 randomly fall into ball-landing points 200 through the friction between the balls and the rotary unit 2, so that the rotary betting game device has a high uncertainty and consequently makes the game more exciting. Of course, the rotation

direction of the rotary unit 2 can be the same as that of each ball 4 to attain the same object.

Please refer to Fig. 2, which is a schematic of ball-landing points in an embodiment according to the present invention. In the figure, the rotary unit 2 is a cone-shaped disk with the center point thereof being the highest position vertically and the circumference thereof being the lowest position vertically. Furthermore, the ball-landing points 200 are aligned in a circle close to the circumference of the rotary unit 2 on the surface of the rotary unit 2. Each ball 4 has the same probability of falling into each ball-landing point 200 so that the rotary betting game device realizes fairness in the game.

Please refer to Fig. 3, which is a schematic of ball-landing points in another embodiment according to the present invention. In the figure, the rotary unit 2 is a cone-shaped disk with the circumference thereof being the highest position vertically and the center point thereof being the lowest position vertically. The ball-landing points 200 are distributively disposed on the surface of the rotary unit 2. Each ball 4 has the same probability of falling into each ball-landing point 200 so that the game is fair.

In the foregoing embodiments, there are equal amounts of ball-landing points having any dice spot number, so that each ball 4 has the same probability of falling into each ball-landing point 200, which makes the game fairer.

Of course, the position of each ball-landing point 200 on the rotary unit is not limited by those described above. As long as the probability of each ball 4 falling into a ball-landing point 200 having any spot number is equal and fair, the ball-landing points 200 can be combined in any way so that the probability of each ball 4 falling into each ball-landing point 200 is equal.

Please refer to Figs 2 and 3 again, which are schematics of ball-landing points according to the present invention. In the figures, a spot number unit 22 is formed by

each ball-landing point 200 on the rotary unit 2 to indicate a dice spot number represented by each ball-landing point 200.

Moreover, in all embodiments, the spot number unit 22 is a monitor, which fixedly displays a dice spot number represented by each ball-landing point 200. Or, the spot number unit 22 randomly displays a dice spot number represented by each ball-landing point 200. However, there are equal amounts of ball-landing points 200 having any dice spot number so as to make the game more fair and exciting.

Please refer to Fig. 4, which is a schematic of the air pressure type ball-shooting unit according to the present invention. In the figure, the ball-shooting unit 3 comprises an air blower 30 and a guide track 32, wherein the guide track 32 is disposed at the air outlet 300 of the air blower 30 and the air blower 30 is controlled to blow a ball 4 on the guide track 32 from the air outlet 300 into the rotary unit 2 along the guide track 32.

Please refer to Fig. 5, which is a schematic of the mechanical type ball-shooting unit according to the present invention. In the figure, the ball-shooting unit 3 comprises a discharging gear 35, an elastic component 36, a guide barrel 37, and a buffer member 38, wherein the discharging gear 35 is a rod, the elastic component 36 is disposed surrounding the discharging gear 35 and moves along with the discharging gear 35 to be compressed. When it is released from the compression, it drives the discharging gear to shoot a ball 4, provides the force for the ball 4 to rotate. The balls 4 are shot to the surface of the rotary unit 2 and provided with the momentum to rotate inside the rotary unit 2. The guide barrel 37 guides the balls 4 to move to the position of the discharging gear 35 and into the rotary unit 2 after being shot, while the buffer member 38 is disposed between the end of the discharging gear 35 for shooting the balls 4 and the guide barrel 37 so as to buffer the force of the discharging gear 38 hitting the guide barrel 37.

Please refer to Fig. 3 again, a ball-returning unit 5 is disposed at a position in the bottom of the rotary unit 2 relative to each ball-landing point 200, respectively, and the

ball collection point 20. The ball-returning unit 5 is connected to the guide track 32 or guide barrel 37. When a ball 4 is shot and falls into a ball-landing point 200 or the ball collection point 20, the ball-returning unit 5 can collect the ball 4 into the guide track 32 or guide barrel 37. Thus, balls 4 can be recovered and used again.

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Please refer to Fig. 2 again, which further comprises an operation unit 6 and an identification unit 7, wherein the operation units 6 are disposed around the game machine 1 for players to place bets and for displaying prize amounts, betting information, and the spot number, total number, spot number combination of each landed ball 4, scores and total scores. The identification units 7 are disposed around the ball-landing points 200 to identify spot numbers of each landed ball 4.

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Please refer to Fig. 6, which is a flow chart of the playing method of the rotary betting game device according to the present invention. In the figure, a playing method suitable for the rotary betting game device comprises:

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(S10) The operation unit 6 limits a player to place bets within a betting period;

(S20) The rotary unit 2 keeps rotating;

(S30) When the rotary unit 2 is rotating, the ball-shooting unit 3 shoots a plurality of balls 4;

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(S40) All balls 4 rotate in the rotary unit 2;

(S50) Each of the balls 4 falls into one of the ball-landing points 200 in the rotary unit 2;

(S60) An identification unit 7 identifies the spot number, total number or spot number combination represented by each ball-landing point 200;

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(S70) The operation unit automatically pays out prizes to winning players and takes the bet placed by those players who did not win.

In one embodiment according to the present invention, the operation unit displays the spot number, total number, spot number combination or probable spot number, total number, spot number combination represented by each ball-landing point 200, and/or score and total score, respectively, when each ball 4 falls into one of the ball-landing points 200. Before the ball-shooting unit 3 shoots balls, each spot number unit 22 randomly generates a dice spot number, and there are equal amounts of ball-landing points having each dice spot number.

In order to make the game more interesting and exciting, in another embodiment of the present invention, when the operation unit 6 completes payout and taking bets, the operation unit 6 randomly executes a stake-raising mechanism at the beginning or ending of next game, e.g., the ball-shooting unit 3 shoots an extra ball 4, and the extra ball 4 can be used to increase the prize or the payout odd... According to the stake-raising mechanism, moreover, the probability that the ball-shooting unit 3 shoots an extra ball 4 is 2 ~ 3% of the total number of games (e.g. 100), and the time to fire an extra ball 4 is not limited to a specific game within the total number of games (e.g. the 30th or the 60th). Instead, it can occur randomly within said total number of games, as long as the number of extra balls complies with the probability of extra balls. In other words, the time to fire an extra ball within the total number of games is generated randomly rather than at specific times.

Furthermore, when the operation unit 6 completes payout and taking bets, the operation unit 6 will add up the number of games. When the accumulative number of games reaches a number for the operation unit to raise the stake, the ball-shooting unit 3 will shoot an extra ball 4 at the end of the next betting period to the rotary unit 2.

Furthermore, when the operation unit 6 completes payout and taking bets, the operation unit 6 will add up the amount taken by the house. When the accumulative amount taken by the house reaches an amount for the operation unit to raise the stake, the ball-shooting unit 3 will shoot an extra ball 4 at the end of the next betting period to the rotary unit 2.

To further understand the actual application of the device and method according to the present invention, an example is described as follows:

Please refer to Figs. 1 and 2, the rotary unit 2 comprises 36 ball-landing points 200. The rotary unit 2 keeps rotating in a clockwise direction. Players place bets within the betting period defined by the operation unit 6. When the betting period ends, the ball-shooting unit 3 shoots three balls 4 in order in a counter clockwise direction. These three balls rotate on the rotary unit 2 and gradually fall into one of the ball-landing points 200 or the ball collection point 20. In the process of each ball falling into a ball-landing point 200, moreover, the identification unit 7 identifies the spot number, total number or spot number combination represented by each ball-landing point 200, and the operation unit 6 will display the spot number, total number or spot number combination or probable spot number, total number, spot number combination represented by each ball-landing point 200, and/or scores and total scores for the players to review.

If any ball 4 falls into the ball collection point 20, the ball-shooting unit 3 will shoot another ball 4 to compensate, until each of the three balls 4 falls into one of the ball-landing points 200. At this time, the operation unit 6 automatically pays out prizes to the winning players and takes the bet placed by those players who did not win. But if the operation unit 6 needs to execute the stake-raising mechanism after each of the three balls 4 falls into one of the ball-landing points 200, an extra ball 4 will be shot. Based on the ball-landing point that this ball falls into, the prize or the payout odd will be increased. For example, if the ball 4 of the stake-raising mechanism falls into the ball-landing point 200 having a spot number of 6, then the prizes (or payout odds) of each spot number, total number or spot number combination for this game will be timed by 6.

According to the foregoing description, the game device according to the present invention is totally different from the known roulette games or dice betting games. Furthermore, it solves the known problems of broken dice or dice stacking in traditional dice betting games by employing balls to fall into ball-landing points. Moreover, it improves the playing method of dice betting games, and thereby brings more interest, lasting appeal, fairness, objectiveness and excitement to the game.

The foregoing description is illustrative and not restrictive. Various changes and modifications may be made without departing from the spirit and scope of the present invention and shall be embraced in the scope of appended claims.

CLAIMS

1. A rotary betting game device, comprising:
a game machine;

5 a rotary unit disposed on one side of said game machine and capable of continuous rotation, said rotary unit comprising a plurality of ball-landing points, each ball-landing point representing a dice spot number; and

a ball-shooting unit disposed inside said game machine and close to said rotary unit, said ball-shooting unit shooting a plurality of balls and making each of said balls
10 move on said rotary unit, each of said balls randomly falling into one of said ball-landing points.

2. The device as set forth in Claim 1, wherein all of said ball-landing points are disposed on a side of said rotary unit in a circular form and close to the
15 circumference thereof.

3. The device as set forth in Claim 2, wherein said rotary unit is a cone shaped plate with the apex side up and the round base side down.

20 4. The device as set forth in Claim 1, wherein all of said ball-landing points are disposed on said side of said rotary unit in geometry distribution.

5. The device as set forth in Claim 4, wherein said rotary unit is a cone shaped plate with the round base side up and the apex side down.
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6. The device as set forth in Claim 5, wherein a ball collection point is disposed in the center of said rotary unit.

7. The device as set forth in any one of the preceding claims, wherein the
30 rotation direction of said rotary unit is different from that of said each ball.

8. The device as set forth in any one of claims 1 to 6, wherein the rotation direction of said rotary unit is the same as that of said each ball.

5 9. The device as set forth in any one of the preceding claims, wherein amounts of said each spot numbers are equal.

10 10. The device as set forth in any one of the preceding claims, wherein a spot number unit is disposed beside each said ball-landing point on said rotary unit, each said spot number unit indicating that a dice spot number is represented by each said ball-landing point.

15 11. The device as set forth in Claim 10, wherein said spot number unit is a monitor displaying a fixed dice spot number corresponding to each said ball-landing point.

12. The device as set forth in Claim 10, wherein said spot number unit is a monitor, which randomly displays a dice spot number corresponding to each ball-landing point.

20 13. The device as set forth in any one of the preceding claims, wherein said ball-shooting unit comprises an air blower and a guide track, said guide track is disposed at an air outlet of said air blower and said air blower is controlled to blow said ball from said air outlet into said rotary unit along said guide track.

25 14. The device as set forth in Claim 13, wherein a ball-collecting unit is disposed at a position in the bottom of said rotary unit relative to each said ball-landing point respectively, said ball-returning unit is connected to a guide barrel to collect each said ball into said guide barrel.

30 15. The device as set forth in any one of the preceding claims, wherein said ball-shooting unit comprises:
a discharging gear;

an elastic component, said elastic component disposed around said discharging gear and moving along with the discharging gear to be compressed. When said elastic component is released from the compression, said elastic component drives said discharging gear to shoot each said ball and provides the force for each said ball to rotate;

a guide barrel, said guide barrel guiding each said balls to move to the position of said discharging gear and move into said rotary unit after being shot; and

a buffer member, said buffer member being disposed between the end of said discharging gear for shooting each said ball and said guide barrel.

16. The device as set forth in Claim 15, wherein a ball-collecting unit is disposed at a position in the bottom of said rotary unit relative to each said ball-landing point, respectively, and said ball-returning unit is connected to said guide barrel to collect said each ball into said guide barrel.

17. The device as set forth in any one of the preceding claims, further comprising:

an operation unit being disposed around said game machine for players to place bets and for displaying prize amounts, betting information, the spot number, total number, or spot number combination of said each landed ball; and

an identification unit being disposed around each said ball-landing point to identify the spot number of each said landed ball.

18. A playing method for the rotary betting game device, comprising the following steps:

limiting a player to place bets within a betting period by an operation unit;

rotating a rotary unit constantly;

shooting a plurality of balls by a ball-shooting unit when said rotary unit is rotating;

rotating each said ball on said rotary unit;

receiving each said ball randomly by one of the ball-landing points in said rotary unit;

identifying that each said ball-landing point represents one of the spot number, total number, and spot number combination by an identification unit; and

5 allocating prizes and taking the bet by said operation unit automatically.

19. The method as set forth in Claim 18, wherein said operation unit respectively displays the corresponding spot number, corresponding total number, corresponding spot number combination, probable spot number, probable total number, 10 probable spot number combination, score, or total score when said balls fall into the ball-landing points in sequence.

20. The method as set forth in Claims 18 or 19, wherein said spot number unit randomly generates a dice spot number and corresponds to each of said ball- 15 landing points before said ball-shooting unit shoots said plurality of balls, and there are equal amounts of each dice spot number.

21. The method as set forth in any one of claims 18 to 20, wherein the step of allocating prizes and takes the bet by said operation unit automatically further comprises 20 the following steps:

executing a stake-raising mechanism by said operation unit;

shooting an extra ball by said ball-shooting unit;

increasing the prize value or the payout odds according to said ball-landing point where said extra ball fallen.

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22. The method as set forth in Claim 20, wherein the timing to shoot said extra ball within the total rounds of a game occurs randomly, as long as said number of extra balls complies with a predetermined probability of extra balls.

23. The method as set forth in any one of claims 18 to 22, wherein when said operation unit completes allocation and takes bets, said operation unit will add up the rounds of a game, and wherein when said rounds of said game reaches a number for said operation unit to raise the stake, said ball-shooting unit will shoot an extra ball when the betting is finished and said rotary unit starts to rotate.

24. The method as set forth in any one of claims 18 to 22, wherein when said operation unit completes allocation and takes bets, said operation unit will add up the amount taken by the house, and wherein when said amount taken by the house reaches an amount for said operation unit to raise the stake, said ball-shooting unit will shoot an extra ball when the betting is finished and said rotary unit starts to rotate.

25. The method as set forth in any one of claims 18 to 22, wherein when said operation unit completes allocation and takes bets, said operation unit randomly controls said ball-shooting unit to shoot an extra ball when the betting is finished and said rotary unit starts to rotate.