SLOT MACHINE AND PLAYING METHOD OF SLOT MACHINE

Inventor: Kazumasa Yoshizawa, Tokyo (JP)

Correspondence Address:
NDQ&M WATCHSTONE LLP
1300 EYE STREET, NW
SUITE 1000 WEST TOWER
WASHINGTON, DC 20005 (US)

Assignee: Aruze Corp.

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ABSTRACT

A slot machine includes a first display, a second display, and a controller. In a base game, the first display rearranges a plurality of symbols arranged on a plurality of defined areas. The second display is disposed adjacent to the first display, and displays an effect image in the base game. The controller displays an image related to a decision of a payout amount of game mediums in a bonus game astride the first display and the second display in a case of shifting a game from the base game to the bonus game and executing the bonus game.
FIG. 2

START OF GAME

S100

PERFORM AUTHENTICATION PROCESSING

S200

EXECUTE BASE GAME

S300

WHETHER OR NOT IS BONUS GAME WON?

S400

YES

EXECUTE BONUS GAME

S500

DECIDE PAYOUT AMOUNT OF CREDITS

S600

PERFORM PAYOUT PROCESSING FOR CREDITS

RETURN
FIG. 4

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLUM</strong></td>
<td><strong>STRAWBERRY</strong></td>
</tr>
<tr>
<td><strong>ORANGE</strong></td>
<td><strong>APPLE</strong></td>
</tr>
<tr>
<td><strong>LOBSTER</strong></td>
<td><strong>CRAB</strong></td>
</tr>
</tbody>
</table>
**FIG. 5**

**PAYOUT TABLE**

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>NUMBER OF OCCURRENCES</th>
<th>PAYOUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLE</td>
<td>5</td>
<td>BONUS GAME TRIGGER</td>
</tr>
<tr>
<td>ORANGE</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>PLUM</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>15</td>
</tr>
</tbody>
</table>
FIG. 7

GAME EXECUTION PROCESS

S11

WHETHER OR NOT ARE ONE OR MORE COINS BET?

S12

YES

REDUCE NUMBER OF CREDITS

S13

NO

S14

WHETHER OR NOT IS SPIN BUTTON SWITCHED ON?

S15

YES

PERFORM SYMBOL DECISION PROCESSING

S16

PERFORM SCROLL CONTROL PROCESSING

S17

NO

WHETHER OR NOT IS BONUS GAME TRIGGER ESTABLISHED?

S18

YES

PERFORM BONUS GAME PROCESSING

S19

PERFORM PAYOUT PROCESSING

RETURN

FIG. 8

SYMBOL DECISION PROCESSING

S31

SELECT RANDOM NUMBER VALUES

S32

DECIDE SYMBOLS TO BE STOPPED ON DEFINED AREAS

RETURN
**FIG. 9**

- **BONUS GAME PROCESSING**
- **PERFORM NUMBER-OF-BONUS-GAMES DECISION PROCESSING**
- **SWITCH DISPLAY CONTENTS OF LIQUID CRYSTAL DISPLAYS OF UPPER AND LOWER IMAGE DISPLAY PANELS**
- **WHETHER OR NOT IS SPIN BUTTON SWITCHED ON?**
  - **NO**
  - **YES**
    - **PERFORM ROTATION DISPLAY CONTROL PROCESSING**
    - **PERFORM PAYOUT AMOUNT DECISION PROCESSING**
    - **PERFORM PAYOUT PROCESSING**
    - **WHETHER OR NOT HAS EXECUTION NUMBER OF BONUS GAMES REACHED DECIDED NUMBER?**
      - **NO**
      - **YES**
        - **RETURN DISPLAY CONTENTS OF LIQUID CRYSTAL DISPLAYS OF UPPER AND LOWER IMAGE DISPLAY PANELS TO ORIGINAL ONES**
        - **RETURN**
FIG. 10

BONUS GAME PROCESSING

PERFORM NUMBER-OF-BONUS-GAMES DECISION PROCESSING

SWITCH DISPLAY CONTENTS OF LIQUID CRYSTAL DISPLAYS OF UPPER AND LOWER IMAGE DISPLAY PANELS

WHETHER OR NOT IS SPIN BUTTON SWITCHED ON?

PERFORM ROTATION DISPLAY CONTROL PROCESSING

PERFORM PAYOUT AMOUNT DECISION PROCESSING

PERFORM PAYOUT PROCESSING

WHETHER OR NOT HAS EXECUTION NUMBER OF BONUS GAMES REACHED DECIDE NUMBER?

RETURN DISPLAY CONTENTS OF LIQUID CRYSTAL DISPLAYS OF UPPER AND LOWER IMAGE DISPLAY PANELS TO ORIGINAL ONES

RETURN
FIG. 12

BONUS GAME PROCESSING

PERFORM NUMBER-OF-BONUS-GAMES DECISION PROCESSING

SWITCH DISPLAY CONTENT OF LIQUID CRYSTAL DISPLAY OF UPPER IMAGE DISPLAY PANEL

WHETHER OR NOT IS SPIN BUTTON SWITCHED ON?

NO

YES

PERFORM ROTATION DISPLAY CONTROL PROCESSING

PERFORM PAYOUT AMOUNT DECISION PROCESSING

PERFORM PAYOUT PROCESSING

WHETHER OR NOT HAS EXECUTION NUMBER OF BONUS GAMES REACHED DECIDED NUMBER?

NO

YES

RETURN DISPLAY CONTENT OF LIQUID CRYSTAL DISPLAY OF UPPER IMAGE DISPLAY PANEL TO ORIGINAL ONE

RETURN
SLOT MACHINE AND PLAYING METHOD OF SLOT MACHINE

CROSS REFERENCE TO RELATED APPLICATION


BACKGROUND OF THE INVENTION

0002 1. Field of the Invention

0003 The present invention relates to a slot machine configured to allow a player to play a game by using a game medium such as a coin, and to a playing method of the slot machine.

0004 2. Description of the Related Art

0005 Hereofore, in a facility in which a slot machine is placed, a player can play a game by inserting a variety of game mediums such as coins and bills into the slot machine. As described in U.S. Pat. No. 6,960,133, the slot machine provides a payout in response to a winning occurring while the game is advancing.

0006 A conventional slot machine is disclosed in Austrian Patent PQ 6290. This slot machine executes, as a subsidiary game that is a shift destination from a base game, a free game in which an effect to superpose a character image and a symbol displayed on a defined area of a video reel on each other is made. However, this slot machine is poor in entertainment factor, and accordingly, it is desired that a slot machine with a higher entertainment factor is developed.

SUMMARY OF THE INVENTION

0007 It is an object of the present invention to provide a slot machine excellent in entertainment factor and a playing method of the slot machine. More specifically, it is the object of the present invention to provide a slot machine capable of displaying such an effect as enhancing player's expectations in a bonus game, and to provide a playing method of the slot machine.

0008 In order to achieve the above-described objects, the present invention provides a slot machine including: a first display on which a plurality of symbols arranged on a plurality of defined areas are rearranged in a base game; a second display on which an effect image is displayed in the base game, the second display being disposed adjacent to the first display; and a controller operable to display an image related to a decision of a payout amount of game mediums in a bonus game on the second display in a case of shifting a game from the base game to the bonus game and executing the bonus game.

0009 In accordance with the slot machine according to the present invention, the image related to the decision of the payout amount of game mediums in the bonus game, which is different from the plurality of symbols and the effect image, is displayed, in the bonus game, as a first display on which the plurality of symbols arranged on the plurality of defined areas are rearranged in the base game and a second display on which the effect image is displayed in the base game.

0010 Therefore, in the bonus game, the first display and the second display can be allowed to display such an effect as deciding the payout amount of game mediums in the bonus game in a new mode that does not exist in the base game, in which the effect display is made by the image related to the decision of the payout amount of game mediums. Accordingly, such an effect as enhancing the player’s expectations can be displayed in the bonus game, and the entertainment factor can be enhanced.

0011 In order to achieve the above-described objects, the present invention provides a slot machine including: a first display on which a plurality of symbols arranged on a plurality of defined areas are rearranged in a base game; a second display on which an effect image is displayed in the base game, the second display being disposed adjacent to the first display; and a controller operable to display images related to a decision of a payout amount of game mediums in a bonus game individually on the first display and the second display in a case of shifting a game from the base game to the bonus game and executing the bonus game.

0012 In accordance with the slot machine according to the present invention, the image related to the decision of the payout amount of game mediums in the bonus game, which are different from the plurality of symbols and the effect image, are displayed, in the bonus game, individually on the first display on which the plurality of symbols arranged on the plurality of defined areas are rearranged in the base game and the second display on which the effect image is displayed in the base game.

0013 Therefore, in the bonus game, the first display and the second display can be allowed to individually display such an effect as deciding the payout amount of game mediums in the bonus game in a new mode that does not exist in the base game, in which the effect display is made by the image related to the decision of the payout amount of game mediums. Accordingly, such an effect as enhancing the player’s expectations can be displayed in the bonus game, and the entertainment factor can be enhanced.

0014 In order to achieve the above-described objects, the present invention provides a slot machine including: a first display on which a plurality of symbols arranged on a plurality of defined areas are rearranged in a base game; a second display on which an effect image is displayed in the base game, the second display being disposed adjacent to the first display; and a controller operable to display an image related to a decision of a payout amount of game mediums in a bonus game on the second display in a case of shifting a game from the base game to the bonus game and executing the bonus game.

0015 In accordance with the slot machine according to the present invention, the image related to the decision of the payout amount of game mediums in the bonus game is displayed on the second display on which the effect image is displayed in the base game.

0016 Therefore, in the bonus game, the second display can be allowed to display such an effect as deciding the payout amount of game mediums in the bonus game in a new mode that does not exist in the base game, in which the effect display is made by the image related to the decision of the payout amount of game mediums. Accordingly, such an effect as enhancing the player’s expectations can be displayed in the bonus game, and the entertainment factor can be enhanced.
As described above, in accordance with the slot machine and the playing method of the slot machine according to the present invention, such an effect as enhancing the player's expectations can be displayed in the bonus game, and the entertainment factor is enhanced. Accordingly, the slot machine can attract more players, and a new entertainment factor can be added to the slot machine.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an explanatory view showing a display example of an upper image display panel and a lower image display panel in a bonus game of a slot machine according to a first embodiment of the present invention.

FIG. 2 is a flowchart showing a schematic processing procedure of a playing method of the slot machine according to the present invention.

FIG. 3 is a perspective view showing an exterior appearance of the slot machine according to the first embodiment of the present invention.

FIG. 4 is an explanatory view showing symbols displayed on the lower image display panel of the slot machine according to the first embodiment of the present invention.

FIG. 5 is an explanatory view showing a payout table for deciding a payout amount from the slot machine according to the first embodiment of the present invention.

FIG. 6 is a block diagram showing an internal construction of the slot machine according to the first embodiment of the present invention.

FIG. 7 is a flowchart showing game execution processing executed in the slot machine according to the first embodiment of the present invention.

FIG. 8 is a flowchart showing symbol decision processing executed in the slot machine according to the first embodiment of the present invention.

FIG. 9 is a flowchart showing bonus game processing executed in the slot machine according to the first embodiment of the present invention.

FIG. 10 is a flowchart showing bonus game processing executed in a slot machine according to a second embodiment of the present invention.

FIGS. 11A and 11B are explanatory views showing display examples of an upper image display panel and a lower image display panel in a bonus game of the slot machine according to the second embodiment of the present invention.

FIG. 12 is a flowchart showing bonus game processing executed in a slot machine according to a third embodiment of the present invention.

FIG. 13 is an explanatory view showing a display example of an upper image display panel and a lower image display panel in a bonus game of the slot machine according to the third embodiment of the present invention.

FIG. 14 is an explanatory view showing defined areas of each of the slot machines according to the first to third embodiments of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

A description will be made below of slot machines and playing methods of the slot machines according to first to third embodiments of the present invention with reference to FIG. 1 to FIG. 14.

FIG. 1 is an explanatory view showing a display example of an upper image display panel and a lower image display panel in a bonus game of the slot machine according to the first embodiment of the present invention. The playing method of the slot machine according to the present invention, in which such display as shown in FIG. 1 is performed by the upper image display panel and the lower image display panel, is schematically shown by a flowchart of FIG. 2. A description will be made below of schematic operations of the slot machine and the playing method, with reference to the flowchart of FIG. 2 and a perspective view of FIG. 3.

As shown in FIG. 2, when the slot machine is started by turning on power, the slot machine first performs authentication processing (Step S100). In this authentication processing, there is performed initial verification processing at a stage before a base game is started, such as to whether a program for operating a system operates normally and whether falsification of the program is not performed.

Next, the slot machine executes the base game (Step S200). This base game is executed in such a manner that a spin button 23 is pressed by a player in a state where the desired number of credits is bet by inserting one or more coins into a coin receiving slot 21, and so on. When the base game is executed, symbols start to be scrolled on a lower image display panel 16 on a front surface of a cabinet 11, and thereafter, the symbols are stopped (rearranged). The scroll of the symbols and the stop (rearrangement) thereof are performed on totally 15 defined areas 28a1 to 28e3 (refer to FIG. 14) with a matrix of five columns and three rows, which are provided in an inside of a display window 15 of the lower image display panel 16. Note that suffixes "a" to "e" assigned to the defined areas 28 denote the columns of the respective defined areas 28 provided in the form of matrix, and suffixes "1" to "3" denote the rows thereof.

The slot machine can perform the arrangement and rearrangement of the symbols on the defined areas 28a1 to 28e3 by a liquid crystal display 17 (corresponding to a first display in claims) provided on a backside of the lower image display panel 16. Moreover, the slot machine can also perform the arrangement and rearrangement of the symbols on the defined areas 28a1 to 28e3 by using mechanical rotation reels provided on a backside of the display window 15, instead of the liquid crystal display 17.

Next, the slot machine determines whether or not to have won the bonus game (Step S300). Although the bonus game is sometimes called a future game, the bonus game including this future game will be generically referred to as the bonus game in this specification.

Then, whether or not the game is to be shifted from the base game to the bonus game as a result of winning the bonus game is determined based on whether or not symbols becoming a bonus trigger are stopped on a payline set on the defined areas 28. For example, this payline can be set on five defined areas 28a1 to 28e1 on an upper stage, five defined areas 28a2 to 28e2 on a middle stage, or five defined
areas (28c3 to 28e3) on a lower stage among the three rows of the defined areas. For example, symbols of “APPLE” can be set as the symbols becoming the bonus trigger.

[0039] When the bonus trigger is established, the slot machine executes the bonus game (Step S400). In the bonus game, the lower image display panel 16 and an upper image display panel 33 adjacent to a portion above the same are used. On a backside of the upper image display panel 33, a liquid crystal display 14 (corresponding to a second display in the claims) is provided. Then, in the bonus game, the slot machine decides a payout amount of game mediums in response to a content of an image displayed on the lower image display panel 16 by the liquid crystal display 17 and to a content of an image displayed on the upper image display panel 33 by the liquid crystal display 14.

[0040] For example, a payout amount of the game mediums for the symbols of “APPLE”, which are aligned on the payline in the base game and have become the bonus trigger, is multiplied by a multiplication factor determined by the bonus game, whereby the payout amount of game mediums in the bonus game is decided. In this case, as shown in FIG. 1, the slot machine rotates and stops one video reel 49 displayed on both of the liquid crystal displays 14 and 17 so as to lie astride the upper image display panel 33 and the lower image display panel 16. In this case, a boundary between the upper image display panel 33 and the lower image display panel 16 becomes a substitute for the payline. When the rotation of the video reel 49 is stopped, one of a plurality of the multiplication factors indicated on the video reel 49 displayed astride both of the liquid crystal displays 14 and 17 is stopped on the boundary, as the substitute for the payline, between the upper image display panel 33 and the lower image display panel 16. Hence, the slot machine sets the payout amount of game mediums in the bonus game in the following manner. Specifically, the payout amount of game mediums for the symbols of “APPLE”, which have become the bonus trigger, is multiplied by the multiplication factor on the video reel 49, which is stopped on the boundary between the upper image display panel 33 and the lower image display panel 16.

[0041] Note that a method of deciding the payout amount of game mediums in response to the content of the image displayed on the lower image display panel 16 by the liquid crystal display 17 and to the content of the image displayed on the upper image display panel 33 by the liquid crystal display 14 is not limited only to such a method as described above. For example, a method can also be adopted, in which individual images are displayed on the liquid crystal display 14 of the upper image display panel 33 and on the liquid crystal display 17 of the lower image display panel 16, and these images are linked with each other. Specifically, for example, as shown in FIG. 11A, cube-like symbols on which the multiplication factors are indicated can be sequentially moved and scrolled from the liquid crystal display 14 of the upper image display panel 33 to the liquid crystal display 17 of the lower image display panel 16.

[0042] In this case, if the symbols are individually displayed on the liquid crystal display 14 of the upper image display panel 33 and the liquid crystal display 17 of the lower image display panel 16 at the point of time when such scroll movement of the symbols is stopped, then the payout amount of credits for the symbols of “APPLE”, which have become the bonus trigger, is multiplied by the sum of the multiplication factors indicated on the respective symbols, and a value obtained thereby can be set as the payout amount of game mediums in the bonus game. Moreover, for example, as shown in FIG. 11B, if one symbol lying astride the upper image display panel 33 and the lower image display panel 16 is displayed on both of the liquid crystal displays 14 and 17, then the payout amount of game mediums for the symbols of “APPLE”, which have become the bonus trigger, is multiplied by the multiplication factor indicated on the symbol concerned, and a value obtained thereby can be set as the payout amount of game mediums in the bonus game.

[0043] Note that, when the slot machine performs the arrangement and rearrangement of the symbols on the defined areas 28a1 to 28e3 in the base game by the mechanical rotation reels provided on the backside of the display window 15, a display content on a liquid crystal display disposed between the rotation reels and the display window 15 just needs to be used as the display content on the lower image display panel 16. A player’s field of view for the symbols arranged and rearranged on the defined areas 28a1 to 28e3 in the base game can be ensured by turning the liquid crystal display placed between the rotation reels and the display window 15 into a state of transparent display during the base game.

[0044] The method of deciding the payout amount of game mediums is not limited only to the method, which is as described above, of deciding the payout amount in response to the content of the image displayed on the lower image display panel 16 by the liquid crystal display 17 and to the content of the image displayed on the upper image display panel 33 by the liquid crystal display 14. For example, the payout amount of game mediums can also be decided in response to the content of the image displayed on the upper image display panel 33 by the liquid crystal display 14. Specifically, for example, as shown in FIG. 13, a video reel 49-1 displayed on the liquid crystal display 14 of the upper image display panel 33 is rotated and stopped. When the rotation of the video reel 49-1 is stopped, one of a plurality of multiplication factors indicated on the video reel 49-1 displayed on the liquid crystal display 14 is stopped on a payline 49-2 displayed on the liquid crystal display 14 together with the video reel 49-1. Hence, in this case, the slot machine multiplies the payout amount of game mediums for the symbols of “APPLE”, which have become the bonus trigger, by the multiplication factor on the video reel 49-1, which is stopped on the payline 49-2, thus making it possible to set the payout amount of game mediums in the bonus game.

[0045] The indication on the video reel does not have to be, as described above, the multiplication factor to be multiplied to the payout amount of game mediums for the symbols of “APPLE”, which have become the bonus trigger, but may be the payout amount of game mediums to be paid out in the bonus game. Moreover, the number of bonus games may be decided in advance, or may be decided randomly at the time of starting the bonus game. Furthermore, the number of bonus games may be one or plural.

[0046] Thereafter, the slot machine decides the payout amount of game medium in the bonus game in response to the content of the image displayed on the upper image display panel 33 and to the content of the image displayed on the lower image display panel 16, or in response to the content of the image displayed on the upper image display panel 33 (Step S500). Subsequently, the slot machine performs payout
processing for the number of game mediums, which is decided in the above-described processing (Step S600). In such a way, the play of the slot machine is executed.

Next, a description will be made of a construction of the slot machine 10 according to the first embodiment of the present invention, with reference to a perspective view shown in FIG. 3. This slot machine 10 is placed in a gaming facility.

In the slot machine 10, a coin, a bill, or electronic value information equivalent to these is used as the game medium for executing the base game. However, in the present invention, the game medium is not particularly limited to these, and for example, a medal, a token, electronic money, and a ticket can be mentioned. No particular limitations are imposed on the above-described ticket, and for example, a ticket attached with a bar code, which is as described later, can be mentioned.

As shown in FIG. 3, the slot machine 10 includes the cabinet 11, a top box 12 installed on the cabinet 11, and a main door 13 provided on the front surface of the cabinet 11.

The upper image display panel 33 is provided above the cabinet 11, and the lower image display panel 16 is provided on an upper portion of the cabinet 11. On a substantial center of the lower image display panel 16, the rectangular display window 15 is provided. On the backside of the display window 15, the liquid crystal display (display) 17 using, as a display area, the entirety of the lower image display panel 16 is provided. On a substantial center of the liquid crystal display 17, the defined area 28 is displayed so as to correspond to the display window 15. Specifically, the defined area 28 is divided into the totally 15 defined areas 28a1 to 28c3 with the matrix of five columns and three rows (refer to FIG. 14). Hence, when the game is executed, the symbols are scrolled on the respective defined areas 28 (28a1 to 28c3) of the liquid crystal display 17, and the player can visually recognize the symbols thus scrolled through the display window 15.

On a surface of the lower image display panel 16, a touch panel 69 (refer to FIG. 6) is provided. The touch panel 69 is partitioned into areas formed into a matrix with plural columns and plural rows. These partitioned areas partially correspond to the 15 defined areas (28a1 to 28c3) displayed on the liquid crystal display 17. Specifically, when the player performs an operation of touching each of the defined areas 28 (28a1 to 28c3), it becomes possible to identify a position thereof by the touch panel 69.

In this embodiment, a description will be made of the case where the defined areas 28 (28a1 to 28c3) provided on the liquid crystal display 17 are formed into the matrix with five columns and three rows; however, the defined areas are not limited to the above-described matrix. Moreover, it is also possible to adopt a construction to display the symbols of the 15 defined areas 28a1 to 28c3 by using the mechanical rotation reels instead of the liquid crystal display 17. In this case, the rotation reels correspond to the first display in the claims.

On a portion of the lower image display panel 16, which excludes the defined areas 28 (28a1 to 28c3), a variety of information regarding the game, an effect image, and the like are displayed by the liquid crystal display 17 during the game. In particular, on a number-of-credits display portion 31 located on an upper right of the lower image display panel 16, the number of credited coins is displayed as an image. On a number-of-payouts display portion 32 located on an upper left side of the lower image display panel 16, each relationship between the number of symbols and the number of paid-out coins, which is shown in FIG. 5, or the like is displayed as an image.

Under the lower image display panel 16, there are provided a control panel 20 composed of a plurality of buttons 23 to 27 through which instructions concerning with advancing of the game are entered by the player, the coin receiving slot 21 for receiving the coin into the cabinet 11, and a bill validator 22.

On the control panel 20, there are provided the spin button 23, a change button 24, a cashout button 25, a 1-BET button 26, and a maximum-BET button 27. The spin button 23 is a button for entering an instruction to start the scroll of symbols on the respective defined areas 28 (28a1 to 28c3). The change button 24 is a button for use in the case of requesting a clerk at the gaming facility to do a money exchange. The cashout button 25 is a button for entering an instruction to pay out the credited coins to a coin tray 18.

The 1-BET button 26 is a button for entering an instruction to bet one coin of the credited coins on the game. The maximum-BET button 27 is a button for entering an instruction to bet, on the game, the maximum number (for example, three) of coins capable of being bet on one game.

The bill validator 22 identifies whether or not the bill is a real one, and receives the real bill into the cabinet 11. Note that the bill validator 22 may be composed so as to be capable of reading a ticket 39 attached with the bar code, which will be described later. On a lower front surface of the main door 13, that is, under the control panel 20, a berry glass 34 on which a character of the slot machine 10 and the like are drawn is provided.

On a front surface of the top box 12, the upper image display panel 33 is provided. On the upper image display panel 33, the effect image and an image representing an introduction of game contents and an explanation of a game rule are displayed by the liquid crystal display 14 disposed on the backside thereof.

Moreover, on the top box 12, a speaker 29 for outputting sounds is provided. Under the upper image display panel 33, there are provided a ticket printer 35, a card reader 36, a data display device 37, and a keypad 38. The ticket printer 35 prints, on a ticket, the bar code in which data regarding the number of credits, date, an identification number of the slot machine 10, and the like is encoded. Then, the ticket printer 35 outputs the printed ticket as such a bar code-attached ticket 39. The player can play a game on another slot machine by using the bar code-attached ticket 39, and can exchange the bar code-attached ticket 39 with bills and the like at a cashier and the like of the gaming facility.

The card reader 36 reads data from a smart card, and writes data to the smart card. The smart card is a card possessed by the player, and stores, for example, data for identifying the player and data regarding a history of the games played by the player.

The data display device 37 is composed of a fluorescent display or the like, and displays, for example, the data read by the card reader 36 and data entered by the player.
through the keypad 38. The keypad 38 is used for entering an instruction and data regarding issuance of the ticket, and so on.

[0062] FIG. 4 is an explanatory view showing the symbols scrolled on the respective defined areas 28 (28a1 to 28c3) of the liquid crystal display 17 and then displayed still. As shown in FIG. 4, the respective symbols “PLUM”, “ORANGE”, “STRAWBERRY”, “APPLE”, “LOBSTER”, and “CRAB” are scrolled.

[0063] FIG. 5 is an explanatory view showing a payout table that sets the symbols stopped on the respective defined areas 28 (28a1 to 28c3) when the base game is executed, and sets the number of coins to be paid out to the player. As shown in FIG. 5, when five symbols of “APPLE” are stopped on the defined areas 28 (28a1 to 28c3), this results in the bonus trigger, and the bonus game is executed. Note that, when five symbols of “APPLE” are stopped on the 15 defined areas 28 (28a1 to 28c3), 15 is assigned as the basic number of payout coins to such a stop of five symbols of “APPLE” in the table of FIG. 5. This basic number of payout coins is used as a base in the case of deciding a payout amount of the coins in the bonus game.

[0064] Moreover, when four symbols of “ORANGE” are stopped, five coins are paid out, and when five symbols thereof are stopped, ten coins are paid out. Furthermore, when three symbols of “PLUM” are stopped, five coins are paid out, when four symbols thereof are stopped, ten coins are paid out, and when five symbols thereof are stopped, 15 coins are paid out.

[0065] FIG. 6 is a block diagram showing an internal construction of the slot machine shown in FIG. 3. As shown in FIG. 6, a control circuit is composed of constituents such as a motherboard 40, a main body printed circuit board (PCB) 60, a gaming board 50, a sub CPU 61, a door PCB 80, and various types of switches and sensors. A controller 48 is composed of the motherboard 40 and the gaming board 50.

[0066] The gaming board 50 includes a central processing unit (CPU) 51, a ROM 55, and a boot ROM 52, which are interconnected by an internal bus, a card slot 53S ready for a memory card 53, and an IC socket 54S ready for a generic array logic (GAL) 54.

[0067] The memory card 53 is composed of a non-volatile memory, and stores the game program. The game program includes a symbol decision program. The symbol decision program is a program for deciding the symbols (code numbers corresponding to the symbols) displayed still on the respective defined areas 28.

[0068] Moreover, the card slot 53S is composed so as to be capable of inserting/removing the memory card 53 thereinto therefrom, and is connected to the motherboard 40 by an IDE bus. Hence, the memory card 53 is removed from the card slot 53S, another game program is written into the memory card 53, and the memory card 53 is inserted into the card slot 53S, thus making it possible to change a type and content of the game played in the slot machine 10. The game program includes the program concerned with the advancing of the game. Moreover, the game program includes image data and sound data, which are outputted during the game.

[0069] The CPU 51, the ROM 55, and the boot ROM 52, which are interconnected by the internal bus, are connected to the motherboard 40 by a PCI bus. The PCI bus transfers a signal between the motherboard 40 and the gaming board 50, and supplies power from the motherboard 40 to the gaming board 50. Moreover, the motherboard 40 and the gaming board 50 construct the controller 48.

[0070] The motherboard 40 is composed by using a commercially available general-purpose motherboard (printed wiring board implemented with basic parts of a personal computer), and includes a main CPU 41, a read only memory (ROM) 42, a random access memory (RAM) 43, and a communication interface 44.

[0071] The ROM 42 is formed of a memory device such as a flash memory, and stores a program such as a basic input/output system (BIOS) to be executed by the main CPU 41, and permanent data. When the BIOS is executed by the main CPU 41, predetermined initializing processing for peripheral devices is performed, and capture processing for the game program stored in the memory card 53 through the gaming board 50 is started. Note that, in the present invention, the ROM 42 may be one capable of rewriting the contents thereof, or may be one incapable of such rewriting.

[0072] In the RAM 43, data and a program, which are for use when the main CPU 41 operates, are stored. The RAM 43 can store the game program.

[0073] In the RAM 43, data regarding the number of credits, the number of inserted game mediums and the number of paid-out game mediums in one game is stored.

[0074] To the motherboard 40, there are individually connected the main body printed circuit board (PCB) 60 and the door PCB 80, which will be described later, by USBs. Moreover, a power supply unit 45 is connected to the motherboard 40.

[0075] To the main body PCB 60 and the door PCB 80, there are connected instruments and devices for generating input signals inputted to the main CPU 41, and instruments and devices, of which actions are controlled by control signals outputted from the main CPU 41. The main CPU 41 executes the game program stored in the RAM 43 based on the input signals inputted to the main CPU 41, thereby performing predetermined computational processing to store a result thereof in the RAM 43, and transmitting the control signals to the respective instruments and devices for the purpose of control processing for the respective instruments and devices.

[0076] To the main body PCB 60, there are connected a lamp 30, the sub CPU 61, a hopper 66, a coin detection unit 67, a graphic board 68, the speaker 29, the bill validator 22, the ticket printer 35, the card reader 36, a key switch 38S, and the data display device 37. The lamp 30 turns on in a predetermined pattern based on the control signal outputted from the main CPU 41.

[0077] The sub CPU 61 is connected to a video display processor (VDP) 46 and the touch panel 69. The VDP 46 reads out image data of the symbols, which are stored in an image data ROM 47, generates images to be displayed on the respective defined areas 28 (28a1 to 28c3) of the liquid crystal display 17, and outputs the image data to the liquid crystal display 17.

[0078] The touch panel 69 is provided on the surface of the lower image display panel 16 shown in FIG. 3., and in the case
where the player touches the touch panel 69 when the touch panel 69 is activated, the touch panel 69 senses the touched position. Specifically, the player touches the touch panel 69 on a position corresponding to each of the 15 defined areas 28 (28.1 to 28.3), thus making it possible to select an arbitrary one among the respective defined areas 28.

[0079] The hopper 66 is installed in the cabinet 11, and pays out a predetermined number of coins from a coin payout opening 19 to the coin tray 18 based on the control signal outputted from the main CPU 41. The coin detection unit 67 is provided in an inside of the coin payout opening 19, and when detecting that the predetermined number of coins are paid out from the coin payout opening 19, outputs an input signal to the main CPU 41.

[0080] The graphic board 68 controls displays images on the upper image display panel 33 and the lower image display panel 16 based on the control signal outputted from the main CPU 41. On the number-of-credits display portion 31 of the lower image display panel 16, the number of credits, which is stored in the RAM 43, is displayed. Moreover, on the number-of-payouts display portion 32 of the lower image display panel 16, the number of paid-out coins is displayed.

[0081] The graphic board 68 includes a video display processor (VDP) for generating image data based on the control signal outputted from the main CPU 41, a video RAM for temporarily storing the image data generated by the VDP, and like. Note that image data for use in the case of generating the image data by the VDP is included in the game program read from the memory card 53 and stored in the RAM 43.

[0082] The bill validator 22 identifies whether or not the bill is a real one, and receives a real bill in the cabinet 11. Upon receiving the real bill, the bill validator 22 outputs an input signal to the main CPU 41 based on the amount of the received bill. The main CPU 41 stores, in the RAM 43, the number of credits, which corresponds to the amount of bill, the amount being transmitted by the input signal.

[0083] Based on the control signal outputted from the main CPU 41, the ticket printer 35 prints, on the ticket, the bar code in which the data regarding the number of credits, the date, the identification number of the slot machine 10, and like, which are stored in the RAM 43, is encoded. Then, the ticket printer 35 outputs the printed ticket as the bar code-attached ticket 39.

[0084] The card reader 36 reads the data from the smart card, and then transmits the read data to the main CPU 41, and writes the data to the card-based on the control signal from the main CPU 41. The key switch 38S is provided on the keypad 38, and outputs a predetermined input signal to the main CPU 41 when the keypad 38 is operated by the player. Based on the control signal outputted from the main CPU 41, the data display device 37 displays the data read by the card reader 36 and the data entered by the player through the keypad 38.

[0085] To the door PCB 80, there are connected the control panel 20, a reverberator 21S, a coin counter 21C, and a cold cathode tube 81. On the control panel 20, there are provided a spin switch 23S corresponding to the spin button 23, a change switch 24S corresponding to the change button 24, a cashout switch 25S corresponding to the cashout button 25, a 1-BET switch 26S corresponding to the 1-BET button 26, and a maximum-BET switch 27S corresponding to the maximum-BET button 27. The respective switches 23S to 27S output input signals to the main CPU 41 when the buttons 23 to 27 corresponding thereto are operated by the player.

[0086] The coin counter 21C is provided in an inside of the coin receiving slot 21, and identifies whether or not the coins inserted into the coin receiving slot 21 by the player are real ones. Coins other than the real coins are discharged from the coin payout opening 19. Moreover, upon detecting the real coins, the coin counter 21C outputs an input signal to the main CPU 41.

[0087] The reverberator 21S operates based on the control signal outputted from the main CPU 41, and distributes the coins recognized as the real coins by the coin counter 21C to a cash box (not shown) installed in an inside of the slot machine 10 or to the hopper 66. Specifically, when the hopper 66 is filled with the coins, the real coins are distributed to the cash box by the reverberator 21S. Meanwhile, when the hopper 66 is not filled with the coins, the real coins are distributed to the hopper 66. The cold cathode tube 81 functions as a backlight installed on the backsides of the lower image display panel 16 and the upper image display panel 33, and turns on based on the control signal outputted from the main CPU 41.

[0088] Next, a description will be made of the processing executed in the slot machine 10. The main CPU 41 reads out and executes the game program, thereby advancing the game.

[0089] FIG. 7 is a flowchart showing game execution processing. In the game execution processing, first, the main CPU 41 determines whether or not one or more coins are bet (Step S11). In this processing, the main CPU 41 determines whether or not to have received the input signal outputted from the 1-BET switch 26S when the 1-BET button 26 is operated or the input signal outputted from the maximum-BET switch 27S when the maximum-BET button 27 is operated. In the case of determining that one or more coins are not bet, the main CPU 41 returns the processing to Step S11.

[0090] Meanwhile, in the case of determining in Step S11 that one or more coins are bet, the main CPU 41 performs processing for reducing the number of credits, which is stored in the RAM 43, in response to the number of bet coins (Step S12). Note that, when the number of bet coins is larger than the number of credits, which is stored in the RAM 43, the main CPU 41 returns the processing to Step S11 without performing the processing for reducing the number of credits, which is stored in the RAM 43. Meanwhile, when the number of bet coins exceeds an upper limit value (for example, three) of the number capable of being bet on one game, the main CPU 41 moves the processing to Step S13 without performing the processing for reducing the number of credits, which is stored in the RAM 43.

[0091] In Step S13, the main CPU 41 determines whether or not the spin button 23 is switched on. In this processing, the main CPU 41 determines whether or not to have received the input signal outputted from the spin switch 23S when the spin button 23 is pressed.

[0092] In the case of determining that the spin button 23S is not switched on, the processing is returned to Step S11. Note that, when the spin button 23 is not switched on (for example, when an instruction telling that the game will be ended is entered without switching on the spin button 23), the main CPU 41 cancels a result of the reduction in Step S12.
Meanwhile, in the case of determining in Step S13 that the spin button 23 is switched on, the main CPU 41 performs symbol decision processing (Step S14). In this symbol decision processing, the main CPU 41 executes the symbol decision program stored in the RAM 43, thereby deciding the code numbers at the time when the symbols are stopped. This processing will be described later in detail by using FIG. 8. Note that, in this embodiment, a description will be made of the case where one or plural winnings are decided from among the plural types of winning by deciding the symbols to be displayed still; however, in the present invention, for example, the one or plural winnings selected from among the plural types of winnings may be first decided, and thereafter, a combination of the symbols to be displayed still may be decided based on the above-described one or plural winnings.

Next, the main CPU 41 performs scroll display control processing for the respective defined areas 28 (28a1 to 28c3) of the liquid crystal display 17 (Step S15). This processing is for display control so that the symbols decided in Step S14 can be displayed still after the symbols start to be scrolled.

Next, the main CPU 41 determines whether or not the bonus game trigger is established, that is, whether or not five or more symbols of "APPLE", which become the bonus trigger, are stopped on the 15 defined areas 28 (28a1 to 28c3) (Step S16).

In the case of determining that the bonus trigger is established, the main CPU 41 reads out a program for playing the bonus game from the RAM 43, and executes bonus game processing (Step S17), and ends the game execution processing. A description will be made later in detail of the bonus game processing by using FIG. 9.

In the case of determining that the bonus game trigger is not established (NO in Step S16), the main CPU 41 determines whether or not the winning is established (Step S18). The establishment of the winning is decided based on the number of such scattered symbols stopped on the 15 defined areas 28 (28a1 to 28c3) or on a combination of specific symbols stopped on the payline. For example, in the case where four symbols of "ORANGE" are stopped as the scattered symbols as shown in FIG. 5, the payout of five coins occurs.

Then, the main CPU 41 performs payout processing for the coins (Step S19), and ends the game execution processing. Meanwhile, when the winning is not established (NO in Step S18), the main CPU 41 ends the game execution processing.

FIG. 8 is a flowchart showing a subroutine of the stopped symbol decision processing executed in Step S14 of FIG. 7. This processing is processing performed in such a manner that the main CPU 41 executes the symbol decision program stored in the RAM 43.

First, the main CPU 41 executes a random number generating program included in the symbol decision program, and thereby selects random number values individually corresponding to the respective symbols from among a numerical range of 0 to 255 (Step S31). In this embodiment, a description will be made of the case of generating the random numbers on the program (the case of using so-called software random numbers). However, in the present invention, a random number generator may be provided in advance, and the random numbers may be sampled from the random number generator (so-called hardware random numbers). However, in the present invention, random numbers generator may be provided in advance, and the random numbers may be sampled from the random number generator (so-called hardware random numbers may be used).

Next, the main CPU 41 decides the symbols to be stopped on the defined areas 28 (28a1 to 28c3) based on the selected random number values (Step S32).

FIG. 9 is a flowchart showing a subroutine of the bonus game processing executed in step S17 shown in FIG. 7. In the bonus game processing, first, the main CPU 41 performs processing for deciding the number of bonus games (Step S61). This processing can be performed by executing the random number generating program included in the symbol decision program, or by providing the random number generator in advance and extracting the random numbers from the random number generator (using the so-called hardware random numbers). The number of bonus games can be decided at an arbitrary number from one to ten. Moreover, the number of bonus games can be predetermined, and the processing of Step S61 can be omitted.

After the number of bonus games is decided, the main CPU 41 next switches the display content of the liquid crystal display 14 of the upper image display panel 33 and the display content of the liquid crystal display 17 of the lower image display panel 16 from display contents for the base game to display contents for the bonus game (Step S62). In such switching, as shown in FIG. 1, an upper half of the video reel 49 is displayed on the liquid crystal display 14 of the upper image display panel 33 that is displaying the effect image and the image representing the introduction of the game contents and the explanation of the game rule. Moreover, as shown in FIG. 1, a lower half of the video reel 49 is displayed on the liquid crystal display 17 of the lower image display panel 16 that is displaying the image of the combination including five or more symbols of "APPLE" and becoming the bonus trigger and the images of the number-of-credits display portion 34 and the number-of-payouts display portion 32. Subsequently, the main CPU 41 determines whether or not the spin button 23 is switched on (Step S63). In the case of determining that the spin button 23 is switched on, the main CPU 41 performs rotation display control processing (Step S64). In this rotation display control processing in Step S64, the main CPU 41 rotates and stops the video reel 49 of FIG. 1, which is displayed astride the liquid crystal display 14 of the upper image display panel 33 and the liquid crystal display 17 of the lower image display panel 16. It can be also seen from FIG. 1 that (a) the video reel 49 is displayed on the liquid crystal display 17 of the lower image display panel 16. On a circumferential surface of the video reel 49, the plurality of multiplication factors are indicated.

Subsequently, the main CPU 41 of the slot machine 10 according to the first embodiment performs payout amount decision processing for deciding the payout amount of coins (Step S65). In this payout amount decision processing, the multiplication factor is used. The multiplication factor is displayed on both of the liquid crystal displays 14 and 17 across the boundary between the upper image display panel 33 and the lower image display panel 16 as a result of the rotation display of the video reel 49 in Step S64. The boundary is located on the video reel 49 and serves as the substitute for the payline. Then, the basic number (15) of payout coins, which is defined for the stop of five symbols of "APPLE" by the table of FIG. 5, is multiplied by the multiplication factor described above, in which the five symbols of "APPLE" become the bonus trigger. Then, the number of coins, which
is obtained by the above-described multiplication, is decided as the payout amount in the bonus game of this time. Subsequently, the main CPU 41 performs payout processing of paying out the decided payout amount of coins (Step S66).

[0105] Subsequently, the main CPU 41 confirms whether or not the execution number of bonus games has reached the number decided in Step S61 (Step S67). When the execution number of bonus games has not reached the number decided in Step S61 (NO in Step S67), the main CPU 41 returns the processing to Step S63. Meanwhile, when the execution number of bonus games has reached the number decided in Step S61 (YES in Step S67), the main CPU 41 returns the display content of the liquid crystal display 14 of the upper image display panel 33 from the image of the upper half of the video reel 49 to the effect image in the base game and the image representing the introduction of the game contents and the explanation of the game rule. In addition, the main CPU 41 returns the display content of the liquid crystal display 17 of the lower image display panel 16 from the image of the lower half of the video reel 49 to the images in the base game immediately before the game is shifted to the bonus game, which are: the image of the combination including five or more symbols of “APPLE” and becoming the bonus trigger; and the images of the number-of-credits display portion 31 and the number-of-payouts display portion 32 (Step S68). Then, the main CPU 41 ends the bonus game processing. In such a way, the bonus game is executed.

[0106] As described above, in the slot machine 10, when the bonus game trigger is established at the time of executing the base game, and the game is shifted to the bonus game, in each bonus game of which number is decided to the arbitrary number from one to ten, the video reel 49 in which the plurality of multiplication factors are indicated on the circumferential surface is displayed astride both of the liquid crystal displays 14 and 17 of the upper image display panel 33 and the lower image display panel 16, and the video reel 49 is then rotated and stopped. Then, the payout amount in the bonus game is decided at the number of coins, which is obtained by the following calculation in which the basic number (15) of payout coins is multiplied by the multiplication factor located on the boundary between the upper image display panel 33 and the lower image display panel 49. In this case, the basic number (15) of payout coins is defined for the stop of five symbols of “APPLE”, which become the bonus trigger, and the boundary serves as the substitute for the payline. Specifically, in the slot machine 10, the payout amount of coins in the bonus game is changed by the display contents of both of the liquid crystal displays 14 and 17 of the upper image display panel 33 and the lower image display panel 16 in the bonus game.

[0107] Hence, when the bonus game is started, the player can be made interested in the payout amount of coins in the bonus game. In such a way, the player can continue to be interested in the game of the slot machine.

[0108] Note that, in the above-described first embodiment, the description has been made of the case where the payout amount of coins in the bonus game is changed by the content of the image displayed astride the liquid crystal display 14 of the upper image display panel 33 and the liquid crystal display 17 of the lower image display panel 16. However, a construction can also be made, in which the payout amount of coins in the bonus game is changed by the contents of the images individually displayed on the liquid crystal display 14 of the upper image display panel 33 and the liquid crystal display 17 of the lower image display panel 16.

[0109] A description will be made of a slot machine according to a second embodiment of the present invention.

[0110] The slot machine according to the second embodiment basically has a similar hardware configuration to that of the slot machine 10 of the first embodiment. Hence, the description made with reference to FIGS. 3, 4 and 6 while assigning the reference numerals to the respective constituents will also be used for a basic construction of the slot machine 10, which is related to an exterior appearance and inside thereof, and a duplicate description will be omitted.

[0111] The slot machine 10 according to the second embodiment is different from the slot machine 10 according to the first embodiment in content of a part of the processing executed mainly by the main CPU 41. With reference to a flowchart of FIG. 10, a description will be made below of a processing procedure of the processing executed by the main CPU 41 of the slot machine 10 of the second embodiment, in which a portion of the processing in the second embodiment is particularly different from that of the processing executed by the main CPU 41 of the slot machine 10 according to the first embodiment.

[0112] FIG. 10 is a flowchart showing a part of a processing procedure according to a modification example of the bonus game executed by the slot machine 10 according to the second embodiment of the present invention. In the slot machine 10 according to the second embodiment, the respective processes of Step S62, Step S64, Step S65 and Step S68 in the bonus game execution processing performed by the main CPU 41 of the slot machine 10 according to the first embodiment, which is shown in FIG. 9, are changed to the respective processes of the following Step S101, Step S102, Step S103 and Step S104 as shown in FIG. 10.

[0113] Then, after deciding the number of bonus games in Step S61 of FIG. 9, as shown in FIG. 10, the main CPU 41 switches the display content of the liquid crystal display 14 of the upper image display panel 33 and the display content of the liquid crystal display 17 of the lower image display panel 16 from the display contents for the base game to the display contents for the bonus game (Step S101). In such switching, as shown in FIG. 11A, the cube-like symbol on which the multiplication factor is indicated is displayed on the liquid crystal display 14 of the upper image display panel 33 that is displaying the effect image and the image representing the introduction of the game contents and the explanation of the game rule. Moreover, as shown in FIG. 11A, the cube-like symbol on which the multiplication factor is indicated is also displayed on the liquid crystal display 17 of the lower image display panel 16 that is displaying the image of the combination including five or more symbols of “APPLE” and becoming the bonus trigger and the images of the number-of-credits display portion 31 and the number-of-payouts display portion 32.

[0114] Moreover, in the case of determining in Step S63 of FIG. 9 that the spin button 23 is switched on, the main CPU 41 performs rotation display control processing as shown in FIG. 10 (Step S102). In the rotation control processing of Step S102, the main CPU 41 scrolls downward the symbol displayed on the liquid crystal display 17 of the lower image
display panel 16, and scrolls downward the symbol displayed on the liquid crystal display 14 of the upper image display panel 33. Thereafter, the main CPU 41 stops both of the symbols. During such scroll, with regard to the symbol displayed on the liquid crystal display 17 of the lower image display panel 16, a portion thereof extending off from a lower edge of the lower image display panel 16 gradually comes not to be displayed, and before long, the entirety of the symbol comes not to be displayed on the lower image display panel 16. Moreover, with regard to the symbol displayed on the liquid crystal display 14 of the upper image display panel 33, a portion thereof extending off from a lower edge of the upper image display panel 33 gradually comes to be displayed on an upper portion of the liquid crystal display 17 of the lower image display panel 16, and before long, the entirety of the symbol comes to be displayed on the lower image display panel 16 instead of coming not to be displayed on the liquid crystal display 14 of the upper image display panel 33.

Note that, when the symbol displayed on the liquid crystal display 17 of the lower image display panel 16 is scrolled downward, and the display is performed so that the entirety of the symbol can extend off from the lower edge of the lower image display panel 16, it is also possible to make an effect as follows. Specifically, prior to such display, the symbol (cube) concerned is cracked and broken from a portion of lightning, whereby the downward scroll of the symbol is started.

Subsequently, the main CPU 41 performs payout amount decision processing for deciding the payout amount of coins (Step S103). In this payout amount decision processing, the basic number (15) of payout coins, which is defined for the stop of five symbols of “APPLE”, the symbols becoming the bonus trigger, in the table of FIG. 5, is multiplied by the multiplication factor indicated on the symbol displayed on the liquid crystal displays 14 and 17 of the upper image display panel 33 and the lower image display panel 16 as a result of the scroll display of the symbol in Step S102. Then, the number of coins, which is obtained by the above-described multiplication, is decided as the payout amount in the bonus game of this time. Here, as shown in FIG. 11A, when the symbols are displayed individually on the respective liquid crystal displays 14 and 17, the number of coins obtained by multiplying the basic number (15) of payout coins by the sum of the multiplication factors indicated on the respective symbols is decided as the payout amount in the bonus game of this time. Moreover, as shown in FIG. 11B, when one symbol is displayed astride both of the liquid crystal displays 14 and 17, the number of coins, which is obtained by multiplying the basic number (15) of payout coins by the multiplication factor indicated on the symbol concerned is decided as the payout amount in the bonus game of this time.

Moreover, in the case of determining that the execution number of bonus games has reached the number decided in Step S61, as shown in FIG. 10, the main CPU 41 returns the display content on the liquid crystal display 14 of the upper image display panel 33 from the image of the cube-like symbol on which the multiplication factor is indicated to the effect image in the base game and the image representing the introduction of the game contents and the explanation of the game rules. In addition, the main CPU 41 returns the display content of the liquid crystal display 17 of the lower image display panel 16 from the image of the cube-like symbol on which the multiplication factor is indicated to the images in the base game immediately before the game is shifted to the bonus game, which are: the image of the combination including five or more symbols of “APPLE” and becoming the bonus trigger; and the images of the number-of-credits display portion 31 and the number-of-payouts display portion 32 (Step S104). Then, the main CPU 41 ends the bonus game processing. In such a way, the bonus game is executed.

In the slot machine 10 according to the second embodiment, which is constructed as described above, when the bonus game trigger is established at the time of executing the base game, and the game is shifted to the bonus game, in each bonus game of which number is decided to the arbitrary number from one to ten, the symbols on which the multiplication factors are indicated are displayed individually on the liquid crystal display 14 of the upper image display panel 33 and the liquid crystal display 17 of the lower image display panel 16, are scrolled downward, and then are stopped. Then, the payout amount in the bonus game is decided at the number of coins, which is obtained by the following calculation in which the basic number (15) of payout coins is multiplied by the multiplication factors indicated on the symbols displayed on the respective liquid crystal displays 14 and 17 of the upper image display panel 33 and the lower image display panel 16.

In this case, the basic number (15) of payout coins is defined for the stop of five symbols of “APPLE”, which become the bonus trigger. Specifically, in the slot machine 10, the payout amount of coins in the bonus game is changed by the display contents of the respective liquid crystal displays 14 and 17 of the upper image display panel 33 and the lower image display panel 16 in the bonus game.

Hence, also in the slot machine 10 according to the second embodiment, in a similar way to the slot machine 10 according to the first embodiment, the player can be made interested in the payout amount of coins in the bonus game when the bonus game is started. In such a way, the player can continue to be interested in the game of the slot machine.

In the above-described first and second embodiments, the description has been made of the case where the payout amount of coins in the bonus game is changed by the contents of the images displayed on the liquid crystal display 14 of the upper image display panel 33 and the liquid crystal display 17 of the lower image display panel 16. However, a construction can also be made, in which the payout amount of coins in the bonus game is changed by the content of the image displayed on the liquid crystal display 14 of the upper image display panel 33.

A description will be made of a slot machine according to a third embodiment of the present invention.

The slot machine according to the third embodiment basically has a similar hardware configuration to those of the slot machines 10 of the first and second embodiments. Hence, the description made with reference to FIGS. 3, 4 and 6 while assigning the reference numerals to the respective constituents will also be used for a basic construction of the slot machine 10, which is related to the exterior appearance and inside thereof, and a duplicate description will be omitted.

The slot machine 10 according to the third embodiment is different from the slot machines 10 according to the first and second embodiments in content of a part of the processing executed mainly by the main CPU 41. With reference to a flowchart of FIG. 12, a description will be made...
below of a processing procedure of the processing executed by the main CPU 41 of the slot machine 10 of the third embodiment, in which a portion of the processing in the third embodiment is particularly different from those of the processing executed by the main CPU 41 of the slot machines 10 according to the first and second embodiments.

[0124] FIG. 12 is a flowchart showing a part of a processing procedure according to a modification example of the bonus game executed by the slot machine 10 according to the third embodiment of the present invention. In the slot machine 10 according to the third embodiment, the respective processes of Step S62, Step S64, Step S65 and Step S68 in the bonus game execution processing performed by the main CPU 41 of the slot machine 10 according to the first embodiment, which is shown in FIG. 9, are changed to the respective processes of the following Step S111, Step S112, Step S113 and Step S114 as shown in FIG. 12.

[0125] Then, after deciding the number of bonus games in Step S61 of FIG. 9, as shown in FIG. 12, the main CPU 41 switches the display content of the liquid crystal display 14 of the upper image display panel 33 from the effect image for the base game and the image representing the introduction of the game contents and the explanation of the game rule to an image of the video reel 49-1 (refer to FIG. 13) in which the plurality of multiplication factors are indicated on the circumferential surface and of the payline 49-2 (Step S111).

[0126] Moreover, in the case of determining in Step S63 of FIG. 9 that the spin button 23 is switched on, as shown in FIG. 12, the main CPU 41 performs rotation control processing for rotating and stopping the video reel 49-1 of the liquid crystal display 14 (Step S112).

[0127] Subsequently, the main CPU 41 performs payout amount decision processing for deciding the payout amount of coins (Step S113). In this payout amount decision processing, the basic number (15) of payout coins, which is defined for the stop of five symbols of “APPLE”, becomes the bonus trigger, in the table of FIG. 5, is multiplied by the multiplication factor on the video reel 49-1 stopped on the payline 49-2 as a result of the rotation display of the video reel 49-1 in Step S112. Then, the number of coins, which is obtained by the above-described multiplication, is decided as the payout amount in the bonus game of this time.

[0128] Moreover, in the case of determining in Step S67 of FIG. 9 that the execution number of bonus games has reached the number decided in Step S61, as shown in FIG. 12, the main CPU 41 returns the display content on the liquid crystal display 14 of the upper image display panel 33 from the image of the video reel 49-1 and the payline 49-2 to the effect image in the base game and the image representing the introduction of the game contents and the explanation of the game rule (Step S114). Then, the main CPU 41 ends the bonus game processing. In such a way, the bonus game is executed.

[0129] In the slot machine 10 according to the third embodiment, which is constructed as described above, when the bonus game trigger is established at the time of executing the base game, and the game is shifted to the bonus game, in each bonus game of which number is decided to the arbitrary number from one to ten, the video reel 49-1 in which the plurality of multiplication factors are indicated on the circumferential surface is displayed on the liquid crystal display 14 of the upper image display panel 33. Then, the video reel 49-1 is rotated and stopped. Then, the payout amount in the bonus game is decided at the number of coins, which is obtained by the following calculation in which the basic number (15) of payout coins is multiplied by the multiplication factor located on the payline 49-2 displayed on the liquid crystal display 14 when the video reel 49-1 is stopped. In this case, the basic number (15) of payout coins is defined for the stop of five symbols of “APPLE”, which become the bonus trigger. Specifically, in the slot machine 10, the payout amount of coins in the bonus game is changed by the display content of the liquid crystal display 14 of the upper image display panel 33 in the bonus game.

[0130] Hence, also in the slot machine 10 according to the third embodiment, in a similar way to the slot machines 10 according to the first and second embodiments, the player can be made interested in the payout amount of coins in the bonus game when the bonus game is started. In such a way, the player can continue to be interested in the game of the slot machine.

[0131] Note that, in each of the above-described embodiments, the description has been made of the case where the liquid crystal display 14 is used as the second display in the upper image display panel 33; however, other displays such as a CRT and a plasma display are also usable instead of the liquid crystal display 14. Moreover, except the case of making the construction to display the 15 defined areas 28a to 28c by using the mechanical rotation reels, the other displays such as the CRT and the plasma display are also usable instead of using the liquid crystal display 17 as the first display also in the lower image display panel 16.

[0132] As above, the description has been made of the slot machine and the playing method of the slot machine according to the present invention based on the illustrated embodiments. However, the present invention is not limited to the embodiments, and the constructions of the respective portions can be replaced by arbitrary constructions having functions similar thereto.

[0133] For example, the controller 48 in the present invention can be composed of a CPU that performs processing in accordance the programs, like the main CPU 41 of the motherboard 40 and the CPU 51 of the gaming board 50 in the slot machine 10 in each of the first to third embodiments; however, besides the above, a part of the controller 48 can also be composed, for example, of a custom integrated circuit (IC) such as an application specific integrated circuit (ASIC), or a digital signal processor (DSP).

What is claimed is:
1. A slot machine comprising:
a first display on which a plurality of symbols arranged on a plurality of defined areas are rearranged in a base game;
a second display on which an effect image is displayed in the base game, the second display being disposed adjacent to the first display; and
a controller operable to display an image related to a decision of a payout amount of game mediums in a bonus game astride the first display and the second display in a case of shifting a game from the base game to the bonus game and executing the bonus game.
2. A slot machine comprising:
   a first display on which a plurality of symbols arranged on
   a plurality of defined areas are rearranged in a base
   game;
   a second display on which an effect image is displayed in
   the base game, the second display being disposed adja-
   cent to the first display; and
   a controller operable to display images related to a decision
   of a payout amount of game mediums in a bonus game
   individually on the first display and the second display in
   a case of shifting a game from the base game to the bonus
   game and executing the bonus game.
3. A slot machine comprising:
   a first display on which a plurality of symbols arranged on
   a plurality of defined areas are rearranged in a base
   game;
   a second display on which an effect image is displayed in
   the base game, the second display being disposed adja-
   cent to the first display; and
   a controller operable to display an image related to a deci-
   sion of a payout amount of game mediums in a bonus
   game on the second display in a case of shifting a game
   from the base game to the bonus game and executing the
   bonus game.
4. The slot machine according to claim 1, wherein the
   controller allows mechanical reels to rearrange the symbols
   on the respective defined areas of the first display in the
   base game, and allows a liquid crystal display disposed in front
   of the mechanical reels to display the image on the first display
   in the bonus game.
5. The slot machine according to claim 2, wherein the
   controller allows mechanical reels to rearrange the symbols
   on the respective defined areas of the first display in the
   base game, and allows a liquid crystal display disposed in front
   of the mechanical reels to display the image on the first display
   in the bonus game.
6. The slot machine according to claim 1,
   wherein indication of a multiplication factor to be applied
   to payout of the game medium is included in the image
   related to the decision of the payout amount of game
   mediums in the bonus game, and
   the controller changes a payout amount of the game medi-
   ums, the payout amount being predetermined for a com-
   bination of symbols becoming a trigger to shift the game
   to the bonus game among the symbols rearranged on the
   first display in the base game immediately before the
   game is shifted to the bonus game, to a payout amount
   obtained by multiplying the predetermined payout
   amount by the multiplication factor thus indicated.
7. The slot machine according to claim 2,
   wherein indication of a multiplication factor to be applied
   to payout of the game medium is included in the image
   related to the decision of the payout amount of game
   mediums in the bonus game, and
   the controller changes a payout amount of the game medi-
   ums, the payout amount being predetermined for a com-
   bination of symbols becoming a trigger to shift the game
   to the bonus game among the symbols rearranged on the
   first display in the base game immediately before the
   game is shifted to the bonus game, to a payout amount
   obtained by multiplying the predetermined payout
   amount by the multiplication factor thus indicated.
8. The slot machine according to claim 3,
   wherein indication of a multiplication factor to be applied
   to payout of the game medium is included in the image
   related to the decision of the payout amount of game
   mediums in the bonus game, and
   the controller changes a payout amount of the game medi-
   ums, the payout amount being predetermined for a com-
   bination of symbols becoming a trigger to shift the game
   to the bonus game among the symbols rearranged on the
   first display in the base game immediately before the
   game is shifted to the bonus game, to a payout amount
   obtained by multiplying the predetermined payout
   amount by the multiplication factor thus indicated.
9. A playing method of a slot machine comprising the steps
   of:
   rearranging, in a base game, a plurality of symbols
   arranged on a plurality of defined areas of a first display;
   displaying, in the base game, an effect image on a second
   display disposed adjacent to the first display; and
   displaying an image related to a decision of a payout
   amount of game mediums in a bonus game astarte
   the first display and the second display in a case of shifting
   a game from the base game to the bonus game and
   executing the bonus game.
10. A playing method of a slot machine comprising the
    steps of:
    rearranging, in a base game, a plurality of symbols
    arranged on a plurality of defined areas of a first display;
    displaying, in the base game, an effect image on a second
    display disposed adjacent to the first display; and
    displaying images related to a decision of a payout
    amount of game mediums in a bonus game individually
    on the first display and the second display in a case of shifting
    a game from the base game to the bonus game and
    executing the bonus game.
11. A playing method of a slot machine comprising the
    steps of:
    rearranging, in a base game, a plurality of symbols
    arranged on a plurality of defined areas of a first display;
    displaying, in the base game, an effect image on a second
    display disposed adjacent to the first display; and
    displaying an image related to a decision of a payout
    amount of game mediums in a bonus game on the second
    display in a case of shifting a game from the base game
    to the bonus game and executing the bonus game.
12. The playing method of a slot machine according to
    claim 9, further comprising the step of: allowing a liquid
    crystal display disposed in front of mechanical reels to
    display the image on the first display in the case of executing
    the bonus game,
    wherein the mechanical reels perform the step of rearrang-
    ing the symbols on the respective defined areas of the
    first display in the base game.
13. The playing method of a slot machine according to
    claim 10, further comprising the step of: allowing a liquid
crystal display disposed in front of mechanical reels to display the image on the first display in the case of executing the bonus game,

wherein the mechanical reels perform the step of rearranging the symbols on the respective defined areas of the first display in the base game.

14. The playing method of a slot machine according to claim 9,

wherein indication of a multiplication factor to be applied to payout of the game medium is included in the image related to the decision of the payout amount of game mediums in the bonus game, and

the playing method further comprises the step of changing a payout amount of the game mediums, the payout amount being predetermined for a combination of symbols becoming a trigger to shift the game to the bonus game among the symbols rearranged on the first display in the base game immediately before the game is shifted to the bonus game, to a payout amount obtained by multiplying the predetermined payout amount by the multiplication factor thus indicated.

15. The playing method of a slot machine according to claim 10,

wherein indication of a multiplication factor to be applied to payout of the game medium is included in the image related to the decision of the payout amount of game mediums in the bonus game, and

the playing method further comprises the step of changing a payout amount of the game mediums, the payout amount being predetermined for a combination of symbols becoming a trigger to shift the game to the bonus game among the symbols rearranged on the first display in the base game immediately before the game is shifted to the bonus game, to a payout amount obtained by multiplying the predetermined payout amount by the multiplication factor thus indicated.

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