A slot machine comprising: a display capable of rearranging normal symbols and a multiplying-factor symbol corresponding to a number; and a controller programmed to execute processing of: (A) rearranging the normal symbols or a combination of the normal symbols and the multiplying-factor symbol to the display; (B-1) determining a normal payout amount, based on the numbers of the normal symbols of respective types rearranged in the processing (A); and (C-1) paying out game media in amount obtained by multiplication of the normal payout amount determined in the processing (B-1) by the number corresponding to the multiplying-factor symbol, when the multiplying-factor symbol is rearranged in the processing (A).
Multiplying factor for free game 10

```
Fig. 1G

SM

107

105

Fig. 1H

SM

107

105

Multiplying factor for free game 10

Win 3330
```
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Number of rearranged symbols</th>
<th>2 symbols 3 symbols 4 symbols 5 or more symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>2</td>
<td>3 6 9 30 10 30 8 10 15 8 30 15 25 30 50 75</td>
</tr>
<tr>
<td>J</td>
<td>4</td>
<td>3 6 9 30 10 30 8 10 15 8 30 15 25 30 50 75</td>
</tr>
<tr>
<td>Q</td>
<td>6</td>
<td>3 6 9 30 10 30 8 10 15 8 30 15 25 30 50 75</td>
</tr>
<tr>
<td>K</td>
<td>9</td>
<td>3 6 9 30 10 30 8 10 15 8 30 15 25 30 50 75</td>
</tr>
<tr>
<td>UMBRELLA</td>
<td>30</td>
<td>30 10 30 8 10 15 24 30 15 24 30 15 25 30 50 75</td>
</tr>
<tr>
<td>CLOUD</td>
<td>10</td>
<td>30 10 30 8 10 15 24 30 15 24 30 15 25 30 50 75</td>
</tr>
<tr>
<td>THUNDER</td>
<td>8</td>
<td>30 10 30 8 10 15 24 30 15 24 30 15 25 30 50 75</td>
</tr>
<tr>
<td>SUN</td>
<td>15</td>
<td>30 10 30 8 10 15 24 30 15 24 30 15 25 30 50 75</td>
</tr>
<tr>
<td>BONUS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

※1 "m" represents an individual payout amount in case of rearrangement of 2 symbols.  
※2 "n" represents the number of rearranged symbols.  
※2 Free games are executed in case of rearrangement of 3 or more symbols.
Fig. 5A

Slot machine game execution processing

NO

- Coin is BET?

YES

- Subtraction of number of credits

NO

- Start button is turned ON?

YES

Symbol rearrangement processing

Prize is established?

YES

- Multiplying-factor symbol is rearranged in symbol matrix?

NO

- Multiplying-factor symbol has a predetermined color?

YES

- Identification of normal symbols colored the same as color of multiplying-factor symbol

Payout of coins corresponding to sum of individual payout amounts for respective types of normal symbols differently colored

NO

Payout of coins corresponding to N-fold of sum of individual payout amounts for respective types of normal symbols colored the same

YES

- Payout of coins corresponding to normal payout amount

To Fig. 5B
Fig. 5B

From Fig. 5A

Specific condition is established?

YES

Stop-display of multiplying-factor symbol in multiplying-factor reel

Determination of multiplying factor for free games

Free game execution processing

NO

S22

S23

S24

S25

Return
Fig. 6

Symbol rearrangement processing

Symbol determination processing

Determination of individual payout amounts for respective types of normal symbols

Determination of normal payout amount by summing individual payout amounts

Last-rearrangement flag is set?

NO

YES

First-rearrangement flag is set?

NO

YES

Normal payout amount is equal to or less than predetermined amount?

NO

YES

Rearrangement of normal symbols

Rearrangement of multiplying-factor symbol

Rearrangement of multiplying-factor symbol

Return
Fig. 7

Timing setting processing

S40

Last-rearrangement selection button is turned "ON"?

NO

S42

First-rearrangement selection button is turned "ON"?

NO

Return

YES

S41

Setting of last-rearrangement flag

YES

S43

Setting of first-rearrangement flag

Fig. 8A

Free game execution processing

Setting number-of-free-games T to T = C

NO

Start button is turned ON?

YES

Symbol rearrangement processing

Prize is established?

NO

Multiplying-factor symbol is rearranged in symbol matrix?

YES

Multiplying-factor symbol has a predetermined color?

NO

Identification of symbols colored the same as color of multiplying-factor symbol

Payout of coins corresponding to amount obtained by multiplying sum of individual payout amounts for respective types of normal symbols differently colored by multiplying factor for free games

YES

Payout of coins corresponding to amount obtained by multiplying N-fold of normal payout amount by multiplying factor

NO

Payout of coins corresponding to amount obtained by multiplying sum of individual payout amounts for respective types of normal symbols colored the same by multiplying factor

From Fig. 8B

To Fig. 8B
Fig. 8B

From Fig. 8A

Specific condition is established?

NO

Stop-display of multiplying-factor symbol in multiplying-factor reel

YES

Determination of new multiplying factor for free games

T = T + C

T = T - 1

T = 0?

YES

Return

NO

S61

S62

S63

S64

S65

S66
Fig. 9C

FREE GAME!

Fig. 9D

SORRY...
Fig. 10

Symbol rearrangement processing

Symbol determination processing

Determination of individual payout amounts for respective types of normal symbols

Determination of normal payout amount by summing individual payout amounts

Rearrangement of symbols in display areas A to C

Game is in ready-to-win state for specific combination?

YES

Display of special image

Rearrangement of symbols in display area D

Specific combination is established?

YES

Display of special image continues

NO

Display of special image ends

Rearrangement of symbols in display areas D to E

Rearrangement of symbols in display area E

Return
Slot machine game execution processing

NO

Coin is BET?

YES

Subtraction of number of credits

NO

Start button is turned ON?

YES

Symbol rearrangement processing

Prize is established?

YES

Stop-display of multiplying-factor symbol by multiplying-factor reel

Determination of individual payout amounts for respective types of normal symbols

Determination of normal payout amount by summing individual payout amounts

Payout of coins corresponding to \((\text{normal payout amount}) \times (\text{number displayed on multiplying-factor symbol})\)

Return
SLOT MACHINE OFFERING A SPECIAL PAYOUT AND CONTROL METHOD THEREOF

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims benefit of priority based on U.S. Provisional Patent Application No. 61/027,604 filed on Feb. 11, 2008. The contents of this application are incorporated herein by reference in their entirety.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention
[0003] The present invention relates to a slot machine offering a special payout and a method for controlling the same.
[0004] 2. Discussion of the Background
[0005] In conventional slot machines, when a player inserts game media such as medals, coins or bills into an insertion slot of the slot machine and presses a spin button, then a plurality of symbols are scroll-displayed to a display portion provided on the front surface of a casing and, thereafter, the respective symbols are automatically stopped, as disclosed in U.S. Pat. Nos. 6,960,133, 6,012,983 and 6,093,102. In this case, when scroll-display of respective symbols starts by an input from the spin button, symbols are selected using random numbers, and the selected symbols are stop-displayed to the display portion. Then, when a combination of the stop-displayed symbols along a winning line is a predetermined winning combination (prize), a payout is conducted.

[0006] Further, among conventional slot machines, there are some slot machines which conduct two types of payouts which are a payout determined according to the combinations of symbols rearranged along winning lines and a payout determined according to the number of displayed symbols, as disclosed in U.S. Pat. No. 6,604,999 and U.S. 2002-0065124-A1. In such a slot machine which conducts payouts based on such scatter symbols, there is no relationship between payouts and positions at which the scatter symbols are displayed.

[0007] Generally, in the above-mentioned conventional slot machines, in the case where plural types of predetermined prizes are established, game media in amount corresponding to the total sum of amounts of respective payouts determined for the respective prizes are paid out to the player. That is, although plural types of prizes are established, an amount of a payout to be offered to the player is only an amount obtained by simple addition of amounts of payouts determined based on the respective prizes.

[0008] Thus, although plural types of prizes are established, the amount of game media to be offered to the player is only the total sum of the amounts of game media to be offered when each prize is established independently, so that lack of significant increase in amounts of payouts causes a problem that the player possibly loses a sense of expectation for the payouts.

[0009] Moreover, in the conventional slot machines, symbols to be displayed (for example, a symbol “watermelon”) are used as a component factor of a predetermined prize (for example, rearrangement of three “watermelons”), and are not symbols that increase an amount of a payout determined based on a prize upon establishment of the prize (for example, symbol that increases an amount of a payout based on the prize of three “watermelons” 3-fold). Therefore, the player has interests only in symbols that can be a component factor of the predetermined prize, resulting in a tendency of the player to get bored.

[0010] In light of the aforementioned problems, the present invention has been devised, and an object of the present invention is to provide a slot machine and a game control method which enable preventing the player from losing a sense of expectation for payouts and avoid a tendency of the player to get bored.


SUMMARY OF THE INVENTION

[0012] The present invention provides a slot machine having the following configuration.

[0013] That is, the slot machine comprises a display, a multiplying-factor-symbol display device and a controller.

[0014] The display is capable of rearranging a plurality of normal symbols. The multiplying-factor-symbol display device is capable of varying and displaying a plurality of multiplying-factor symbols each having a different number from one another displayed thereon. The controller is programmed to execute processing of:

[0015] (A) rearranging the plurality of the normal symbols to the display;

[0016] (B-1) determining a normal payout amount, based on the numbers of the normal symbols of respective types rearranged in the processing (A);

[0017] (C) stop-displaying a single multiplying-factor symbol by the multiplying-factor-symbol display device, after varying and displaying the multiplying-factor symbols; and

[0018] (D-1) paying out game media in amount obtained by multiplying the normal payout amount determined in the processing (B-1) by the number displayed on the multiplying-factor symbol stop-displayed in the processing (C).

[0019] According to the aforementioned slot machine, a single multiplying-factor symbol is stop-displayed by the multiplying-factor-symbol display device, after the multiplying-factor symbols are varied and displayed. Each of the multiplying-factor symbols has a number displayed thereon. Further, game media in amount obtained by multiplying the normal payout by the number displayed on the multiplying-factor symbol are paid out.

[0020] As described above, according to the aforementioned slot machine, a player can acquire several times larger amount of game media, based on the multiplying-factor symbol stop-displayed by the multiplying-factor-symbol display device, resulting in enhancement of a sense of expectancy of the player for payouts. Therefore, it is possible to prevent the player from losing a sense of expectancy for payouts.

[0021] Further, since the multiplying-factor symbol capable of increasing several-fold an amount of game media that the player can acquire is stop-displayed, it is possible to lead the player to have interests and concern for the number displayed on the multiplying-factor symbol to be stop-displayed. Furthermore, since the player plays games with a great sense of expectancy for stop-display of a multiplying-factor symbol having a larger number displayed thereon, it is possible to prevent the player from getting bored with games soon.
Further, the slot machine of the present invention preferably has the following configuration.

That is, the multiplying-factor symbols are colored or have a colored background. Further, the processing (D-1) is processing for paying out, when a multiplying-factor symbol colored a predetermined color or having a background colored the predetermined color is stop-displayed in the processing (C), game media in amount obtained by multiplying the normal payout amount determined in the processing (B-1) by the number displayed on the multiplying-factor symbol stop-displayed in the processing (C), on condition that the normal symbols rearranged in the processing (A) or a combination thereof satisfy a predetermined condition.

Thus, according to the aforementioned slot machine, the player can acquire a several times larger amount of game media, on condition that rearranged normal symbols or a combination thereof satisfy the specific condition (for example, rearrangement of a predetermined number or more of predetermined symbols, establishment of a specific combination by predetermined nine symbols).

Accordingly, the player has a lot of interests in whether or not the specific condition is established, and this configuration can lead the player to have a lot of interests in whether or not the specific condition is established as well as which prize is established by rearranged symbols. Therefore, it is possible to enhance interests of the player in symbols to be rearranged and also to immerse the player in the games.

Further, the slot machine of the present invention preferably has the following configuration.

That is, the processing (C) is processing for stop-displaying the multiplying-factor symbol by the multiplying-factor-symbol display device, after rearranging the plurality of the normal symbols in the processing (A).

As described above, according to the aforementioned slot machine, the multiplying-factor symbol is stop-displayed by the multiplying-factor-symbol display device, after rearranging the normal symbols to the display. That is, the multiplying factor for multiplication of the normal symbol is determined, after the player recognizes the normal payout amount (the amount paid out for the established prize). Therefore, the player greatly may expect or not expect so much the stop-display of a multiplying-factor symbol having a large number displayed thereon, depending on the amount paid out for the established prize.

For example, when the normal symbols rearranged in the symbol matrix SM results in establishment of a prize that offers a large amount of a payout, the player waits for stop-display of a multiplying-factor symbol having a larger number displayed thereon, with expectation for a further increase in the amount of the payout. On the contrary, when the normal symbols rearranged to the display results in no payout, since even stop-display of a multiplying-factor symbol having a large number displayed thereon only results in no increase in the amount of a payout, the player does not expect the stop-display of a multiplying-factor symbol having a large number displayed thereon.

As described above, which normal symbols are rearranged in the display causes ups and downs in the sense of expectation for the stop-display of a multiplying-factor symbol having a large number displayed thereon, resulting in further enhancement of entertainment of the games.
device is capable of varying and displaying a plurality of multiplying-factor symbols each having a different number from one another displayed thereon. The controller is programmed to execute processing of:

[A] rearranging the plurality of normal symbols to the display;

[B] determining, based on the numbers of the normal symbols of respective types rearranged in the processing (A), individual payout amounts for the respective types;

[C] stop-displaying a single multiplying-factor symbol by the multiplying-factor-symbol display device, after varying and displaying the multiplying-factor symbols; and

[D] paying out a special amount of game media and a normal amount of game media, the special payout amount being obtained by multiplying an amount obtained by summing the individual payout amounts for the types satisfying a predetermined condition by the number displayed on the multiplying-factor symbol stop-displayed in the processing (C), the standard payout amount being obtained by summing the individual payout amounts for types failing to satisfy the predetermined condition.

As described above, according to the aforementioned slot machine, a single multiplying-factor symbol is stop-displayed by the multiplying-factor-symbol display device, after the multiplying-factor symbols are varied and displayed. Each of the multiplying-factor symbols has a number displayed thereon. Then, a special amount of game media and a standard amount of game media are paid out. Here, the special payout amount is obtained by multiplying an amount obtained by summing the individual payout amounts for the types of the symbols satisfying the predetermined condition by the number corresponding to the multiplying-factor symbol, and the standard payout amount is obtained by summing the individual payout amounts for the types failing to satisfy the predetermined condition.

As described above, according to the aforementioned slot machine, the player can acquire a several times larger amount of game media for the types of the normal symbols satisfying the predetermined condition, based on the stop-display of the multiplying-factor symbol stop-displayed by the multiplying-factor-symbol display device, resulting in enhancement of a sense of expectancy of the player for payouts. Therefore, it is possible to prevent the player from losing a sense of expectancy for payouts.

Further, since the multiplying-factor symbol capable of increasing several-fold an amount of game media that the player can acquire is stop-displayed, it is possible to lead the player to have interests and concern for the number displayed on the multiplying-factor symbol to be stop-displayed. Furthermore, since the player plays games with a great sense of expectancy for stop-display of a multiplying-factor symbol having a larger number displayed thereon, it is possible to prevent the player from getting bored with games soon.

Furthermore, since only the payout amounts for the types of the normal symbols satisfying the predetermined condition are increased several-fold, it is possible to lead the player to have interests and concern for whether or not the respective normal symbols satisfy the predetermined condition.

Further, the slot machine of the present invention preferably has the following configuration.

That is the normal symbols and the multiplying-factor symbols are colored or have a colored background. The processing (D-2) comprises processing of: (D-2-1) determining the special payout amount by multiplying an amount obtained by summing individual payout amounts for types of normal symbols colored the same or having a background colored the same as a color of the multiplying-factor symbol rearranged in the processing (C) or a color of the background of the multiplying-factor symbol, by the number displayed on the multiplying-factor symbol; (D-2-2) determining the standard payout amount by summing individual payout amounts for types other than the types; and (D-2-3) paying out the special payout amount of game media determined in the processing (D-2-1) and the standard payout amount of game media determined in the processing (D-2-2).

As described above, according to the aforementioned slot machine, the player can acquire a several times larger amount of game media for the normal symbols colored the same as the color of the multiplying-factor symbol stop-displayed by the multiplying-factor-symbol display device or the normal symbols having a background colored the same (hereinafter, also referred to normal symbols colored the same).

Therefore, the player have a lot of fun in checking which normal symbols have the same color as that of the multiplying-factor symbol, during playing games. Such an action as checking allows the player to immerse in the games.

Further, the slot machine of the present invention preferably has the following configuration.

That is, the processing (C) is processing for stop-displaying the multiplying-factor symbol by the multiplying-factor-symbol display device, after rearranging the plurality of the normal symbols in the processing (A).

As described above, according to the aforementioned slot machine, the multiplying-factor symbol is stop-displayed by the multiplying-factor-symbol display device, after rearranging the normal symbols to the display. That is, the multiplying factor for multiplication of the total sum of the individual payout amounts for the types of the symbols satisfying the predetermined condition is determined, after the player recognizes the individual payout amounts for the respective types of the symbols (the amounts paid out for the established prizes). Therefore, the player may greatly expect or may not expect so much the stop-display of a multiplying-factor symbol having a large number displayed thereon, depending on the amounts paid out for the established prizes.

For example, when normal symbols rearranged to the display results in establishment of a prize that offers a large amount of a payout, the player waits for the rearrangement of a multiplying-factor symbol having a larger number displayed thereon with expectation for a further increase in the amount of the payout. In addition, the player expects that the symbols constituting the prize satisfy the predetermined condition. On the contrary, when the normal symbols rearranged to the display results in no payout, since even stop-display of a multiplying-factor symbol having a large number displayed thereon only results in no increase in an amount of a payout, the player does not expect the stop-display of a multiplying-factor symbol having a large number displayed thereon.

As described above, which normal symbols are rearranged in the first display area causes ups and downs in the sense of expectation for the stop-display of a multiplying-
factor symbol having a large number displayed thereon, resulting in further enhancement of entertainment of the games.

0058] Further, the slot machine of the present invention preferably has the following configuration.

0059] That is, the processing (D-2) is processing for paying out the special amount of game media and the standard amount of game media, on condition that the normal symbols rearranged in the processing (A) or a combination thereof satisfy a predetermined condition, the special payout amount being obtained by multiplying an amount obtained by summing the individual payout amounts for the types satisfying the predetermined condition by the number displayed on the multiplying-factor symbol stop-displayed in the processing (C), the standard payout amount being obtained by summing the individual payout amounts for types failing to satisfy the predetermined condition.

0060] Further, according to the aforementioned slot machine, the player can acquire a several times larger amount of game media for the types of the normal symbols satisfying the predetermined condition, on condition that rearranged normal symbols or a combination thereof satisfies the specific condition (for example, rearrangement of a predetermined number or more of predetermined symbols, establishment of a specific combination by predetermined nine symbols).

0061] Accordingly, the player has a lot of interests in whether or not the specific condition is established, and this configuration can lead the player to have a lot of interests in whether or not the specific condition is established as well as which prize is established by rearranged symbols. Therefore, it is possible to enhance interests of the player in symbols to be rearranged and also to immerse the player in the games.

0062] Further, the present invention provides a slot machine having the following configuration.

0063] That is, the processing (A) comprises processing of: (A-1) rearranging a plurality of normal symbols to the display after coins are BET; and (A-2) rearranging a plurality of normal symbols even without coins BET, on condition that the normal symbols rearranged in the processing (A) or a combination thereof satisfy the predetermined condition. Further, the processing (B-2) comprises processing of: (B-2-1) determining the individual payout amounts for the respective types, based on the numbers of the normal symbols of respective types rearranged in the processing (A-1); and (B-2-2) determining the individual payout amounts for the respective types, based on the numbers of the normal symbols of respective types rearranged in the processing (A-2). Further, the processing (D-2) is processing for paying out the special amount of game media and the standard amount of game media, the special payout amount being obtained by multiplying an amount obtained by summing the individual payout amounts for types satisfying the predetermined condition by the number displayed on the multiplying-factor symbol stop-displayed in the processing (C) out of the individual payout amounts for the respective types determined in the processing (B-2-2), the standard payout amount being obtained by summing the individual payout amounts for types failing to satisfy the predetermined condition out of the individual payout amounts determined in the processing (B-2-2).

0064] Further, according to the aforementioned slot machine, in case of establishment of the specific condition, a plurality of normal symbols are rearranged and the normal payout amount is determined, even without coins BET. That is, free games are conducted in the event of the establishment of the specific condition. During the free games, the player can acquire a several times larger amount of game media than the amount of game media which the player can acquire in games other than free games (also referred to normal games in the specification), for the types of the normal symbols satisfying the predetermined condition.

0065] Therefore, since the player can play game without BETTING game media and also acquire a several times larger amount of a payout for the types of the normal symbols satisfying the predetermined condition, it is possible to further enhance interests and concern of the player for the specific condition that generates free games. As a result, this configuration can immerse the player in the games.

0066] Further, the present invention provides a controlling method of a slot machine having the following configuration.

0067] That is, the controlling method of a slot machine comprises steps of: (A) rearranging a plurality of normal symbols to the display; (B-1) determining a normal payout amount, based on the numbers of the normal symbols of respective types rearranged in the processing (A); (C) stop-displaying a single multiplying-factor symbol by the multiplying-factor-symbol display device, after varying and displaying the multiplying-factor symbols; and (D-1) paying out game media in amount obtained by multiplying the normal payout amount determined in the processing (B-1) by the number displayed on the multiplying-factor symbol stop-displayed in the processing (C).

0068] According to the aforementioned controlling method of a slot machine, a single multiplying-factor symbol is stop-displayed by the multiplying-factor-symbol display device, after the multiplying-factor symbols are varied and displayed. Each of the multiplying-factor symbols has a number displayed thereon. Further, game media in amount obtained by multiplying the normal payout by the number displayed on the multiplying-factor symbol are paid out.

0069] As described above, according to the aforementioned controlling method of a slot machine, the player can acquire several times larger amount of game media, based on the multiplying-factor symbol stop-displayed by the multiplying-factor-symbol display device, resulting in enhancement of a sense of expectancy of the player for payouts. Therefore, it is possible to prevent the player to lose a sense of expectancy for payouts.

0070] Further, since the multiplying-factor symbol capable of increasing several-fold an amount of game media that the player can acquire is stop-displayed, it is possible to lead the player to have interests and concern for the number of the multiplying-factor symbol to be stop-displayed. Furthermore, since the player plays games with a great sense of expectancy for stop-displaying of a multiplying-factor symbol having a larger number displayed thereon, it is possible to prevent the player from getting bored with games soon.

0071] Further, the present invention provides a controlling method of a slot machine having the following configuration.

0072] That is, the controlling method of a slot machine comprises steps of: (A) rearranging a plurality of normal symbols to the display; (B-2) determining, based on the numbers of the normal symbols of respective types rearranged in the processing (A), individual payout amounts for the respective types; (C) stop-displaying a single multiplying-factor symbol by the multiplying-factor-symbol display device, after varying and displaying the multiplying-factor symbols; and (D-2) paying out a special amount of game media and a normal amount of game media, the special payout amount
being obtained by multiplying an amount obtained by summing the individual payout amounts for the types satisfying a predetermined condition by the number displayed on the multiplying-factor symbol stop-displayed in the processing (C), the standard payout amount being obtained by summing the individual payout amounts for types failing to satisfy the predetermined condition.

[0073] As described above, according to the aforementioned controlling method of a slot machine, a single multiplying-factor symbol is stop-displayed by the multiplying-factor-symbol display device, after the multiplying-factor symbols are varied and displayed. Each of the multiplying-factor symbols has a number displayed thereon. Then, a special amount of game media and a standard amount of game media are paid out. Here, the special payout amount is obtained by multiplication of an amount obtained by summing the individual payout amounts for the types of the symbols satisfying the predetermined condition by the number corresponding to the multiplying-factor symbol, and the standard payout amount is obtained by summing the individual payout amounts for the types failing to satisfy the predetermined condition.

[0074] As described above, according to the aforementioned controlling method of a slot machine, the player can acquire a several times larger amount of game media for the types of the normal symbols satisfying the predetermined condition, based on the stop-display of the multiplying-factor symbol stop-displayed by the multiplying-factor-symbol display device, resulting in enhancement of a sense of expectancy of the player for payouts. Therefore, it is possible to prevent the player from losing a sense of expectancy for payouts.

[0075] Further, since the multiplying-factor symbol capable of increasing several-fold an amount of game media that the player can acquire is stop-displayed, it is possible to lead the player to have interests and concern for the number displayed on the multiplying-factor symbol to be stop-displayed. Furthermore, since the player plays games with a great sense of expectancy for stop-display of a multiplying-factor symbol having a larger number displayed thereon, it is possible to prevent the player from getting bored with games soon.

[0076] Furthermore, since only the payout amounts for the types of the normal symbols satisfying the predetermined condition are increased several-fold, it is possible to lead the player to have interests and concern for whether or not the respective normal symbols satisfy the predetermined condition.

BRIEF DESCRIPTIONS OF DRAWINGS

[0077] FIG. 1A is a view illustrating an exemplary symbol matrix.

[0078] FIG. 1B is another view illustrating an exemplary symbol matrix.

[0079] FIG. 1C is a view illustrating an exemplary image which is displayed to a lower image display panel.

[0080] FIG. 1D is another view illustrating another exemplary image which is displayed to the lower image display panel.

[0081] FIG. 1E is another view illustrating another exemplary image which is displayed to the lower image display panel.

[0082] FIG. 1F is another view illustrating another exemplary image which is displayed to the lower image display panel.

[0083] FIG. 1G is another view illustrating another exemplary image which is displayed to the lower image display panel.

[0084] FIG. 1H is another view illustrating another exemplary image which is displayed to the lower image display panel.

[0085] FIG. 2 is a view illustrating the relationships between the numbers of rearranged normal symbols and individual payout amounts.

[0086] FIG. 3 is a perspective view illustrating the external appearance of a slot machine.

[0087] FIG. 4 is a block diagram illustrating an internal configuration of the slot machine illustrated in FIG. 3.

[0088] FIG. 5A is a flowchart illustrating a subroutine of slot machine game execution processing according to a first embodiment.

[0089] FIG. 5B is a flowchart illustrating a subroutine of the slot machine game execution processing according to the first embodiment.

[0090] FIG. 6 is a flowchart illustrating a subroutine of symbol rearrangement processing.

[0091] FIG. 7 is a flowchart illustrating a subroutine of timing setting processing.

[0092] FIG. 8A is a flowchart illustrating a subroutine of free-game execution processing.

[0093] FIG. 8B is a flowchart illustrating a subroutine of the free-game execution processing.

[0094] FIG. 9A is a view illustrating an exemplary symbol matrix.

[0095] FIG. 9B is another view illustrating an exemplary symbol matrix.

[0096] FIG. 9C is a view illustrating an exemplary image which is displayed to a lower image display panel.

[0097] FIG. 9D is another view illustrating another exemplary image which is displayed to the lower image display panel.

[0098] FIG. 10 is a flowchart illustrating a subroutine of symbol rearrangement processing.

[0099] FIG. 11 is a flowchart illustrating a subroutine of slot machine game execution processing according to a second embodiment.

[0100] FIG. 12 is a perspective view illustrating an external appearance of a slot machine according to another embodiment.

DESCRIPTION OF THE EMBODIMENTS

First Embodiment

[0101] In a slot machine 10 (see FIG. 3) according to the first embodiment, a multiplying-factor symbol (for example, a red multiplying-factor symbol 102 (see FIG. 1C) or a yellow multiplying-factor symbol 104 (see FIG. 1D)) is rearranged in a symbol matrix SM. In addition, by a multiplying-factor reel 106 (see FIG. 3), a multiplying-factor symbol (a multiplying-factor symbol 108 for free games (see FIG. 1F)) is stop-displayed. Thus, in the first embodiment, two types of multiplying-factor symbols are used. Hereinafter, the multiplying-factor symbol rearranged in the symbol matrix SM is also referred to as a multiplying-factor symbol for the symbol matrix SM. Further, hereinafter, the multiplying-factor sym-
bol stop-displayed by the multiplying-factor reel 106 is also referred to a multiplying-factor symbol for the multiplying-factor reel.

[0102] Out of these multiplying-factor symbols, the multiplying-factor symbol for the multiplying-factor reel corresponds to the multiplying-factor symbol in the present invention. The multiplying-factor reel 106 corresponds to the multiplying-factor symbol display device.

[0103] When the multiplying-factor symbol for the symbol matrix SM or the multiplying-factor symbol for the multiplying-factor reel is rearranged or stop-displayed, based on the number N (the symbol N is an integral number of 2 or more) displayed on the rearranged or stop-displayed multiplying factor symbol, the number of coins to be offered to a player increases N-fold at the maximum.

[0104] Hereinafter, with reference to FIGS. 1 and FIG. 2, the outline of the first embodiment will be described.

[0105] FIGS. 1A and 1B are views each illustrating an exemplary symbol matrix.

[0106] Each symbol matrix SM illustrated in FIGS. 1A and 1B is the symbol matrix SM displayed to a lower image display panel 16 (the display of the present invention) provided in the slot machine 10 (see FIG. 3). The symbol matrix SM is constituted by a normal-symbol display area 100 and a multiplying-factor-symbol display area 101. The normal-symbol display area 100 is capable of rearranging a total of 12 symbols along 3 rows and 4 columns. The multiplying-factor-symbol display area 101 is capable of displaying three normal symbols or a combination of two normal symbols and a single multiplying-factor symbol.

[0107] Hereinafter, both of the normal symbols and the multiplying-factor symbols are simply referred to as symbols.

[0108] When the player presses a start button 23 (see FIG. 3) provided in the slot machine 10, scrolling of symbols starts in the symbol matrix SM, as illustrated in FIG. 1A.

[0109] Subsequently, 15 normal symbols or a combination of 14 normal symbols and a single multiplying-factor symbol are rearranged. The symbols are rearranged in either of the following two patterns.

[0110] Pattern I: After rearranging 12 normal symbols in the normal-symbol display area 100, three normal symbols or a combination of two normal symbols and a single multiplying-factor symbol are rearranged in the multiplying-factor-symbol display area 101.

[0111] Pattern II: After rearranging three normal symbols or a combination of two normal symbols and a single multiplying-factor symbol in the multiplying-factor-symbol display area 101, 12 normal symbols are rearranged in the normal-symbol display area 100.

[0112] FIG. 1B illustrates the case where symbols are rearranged in Pattern I.

[0113] Which pattern to be employed in the rearrangements is determined based on operation of timing selection buttons 110A, 110B (see FIG. 3) by the player, or types and the number of normal symbols to be rearranged. Hereinafter, the pattern of the rearrangements determined based on operation of the timing selection buttons 110A, 110B is referred to as "setting of timing".

[0114] First, there will be described a case where timing is set by operation of the timing setting buttons 110A, 110B.

[0115] The slot machine 10 is provided with a last-rearrangement selection button 110A and a first-rearrangement selection button 110B (see FIG. 3). Hereinafter, these two buttons together are also referred to as timing selection buttons 110. The player can select a single timing by pressing one of the timing selection buttons 110.

[0116] In the case where the last-rearrangement selection button 110A is pressed, Pattern I is determined as the pattern of the rearrangements. That is, the press of the last-rearrangement selection button 110A by the player means that the rearrangements are set in such a manner that after rearranging the normal symbols in the normal-symbol display area 100, a multiplying-factor symbol is rearranged in the multiplying-factor-symbol display area 101.

[0117] On the other hand, in the case where the first-rearrangement selection button 110B is pressed, Pattern II is determined as the pattern of the rearrangements. That is, the press of the first-rearrangement selection button 110B by the player means that the rearrangements are set in such a manner that after rearranging the normal symbols in the normal-symbol display area 100, a multiplying-factor symbol is rearranged in the multiplying-factor-symbol display area 101.

[0118] In the case where neither of the last-rearrangement selection button 110A nor the first-rearrangement selection button 110B is pressed, the pattern of the rearrangement is determined based on the types and the number of normal symbols to be rearranged.

[0119] Hereinafter, timing setting in this case will be described.

[0120] When the start button 23 provided in the slot machine 10 is pressed by the player, symbols to be rearranged in the symbol matrix SM are determined using random numbers. Then, based on the normal symbols determined to be rearranged, a normal payout amount is determined. When the normal payout amount is equal to or less than a predetermined amount, Pattern I is determined as the pattern of the rearrangements. On the other hand, when the amount of the payout is more than the predetermined amount, Pattern II is determined as the pattern of the rearrangements.

[0121] Here, a calculation method of payout amounts will be described with reference to FIGS. 1C, 1D, and FIG. 2. The normal payout amount and individual payout amounts will also be described.

[0122] FIGS. 1C and 1D are views each illustrating an exemplary image displayed to the lower image display panel.

[0123] FIG. 2 is a view illustrating the relationships between the numbers of rearranged normal symbols and amounts of individual payouts.

[0124] As illustrated in FIG. 2, the individual payout amounts are determined so as to correspond to types and the numbers of normal symbols in the normal symbols. In FIG. 2, "10", "J", "Q", "K", "UMBRELLA", "CLOUD", "THUNDER", and "SUN" are illustrated as examples of the normal symbols.

[0125] For example, as illustrated in FIG. 1C, when three "SUNs" are rearranged, the individual payout amount is an amount corresponding to 50 coins. Further, when four "Ks" are rearranged, the individual payout amount is an amount corresponding to 30 coins. Furthermore, when two "Qs" are rearranged, the individual payout amount is an amount corresponding to 30 coins.

[0126] As described above, the individual payout amounts are calculated for the respective types of the normal symbols.

[0127] The normal payout amount is an amount obtained by adding the individual payout amounts for the respective types of the symbols. In the example illustrated in FIG. 1C,
the normal payout amount is an amount corresponding to 50+30+30–110 coins (see number-of-payouts display section 103 of FIG. 1C).

[0128] As described above, when a multiplying-factor symbol is rearranged in the multiplying-factor-symbol display area 101, the payout amount increases N-fold at the maximum. In the present embodiment, each multiplying-factor symbol and each normal symbol have one of colors of red, blue and yellow. A degree of increase of the payout amount changes according to the colors of the rearranged symbols.

[0129] A red multiplying-factor symbol 102 is rearranged in the symbol matrix SM in the example illustrated in FIG. 1C. Although, in this example, the characters “RED” are displayed on the red multiplying-factor symbol 102, these characters are illustrated only for convenience of the description. In actual, the red multiplying factor symbol 102 has characters of “×3” that is colored red.

[0130] With respect to this point, a yellow multiplying-factor symbol 104 in FIG. 1D is also illustrated in the same way.

[0131] As illustrated in FIG. 1C, in the case where the red multiplying-factor symbol 102 is rearranged, coins corresponding to the three-fold of the normal payout amount are paid out to the player regardless of colors of rearranged normal symbols (see number-of-payouts display section 103 of FIG. 1C).

[0132] On the other hand, as illustrated in FIG. 1D, when the yellow multiplying-factor symbol 104 is rearranged, normal symbols having a yellow color that is the same color as that of the yellow multiplying-factor symbol 104 (hereinafter, simply referred to “normal symbol colored the same”) are identified out of normal symbols rearranged in the symbol matrix SM.

[0133] In the example illustrated in FIG. 1D, the normal symbols enclosed by a frame represent symbols colored yellow. In this case, similarly, the normal symbols are illustrated as being enclosed by the frame for indicating which normal symbols are colored yellow for convenience of the description. However, in actual, the normal symbols are not displayed in such a way that they are enclosed by a frame. In actual, the normal symbols themselves have a color, so that the player can immediately recognize which normal symbols have the yellow color, without a frame for enclosing the normal symbols.

[0134] When the normal symbols colored the same are identified, coins corresponding to the three-fold of the total sum of individual payout amounts for respective types of the normal symbols colored the same are paid out to the player. With respect to the normal symbol having a different color from that of the yellow multiplying factor symbol 104 (hereinafter, simply referred to “normal symbol differently colored”), coins corresponding to the total sum of the individual payout amounts for respective types of the normal symbols differently colored (without 3-fold multiplication) are paid out to the player (see the number-of-payouts display section 103 in FIG. 1D).

[0135] The calculation method of payout amounts has been described with reference to FIGS. 1C, 1D, and FIG. 2.

[0136] Next, free games conducted in the present embodiment will be described with reference to FIGS. 1E to 1H.

[0137] FIGS. 1E to 1H are views each illustrating an exemplary image displayed to the lower image display panel.

[0138] In the period of the free games, although game media are not BET, slot machine games are conducted. In the present specification, the slot machine game conducted in a period other than the period of free games is also referred to a normal game.

[0139] In the present embodiment, when three or more normal symbols “BONUSs” (see FIG. 2) are rearranged, free games generate.

[0140] In case of the rearrangement of three or more normal symbols “BONUSs”, the multiplying-factor symbols are varied and displayed in a multiplying-factor-symbol display area 105, as illustrated in FIG. 1E.

[0141] The multiplying-factor reel 106 is rotatably provided within the cabinet 11 (see FIG. 3) included in the slot machine 10. The symbol sequence constituted by a plurality of multiplying-factor symbols (characters of “×N” (the symbol N is an integer of 2 or larger)) is drawn on the outer peripheral surface of the multiplying-factor reel 106. In the multiplying-factor-symbol display area 105, there are formed a display window visible through its back surface, and a multiplying-factor symbol drawn on the outer peripheral surface of the multiplying-factor reel 106 is displayed through the display window.

[0142] As illustrated in FIG. 1E, after varying and displaying of the plurality of multiplying-factor symbols, a single multiplying-factor symbol is stop-displayed. In the example illustrated in FIG. 1F, a multiplying-factor symbol 108 for free games on which characters of “×10” are displayed is stop-displayed. In this example, a multiplying-factor for free games is determined to be 10. The multiplying factor for free games is a value referred when a payout amount is determined in free games.

[0143] As illustrated in FIG. 1G, in a multiplying-factor-for-free-games display area 107, an image of characters indicative of the multiplying factor for free games is displayed during the free games.

[0144] As illustrated in FIG. 1H, in free games, coins corresponding to an amount obtained by multiplying a payout amount in a normal game by the multiplying factor for free games is paid out (see the number-of-payouts display section 103).

[0145] There has been described the outline of the first embodiment, with reference to FIGS. 1A to 1H and FIG. 2.

[0146] Hereinafter, the first embodiment will be described in more detail.

[0147] FIG. 3 is a perspective view illustrating the external appearance of the slot machine.

[0148] In the slot machine 10, a coin, a bill, or electronic valuable information corresponding thereto is used as a game medium. However, in the present invention, a game medium is not particularly limited. Examples of the game medium may include a medal, a token, electronic money, or a ticket. It should be noted that the ticket is not particularly limited, and examples thereof include a ticket with a bar code, which will be described later.

[0149] Here, the slot machine 10 is a standalone type slot machine that is not connected to a network, but the present invention can also be applied to a slot machine connected to a network.

[0150] The slot machine 10 includes: a cabinet 11; a top box 12 placed on the upper side of the cabinet 11; and a main door 13 provided at the front face of the cabinet 11. The lower image display panel 16 is provided in front of the main door 13. The lower image display panel 16 includes a liquid crystal display panel which displays the symbol matrix SM (see FIG. 1) constituted by the normal symbol display area 100 and the
multiplying-factor-symbol display area 101. The lower image display panel 16 corresponds to the display of the present invention. In the lower image display panel 16, there are provided a number-of-credits display section 31 (not shown). The number-of-credits display section 31 displays an image indicating the number of credited coins.

[0151] In addition, as described above, there are provided the multiplying-factor-symbol display area 105 in the lower image display panel 16, and the player is allowed to see a multiplying-factor symbol displayed by the multiplying-factor reel 106.

[0152] Further, a touch panel 69, which is not shown in the figure, is provided on the front face of the lower image display panel 16, and the player can input various kinds of commands by operating the touch panel 69.

[0153] Below the lower image display panel 16, there are provided a control panel 20 comprised of a plurality of buttons 23 to 27 and 110 (11A and 110B) with each of which a command according to the game progress is inputted by the player, a coin receiving slot 21 through which a coin is accepted into the cabinet 11, and a bill validator 22.

[0154] The control panel 20 is provided with a start button 23, a change button 24, a CASHOUT button 25, a 1-BET button 26, and a maximum BET button 27. The start button 23 is used for inputting a command to start a game. The change button 24 is used for making a request of staff at a recreation facility for exchange. The CASHOUT button 25 is used for inputting a command to pay out credited coins to a coin tray 18.

[0155] The 1-BET button 26 is used for inputting a command to BET one coin on a game out of credited coins. The maximum BET button 27 is used for inputting a command to BET the maximum number (10 in the present embodiment) of coins that can be bet on a single game out of credited coins.

[0156] In addition, the last-rearrangement selection button 110A and the first-rearrangement selection button 110B are provided on the control panel 20. As described above, the player is allowed to select a single pattern out of Pattern I and Pattern II as the timing of the rearrangements of symbols by pressing either one of these timing selection buttons 110.

[0157] The bill validator 22 not only discriminates a regular bill from a false bill, but also accepts the regular bill into the cabinet 11. It should be noted that the bill validator 22 may be configured so as to be capable of reading a later-described ticket 39 with a barcode. At the lower front face of the main door 13, namely below the control panel 20, there is provided a belly glass 34 on which a character or the like of the slot machine 10 is drawn.

[0158] At the front face of the top box 12, an upper image display panel 33 is provided. The upper image display panel 33 is provided with a liquid crystal panel to display, for example, an image representing an introduction of the contents of a game or a description of a rule of the game.

[0159] Further, the top box 12 is provided with a speaker 29. Below the upper image display panel 33, there are provided a ticket printer 35, a card reader 36, a data display 37, and a keypad 38. The ticket printer 35 prints on a ticket a barcode as coded data of the number of credits, date and time, an identification number of the slot machine 10, and the like, and outputs the ticket as a ticket 39 with a barcode. The player can make another slot machine read the ticket 39 with a barcode to play a game thereon, or can exchange the ticket 39 with a barcode with bills or the like at a predetermined place in the recreation facility (for example, a cashier in a casino).

[0160] The card reader 36 reads data from a smart card and writes data into the smart card. The smart card is a card owned by the player, and for example, data for identifying a player and data on a history of games played by the player are stored therein. Data corresponding to a coin, a bill, or a credit may be stored in the smart card. Further, in place of the smart card, a magnetic stripe card may be adopted. The data display 37 is comprised of a fluorescent display or the like, and displays, for example, data read by the card reader 36 or data inputted by the player through the keypad 38. The keypad 38 is used for inputting a command and data concerning the issue of a ticket and the like.

[0161] FIG. 4 is a block diagram showing an internal configuration of the slot machine shown in FIG. 3.

[0162] A gaming board 50 includes a CPU (Central Processing Unit) 51, a ROM 55, and a boot ROM 52 which are interconnected to one another via an internal bus, a card slot 53S corresponding to a memory card 53, and an IC socket 54S corresponding to a GAL (Generic Array Logic) 54.

[0163] The memory card 53 is formed from a nonvolatile memory such as CompactFlash (registered trademark) and stores game programs and game system programs. The game programs include a symbol selection program. The aforementioned symbol selection program is a program for determining the normal symbols and the multiplying-factor symbol to be rearranged in the symbol matrix SM and the multiplying-factor symbol to be stop-displayed by the multiplying-factor reel 106. The aforementioned symbol selection program includes symbol weighing data in association with plural types of payout ratios (for example, 80%, 84%, 88%). The symbol weighing data is data indicating the correspondence between the respective symbols, and one or more random numbers which fall in a predetermined numerical range (0 to 255). The payout ratios are determined based on payout-ratio setting data outputted from the GAL 54 and, based on the symbol weighing data associated with the payout ratios, the symbols to be rearranged in the symbol matrix SM and a multiplying-factor symbol to be stop-displayed by the multiplying-factor reel 106 are determined.

[0164] Further, the game programs include table data (see FIG. 2) indicative of the relationships between the numbers of rearranged normal symbols and the individual payout amounts.

[0165] Further, the card slot 53S is configured so as to allow the memory card 53 to be inserted therein or ejected therefrom, and is connected to a mother board 40 via an IDE bus. Thus, the memory card 53 can be ejected from the card slot 53S, and then another game program is written onto the memory card 53, and the memory card 53 can be inserted into the card slot 53S, to change the type and contents of a game to be played on the slot machine 10. The game program includes a program associated with the progress of a game. The game program also includes image data and sound data to be outputted during the game. The image data includes image data and the like indicating a symbol matrix.

[0166] The GAL 54 is a type of PLD having a fixed OR array structure. The GAL 54 includes plural input ports and plural output ports and, when predetermined data is inputted to an input port, the GAL 54 outputs data corresponding to the aforementioned data from an output port. The data outputted from this output port is the aforementioned payout-ratio setting data.

[0167] Further, the IC socket 54S is configured to allow the GAL 54 to be attached thereto and detached therefrom and is
connected to the motherboard 40 through a PCI bus. Accordingly, the GAL 54 can be replaced with another GAL 54 to change the payout-ratio setting data.

CPU 51, ROM 55 and boot ROM 52 interconnected to one another via an internal bus are connected to the motherboard 40 by PCI bus.

The motherboard 40 is constructed with a general-purpose mother board commercially available (a printed circuit board on which basic parts of a personal computer are mounted) and includes a main CPU 41, ROM (Read Only Memory) 42 and RAM (Random Access Memory) 43. The motherboard 40 is the controller of the present invention.

ROM 42 is constituted of a memory device such as a flash memory and stores thereon a program such as BIOS (Basic Input/Output System) executed by the main CPU 41 and permanent data. When BIOS is executed by the main CPU 41, not only is initialization processing for predetermined peripheral devices conducted, but a capture processing for the game program and game system program stored on the memory card 53 is also started via the gaming board 50. In the present invention, contents of ROM 42 may be rewritable or not rewritable.

RAM 43 stores data and a program used at the time of operation of the main CPU 41, and various flags. RAM 43 can also store the game program. RAM 43 further stores data on the number of credits, the number of coins-in or coins-out for one game, and the like.

Further, in the RAM 43, there are provided a multiplying-factor-for-free-game storage area and a number-of-free-games storage area. The multiplying-factor-for-free-game storage area stores data indicative of a multiplying factor for free games. As described above, the multiplying factor for free games is a value referred when a payout amount is determined in the free games. The number-of-free-games storage area stores data indicative of the number of remaining free games.

To the motherboard 40, a body PCB (Printed Circuit Board) 60 and a door PCB 80, which will be described later, are connected through respective USBs. Further, the motherboard 40 is connected with a power supply unit 45.

The body PCB 60 and the door PCB 80 are connected with equipment and devices that generate input signals to be inputted to the main CPU 41, and equipment and devices operations of which are controlled by control signals outputted from the main CPU 41. The main CPU 41 executes a game program stored in the RAM 43 based on an input signal inputted to the main CPU 41, thereby executes the predetermined arithmetic processing and stores a result thereof in the RAM 43, or transmits a control signal to each of the equipment and devices as processing for controlling each of the equipment and devices.

To the body PCB 60, there are connected a lamp 30, a hopper 66, a coin detecting portion 67, a graphic board 68, a speaker 29, a touch panel 69, a bill validator 22, a ticket printer 35, a card reader 36, a key switch 38S, and a data display 37. The lamp 30 lights up in a predetermined pattern based on a control signal outputted from the main CPU 41.

The hopper 66 is installed inside the cabinet 11 and pays out a predetermined number of coins from the coin payout exit 19 to the coin tray 18, based on a control signal outputted from the main CPU 41. The coin detecting portion 67 is provided inside the coin payout exit 19, and outputs an input signal to the main CPU 41 when detecting a payout of a predetermined number of coins from the coin payout exit 19.

The graphic board 68 controls, based on a control signal outputted from the main CPU 41, an image display to the upper image display panel 33 and the lower image display panel 16. The number of credits stored in RAM 43 is displayed to the number-of-credits display section 31 (not shown) of the lower image display panel 16. The number of coins-out is displayed to the number-of-payouts display section 105 (see FIG. 1C, FIG. 1D and FIG. 1H) of the lower image display panel 16. An image of characters indicative of a multiplying factor for free games is displayed in the multiplying-factor-for-free-games display area 107 (see FIG. 1G) during the free games. The graphic board 68 is equipped with VDP (Video Display Processor) which generates image data based on a control signal outputted from the main CPU 41 and a video RAM which temporarily stores image data generated by VDP, and of the like equipments. It should be noted that image data used in generating image data with VDP is contained in a game program read from the memory card 53 and stored in RAM 43.

The bill validator 22 not only discriminates a regular bill from a false bill, but also accepts the regular bill into the cabinet 11. When accepting a regular bill, the bill validator 22 outputs an input signal to the main CPU 41, based on the face amount of the bill. The main CPU 41 stores, in the RAM 43, the number of credits according to the face amount of the bill transmitted with the input signal.

The ticket printer 35 prints on a ticket, based on a control signal outputted from the main CPU 41, a barcode formed by encoding data such as the number of credits, date and time, an identification number of the slot machine 10, and of the like data stored in the RAM 43, and outputs the ticket as a ticket 39 with a barcode.

The card reader 36 reads data from a smart card and transmits the data to the main CPU 41 or writes data into the smart card based on a 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. The data display 37 displays, based on a control signal outputted from the main CPU 41, data read by the card reader 36 or data inputted by the player through the keypad 38.

To the door PCB 80, there are connected a control panel 20, a reverser 21S, a coin counter 21C, and a cold cathode tube 81. The control panel 20 is provided with a start switch 23S corresponding to the start button 23, a change switch 24S corresponding to the change button 24, a CASH-OUT switch 25S corresponding to the CASH-OUT 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. Each of the switches 23S to 27S outputs an input signal to the main CPU 41 when each of the buttons 23 to 27 corresponding thereto is operated by the player.

Further, in the control panel 20, there are provided an last-rearrangement selection switch 110AS corresponding to the last-rearrangement selection button 110A, and a first-rearrangement selection switch 110BS corresponding to the first-rearrangement selection button 110B. Each of the switches 110AS and 110BS outputs an input signal to the main CPU 41, when each of the buttons 110A and 110B corresponding thereto is operated by the player.

The coin counter 21C is provided inside the coin receiving slot 21 and discriminates a regular coin from a false coin inserted into the coin receiving slot 21 by the player. Coins other than regular coins are discharged from the coin
When the coin counter 21C detects a regular coin, the coin counter 21C outputs an input signal to the main CPU 41.

The reverser 21S operates based on a control signal outputted from the main CPU 41, and distributes a coin identified by the coin counter 21C as a regular coin into a cash box (not shown) or the hopper 66, which are disposed in the slot machine 10. Specifically, when the hopper 66 is filled with coins, a regular coin is distributed into the cash box by the reverser 21S. On the other hand, when the hopper 66 is not filled with coins, the regular coin is distributed into the hopper 66. The cold cathode tube 81 functions as a backlight installed on the rear face side of the lower image display panel 16 and the upper image display panel 33, and lights up based on a control signal to be outputted from the main CPU 41.

Next, processing executed on the slot machine 10 will be described.

The main CPU 41 reads a game program and executes the game program to progress a game.

FIGS. 5A and 5B are flowcharts illustrating a subroutine of slot machine game execution processing according to the first embodiment.

In the slot machine game execution processing, first, the main CPU 41 determines whether or not a coin has been BET (step S10). In the processing, the main CPU 41 determines whether or not to have received an input signal outputted from the 1-BET switch 26S when the 1-BET button 26 is operated or an input signal outputted from the maximum BET switch 27S when the maximum BET button 27 is operated. When determining that a coin has not been BET, the main CPU 41 returns the processing to the step S10.

On the other hand, when determining that a coin has been BET in step S10, the main CPU 41 executes processing for making a subtraction from the number of credits stored in the RAM 43, according to the number of BET coins (step S11). It should be noted that, when the number of BET coins is larger than the number of credits stored in the RAM 43, the main CPU 41 does not execute the processing for making a subtraction from the number of credits stored in the RAM 43, and returns the processing to step S10. When the number of BET coins exceeds an upper limit of the number of coins that can be BET on a single game (10 in the present embodiment), the main CPU 41 does not execute the processing for making a subtraction from the number of credits stored in the RAM 43, and processing is proceeded to step S12.

Next, the main CPU 41 determines whether or not the start button 23 has been turned on (step S12). In the processing, the main CPU 41 determines whether or not to have received an input signal outputted from the start switch 23S when the start button 23 is pressed.

When determining that the start button 23 has not been turned ON, the main CPU 41 returns the processing to step S10. It should be noted that, when the start button 23 is not turned ON (for example, when a command to end the game is inputted without pressing the start button 23), the main CPU 41 cancels a result of the subtraction obtained in step S11.

On the other hand, when determining in step S12 that the start button 23 has been turned ON, the main CPU 41 executes symbol rearrangement processing (step S13).

Here, the symbol rearrangement processing will be described with reference to FIG. 6.

FIG. 6 is a flowchart illustrating a subroutine of the symbol rearrangement processing.
whether or not the normal payout amount determined in step S32 is equal to or less than a predetermined amount (step S35).

[0210] When determining in step S33 that the last-rearrangement flag is set, or determining in step S35 that the normal payout amount is equal to or less than the predetermined amount, the main CPU 41 rearranges 12 normal symbols in the normal symbol display area 100 (step S36).

[0211] Subsequently, when the main CPU 41 determines in step S30 to rearrange a multiplying-factor symbol, the multiplying-factor symbol and two normal symbols are rearranged in the multiplying-factor-symbol display area 101 (step S37). On the other hand, when the main CPU determines in step S30 not to rearrange a multiplying-factor symbol, three normal symbols are rearranged in the multiplying-factor-symbol display area 101 (step S37).

[0212] When determining in step S34 that the first-rearrangement flag is set, or determining in step S35 that the normal payout amount is more than the predetermined amount, the main CPU shifts the processing to step S38.

[0213] When the main CPU 41 determines in step S30 to rearrange a multiplying-factor symbol, the main CPU 41 rearranges the multiplying-factor symbol and two normal symbols in the multiplying-factor-symbol display area 101 (step S38). On the other hand, when the main CPU 41 determined in step S30 not to rearrange a multiplying-factor symbol, the main CPU 41 rearranges three normal symbols in the multiplying-factor-symbol display area 101 (step S38).

[0214] Subsequently, the main CPU 41 rearranges 12 normal symbols in the normal-symbol display area 100 (step S39).

[0215] After execution of the processing of step S37 or step S39, the main CPU 41 ends the present subroutine.

[0216] The symbol rearrangement processing executed in step S13 in FIG. 5A has been described with reference to FIG. 6.

[0217] When the main CPU 41, the ROM 42 and the RAM 43 execute the processing of step S30 and step S36 to step S39 in cooperation with one another, the main CPU 41, the ROM 42 and the RAM 43 function as the controller for executing the processing (A) of the present invention. Here, step S30 and step S36 to step S39 correspond to the step (A) of the present invention.

[0218] When the main CPU 41, the ROM 42 and the RAM 43 execute the processing of step S31 in cooperation with one another, the main CPU 41, the ROM 42 and the RAM 43 function as the controller for executing the processing (B-2) of the present invention. Here, step S31 corresponds to the step (B-2) of the present invention.

[0219] When the main CPU 41, the ROM 42 and the RAM 43 execute the processing of step S32 in cooperation with one another, the main CPU 41, the ROM 42 and the RAM 43 function as the controller for executing the processing (B-1) of the present invention. Here, step S32 corresponds to the step (B-1) of the present invention.

[0220] After execution of the processing of step S13, the main CPU 41 determines whether or not a prize is established (step S14). Here, the establishment of a prize means a rearrangement of two or more of at least one type of the normal symbols "10", "J", "Q", "K", "UMBRELLA", "CLOUD", "THUNDER" and "SUN" etc. in the symbol matrix SM (see FIG. 2). In the processing, the main CPU 41 determines whether or not the normal payout amount determined in step S32 in FIG. 6 is 0.

[0221] When determining that the prize has been established, the main CPU 41 determines whether or not to have rearranged a multiplying-factor symbol in the multiplying-factor-symbol display area 101 of the symbol matrix SM based on the result of step S30 in FIG. 6 (step S15).

[0222] When determining not to have rearranged a multiplying-factor symbol, the main CPU 41 pays out coins corresponding to the normal payout amount determined in step S32 in FIG. 6 (step S16).

[0223] When determining in step S15 to have rearranged a multiplying-factor symbol, the main CPU 41 determines whether or not the rearranged multiplying-factor symbol has a predetermined color (red in the present embodiment) (step S17).

[0224] When determining that the rearranged multiplying-factor symbol has the predetermined color, the main CPU 41 pays out coins corresponding to N-fold of the normal payout amount determined in step S32 in FIG. 6 (step S18). Here, the symbol N represents a number “N” displayed on the rearranged multiplying-factor symbol.

[0225] Next, when determining that the multiplying-factor symbol rearranged in step S17 does not have the predetermined color, the main CPU 41 identifies normal symbols colored the same as the color of the rearranged multiplying-factor symbol, out of the rearranged normal symbols (step S19).

[0226] Next, the main CPU 41 pays out coins corresponding to the total sum (standard payout amount) of individual payout amounts for respective types of the normal symbols differently colored from that of the rearranged multiplying-factor symbol, based on the individual payout amounts for the respective types of the normal symbols determined in step S31 (step S20).

[0227] Subsequently, the main CPU 41 pays out coins corresponding to N-fold (special payout amount) of the total sum of the individual payout amounts for the respective types of the normal symbols colored the same as that of the rearranged multiplying-factor symbol (step S21). Here, the symbol N represents a number “N” displayed on the rearranged multiplying-factor symbol.

[0228] When determining in step S14 that a prize is not established, or after execution of the processing of step S16, step S18 or step S21, the main CPU 41 determines whether or not a specific condition is established (step S22). In the present embodiment, the specific condition is the rearrangement of three or more normal symbols “BONUSes”. In the processing, the main CPU 41 determines whether three or more normal symbols “BONUSes” are rearranged based on the result of step S30 in FIG. 6.

[0229] When determining that the specific condition is not established, the main CPU 41 ends the present subroutine.

[0230] On the other hand, when determining that the specific condition is established, the main CPU 41 varies and displays the multiplying-factor symbols by the multiplying-factor reel 106, and then stop-displays a single multiplying-factor symbol in the multiplying-factor-symbol display area 105 (step S23). In the processing, the main CPU 41 executes a symbol selection program to determine a multiplying-factor symbol to be stop-displayed, and stop-displays the determined multiplying-factor symbol by the multiplying-factor reel 106.

[0231] When the main CPU 41, the ROM 42 and the RAM 43 execute the processing of step S23 in cooperation with one another, the main CPU 41, the ROM 42 and the RAM 43
function as the controller for executing the processing (C) of the present invention. Here, step S23 corresponds to the step (C) of the present invention.

[0232] Next, the main CPU 41 determines the number displayed on the stop-displayed multiplying-factor symbol as the multiplying factor for free games (step S24). In the processing, the main CPU 41 stores the determined multiplying factor for free games in a predetermined area (multiplying-factor-for-free-game storage area) of the RAM 43.

[0233] Subsequently, the main CPU 41 executes the free-game execution processing (step S25), and then ends the present subroutine.

[0234] Here, the free-game execution processing will be described with reference to FIGS. 8A and 8B. FIGS. 8A and 8B are flowcharts illustrating a subroutine of the free-game execution processing.

[0236] First, the main CPU 41 sets the number-of-remaining-free-games T to T=C=10, in the present embodiment (in a predetermined area (number-of-free-games storage area) of the RAM 43 (step S50)).

[0237] Next, the main CPU 41 executes processing of step S51 to step S60. The processing is almost the same as the processing of step S12 to step S21 in FIG. 5A.

[0238] In FIG. 8A, only processing of step S55, step S57, step S59 and step S60 are different from those of FIG. 5A. Only the processing will be described here.

[0239] Specifically, the main CPU 41 pays out, in step S16 in FIG. 5A, coins corresponding to the normal payout amount determined in step S32 in FIG. 6. On the other hand, the main CPU 41 pays out, in step S55 in FIG. 8A, coins corresponding to an amount obtained by multiplying the normal payout amount determined in step S32 in FIG. 6 by the multiplying factor for free games.

[0240] Further, the main CPU 41 pays out, in step S18 in FIG. 5A, coins corresponding to the N-fold of the normal payout amount determined in step S32 in FIG. 6. On the other hand, the main CPU 41 pays out, in step S55 in FIG. 8A, coins corresponding to an amount obtained by multiplying the N-fold of the normal payout amount determined in step S32 in FIG. 6 by the multiplying factor for free games.

[0241] Further, the main CPU 41 pays out, in step S20 in FIG. 5A, coins corresponding to the total sum of the individual payout amounts determined in step S31 in FIG. 6 for the respective types of the normal symbols differently colored from the color of the rearranged multiplying-factor symbol, based on the individual payout amounts for the respective types of the normal symbols determined in step S31 in FIG. 6. On the other hand, the CPU 41 pays out, in step S59 in FIG. 8A, coins corresponding to an amount obtained by multiplication of the individual payout amounts for the respective types of the normal symbols differently colored from the color of the rearranged multiplying-factor symbol by the multiplying factor for free games.

[0242] In addition, the main CPU 41 pays out, in step S21 in FIG. 5A, coins corresponding to the N-fold of the total sum of the individual payout amounts for the respective types of the normal symbols colored the same as the color of the rearranged multiplying-factor symbol, based on the amounts of the individual payouts for the respective types of the normal symbols determined in step S31 in FIG. 6. On the other hand, the main CPU 41 pays out, in step S60 in FIG. 8A, coins corresponding to an amount obtained by multiplying the N-fold of the total sum of the individual payout amounts for the respective types of the normal symbols colored the same as the color of the rearranged multiplying-factor symbol, by the multiplying factor for free games.

[0243] As described above, the amount of coins to be paid out in free games is N-fold larger than the amount of coins to be paid out normal games.

[0244] When determining in step S53 that a prize is not established, or after execution of the processing of step S55, step S57 or step S60, the main CPU 41 determines whether or not a specific condition is established (step S61). The specific condition is the rearrangement of the normal symbols “BONUSs”, like in the normal games. In the processing, the main CPU 41 determines whether or not three or more normal symbols “BONUSs” are rearranged based on the result of step S30 in FIG. 6.

[0245] When determining that the specific condition is established, the main CPU 41 varies and displays the multiplying-factor symbols by the multiplying-factor reel 106, and then stop-displays a single multiplying-factor symbol in the multiplying-factor-symbol display area 105 (step S62). In the processing, the main CPU 41 overwrites and saves the determined multiplying factor for free games in the predetermined area (multiplying-factor-for-free-game storage area) in the RAM 43.

[0247] Next, the main CPU 41 sets the number-of-remaining-free-games T to T=T+C in the number-of-free-games storage area of the RAM 43 (step S64). Namely, when the specific condition is established during the free games, the number of free games is increased.

[0248] When determining in step S61 that the special condition is not established or after execution of the processing of step S64, the main CPU 41 sets the number-of-remaining-free-games T to T=T−1, in the number-of-free-games storage area in the RAM 43 (step S65).

[0249] Subsequently, the main CPU 41 determines whether or not T is 0 (step S66).

[0250] When determining that T is not 0, the main CPU 41 returns the processing to step S51. On the other hand, when determining that T is 0, the main CPU 41 ends the present subroutine.

[0251] The first embodiment has been described.

[0252] In the first embodiment, there has been described the case where symbols themselves are colored. However, in the present invention, symbols may have a colored background. Also, there is no particular limitation on types and the number of colors of the symbols.

[0253] As described above, according to the slot machine 10 of the first embodiment, the multiplying-factor symbol may be rearranged in the symbol matrix SM displayed to the lower image display panel 16. Further, each of the multiplying-factor symbols corresponds to a number. In case of the rearrangement of the multiplying-factor symbol colored the predetermined color (red), the player can acquire several times larger amount of game media.

[0254] As described above, according to the slot machine 10 of the first embodiment, in case of the rearrangement of the multiplying-factor symbol colored red, the player can acquire several times larger amount of game media, resulting in enhancement of a sense of expectancy of the player for payouts. Therefore, it is possible to prevent the player to lose a sense of expectancy for payouts.
Further, since the multiplying-factor symbol capable of increasing several-fold an amount of game media that the player can acquire may be rearranged, it is possible to lead the player to have interests and concern for the rearrangement of the multiplying-factor symbol. Furthermore, since the player plays games with a great sense of expectancy for the rearrangement of the multiplying-factor symbol, it is possible to prevent the player from getting bored with games soon.

Furthermore, according to the slot machine of the first embodiment, the player can acquire a several times larger amount of game media, on condition that rearranged normal symbols or a combination thereof satisfies the specific condition (rearrangement of three or more symbol “BONUs”).

Accordingly, whether or not the specific condition is established is a matter of interests for the player, and this configuration can lead the player to have a great interest in whether or not the specific condition is established as well as which prize is established by rearranged symbols. Therefore, it is possible to enhance interests of the player in symbols to be rearranged and also to immerse the player in the games.

Further, according to the slot machine of the first embodiment, free games are conducted in the event of the establishment of the specific condition. During the free games, the player can acquire a several times larger amount of game media than the amount of game media that the player can acquire in the normal games.

Therefore, since the player can play game without BETTING game media and also acquire a several times larger amount of a payout, it is possible to further enhance interest and concern of the player for the specific condition that generates free games. As a result, this configuration can immerse the player in the games.

Further, according to the slot machine of the first embodiment, when a multiplying-factor symbol is rearranged in the symbol matrix in the free games, the player is offered a payout in amount obtained by multiplying both of the multiplying-factor set for the multiplying-factor symbol and the multiplying factor for free games. Accordingly, since the payout amount is significantly increased in this case, it is possible to significantly enhance a sense of expectation of the player for the establishment of the specific condition and the rearrangement of a multiplying-factor symbol in the symbol matrix SM during the free games.

Further, according to the slot machine of the first embodiment, the pattern of the rearrangements is determined based on the normal payout amount. Specifically, when the normal payout amount is equal to or less than the predetermined amount, the multiplying-factor symbol is rearranged in the symbol matrix SM at the end. Therefore, it is possible to please a player who is disappointed at establishment of only a prize that offers a small amount of a payout, by rearranging a multiplying-factor symbol having a large multiplying-factor set therefor at the end.

Further, according to the slot machine of the first embodiment, the pattern of the rearrangement of the symbols is determined, based on the selection of the player, out of the following patterns: a pattern in which the multiplying-factor symbol is rearranged after rearranging the normal symbols; and a pattern in which the normal symbols are rearranged after rearranging the multiplying-factor symbol. Accordingly, this configuration allows the player to set the timing of the rearrangement of the multiplying-factor symbol as he/she likes, leading to giving satisfaction to the player. Further, this configuration also allows to the player to change the timing of the rearrangement of the multiplying-factor symbol at any time during a game, leading to prevention of the player from getting bored.

In the above-described example, the description has been given with the definition of the specific condition as the rearrangement of three or more normal symbols “BONUs”. However, in the present invention, the contents of the specific condition are not particularly limited.
Hereinafter, a specific condition according to another embodiment will be described with reference to FIGS. 9A to 9D.

FGS. 9A and 9B are views each illustrating an exemplary symbol matrix.

FGS. 9C and 9D are views each illustrating an exemplary image which is displayed to the lower image display panel.

In the present embodiment, symbols are rearranged in the symbol matrix SM in the sequential order of a display area 200A, a display area 200B, a display area 200C, a display area 200D and a display area 200E. The multiplying-factor symbol is rearranged in the display area 200E. The display area 200E corresponds to the multiplying-factor-symbol display area 101 of the first embodiment.

Here, the specific condition of the present embodiment is “a rearrangement of a specific combination of normal symbols rearranged in the display area 200B, the display area 200C and the display area 200D”.

The normal symbols constituting the specific combination have a colored background. FIG. 9B illustrates a case in which normal symbols rearranged in the display area 200B and the display area 200C are the normal symbols constituting the specific combination.

Further, when normal symbols rearranged in the display area 200B and the display area 200C are the normal symbols constituting the specific combination at the time of the rearrangement of normal symbols in the display area 200A to the display area 200C (that is, when the game is a ready-to-win state for the specific combination), a special image is displayed in the display area 200B to the display area 200D.

In the example illustrated in FIG. 9B, an image indicative of a face is displayed.

Subsequently, when the rearrangement in the display area 200D results in completion of the specific combination, an image 201 of characters of a win “FREE GAME!” is displayed and indicates that the specific condition is established and free games will start (see FIG. 9C). At this time, the special image is kept displayed.

On the other hand, when the rearrangement in the display area 200D does not result in establishment of the specific combination, an image 202 of characters of a loss “SORRY” is displayed (see FIG. 9D). At this time, display of the special image ends.

It should be noted that the special image, the image 201 of characters of a win and the image 202 of characters of a loss are included in the above-mentioned game program.

Further, in the present embodiment, plural kinds of combinations are set as the specific combination. Each combination corresponds to a different special image from one another. When the game gets into a ready-to-win state for a single specific combination, the slot machine is configured to display the special image corresponding to the combination.

FIG. 10 is a flowchart illustrating a subroutine of symbol rearrangement processing.

First, the main CPU 41 executes processing of step S130 to step S132. The processing is the same as the processing of step S30 to step S32 in FIG. 6 and a description thereof will be omitted here.

Next, the main CPU 41 rearranges normal symbols in the display area 200A to the display area 200C in the symbol matrix SM, based on the result of the symbol determination in step S130 (step S133).

Next, the main CPU 41 determines whether or not the game is in a ready-to-win state for the completion of the specific combination (step S134). In the processing, the main CPU 41 determines whether or not 6 normal symbols rearranged in the display area 200B and the display area 200C are the normal symbols constituting the specific combination.

When determining that the game is not a ready-to-win state for the completion of the specific combination, the main CPU rearranges symbols in the display area 200D and the display area 200E (step S135), based on the result of the symbol determination in step S130, and ends the present subroutine.

Next, the other hand, when determining that the game is in a ready-to-win state, the main CPU 41 displays the special image corresponding to the specific combination in the display area 200B to the display area 200D (step S136).

Next, the main CPU 41 rearranges symbols in the display area 200D, based on the result of the symbol determination in step S130 (step S137).

Next, the main CPU 41 determines whether or not the specific combination is established (step S138). When determining that the specific combination is established, the main CPU 41 keeps the special image displayed and displays the image 201 of characters of a win (step S140).

On the other hand, when determining that the specific combination is not completed, the main CPU 41 ends the display of the special image and displays the image 202 of characters of a loss (step S139).

After execution of the processing of step S139 or step S140, the main CPU 41 rearranges symbols in the display area 200E (step S141), based on the result of the symbol determination in step S130, and ends the present subroutine.

As described above, in the present embodiment, symbols are rearranged in the sequential order of the display area 200A, the display area 200B, the display area 200C and the display area 200E; without execution of the timing setting described in the first embodiment. Thus, in the present invention, the slot machine may be configured not to apply determination of the order of the rearrangement of symbols, based on the operation of the timing selection button by the player or the types or the number of normal symbols to be rearranged.

Second Embodiment

In the description of the first embodiment, multiplying-factor symbols include the multiplying-factor symbols for the symbol matrix SM and the multiplying-factor symbols for the multiplying-factor reel. However, in the present invention, the multiplying-factor symbols do not necessarily include the multiplying-factor symbol for the symbol matrix SM. The slot machine 10 according to the second embodiment is configured not to rearrange the multiplying-factor symbol in the symbol matrix SM.

Further, in the description of the first embodiment, payouts are multiplied by the multiplying factor only in the free games, based on the multiplying-factor symbol for the multiplying-factor reel. That is, the payouts are multiplied by the multiplying factor based on the multiplying-factor symbol, on condition of satisfaction of either of the following conditions: the rearrangement of three or more of normal symbols “BONUSs”; or “the rearrangement of the predetermined combination of the normal symbols rearranged in the display area 200B, the display area 200C and the display area 200D”. However, in the present invention, execution of mul-
tiplication of the payouts by the multiplying factor based on the multiplying-factor symbol is not limited to the case of establishment of the specific condition. The slot machine according to the second embodiment is configured to multi-
pling payouts by the multiplying factor based on the multi-
plying-factor symbol also in the normal games.

In the following description, the same components as components of the slot machine 10 according to the first embodiment will be given the same reference numerals.

Further, the parts of the second embodiment to which description on the first embodiment can be applied will not be described.

FIG. 11 is a flowchart illustrating a subroutine of slot machine game execution processing according to the second embodiment.

First, the main CPU 41 executes processing of step S110 to step S112. The processing is the same as the processing of step S10 to step S12 in FIG. 5A, and a description thereof will be omitted here.

Next, the main CPU 41 executes symbol rearrangement processing (step S113).

In the processing, at first, the main CPU 41 starts scroll-display of the symbols in the symbol matrix SM, as illustrated in FIG. 1A. Then, the main CPU 41 executes the above-mentioned symbol selection program, determines symbols to be rearranged, and rearranges the symbols in the symbol matrix SM.

When the main CPU 41, the ROM 42 and the RAM 43 execute the processing of step S113 in cooperation with one another, the main CPU 41, the ROM 42 and the RAM 43 function as the controller for executing the processing (A) of the present invention. Here, step S113 corresponds to the step (A) of the present invention.

Next, the main CPU 41 determines whether or not a prize is established (step S114). In the processing, the main CPU 41 counts the number of rearranged normal symbols of the respective types. Then, the main CPU 41 determines whether or not two or more normal symbols of a single type have been counted. When determining that a prize is not established, the main CPU 41 ends the present subroutine.

On the other hand, when determining that a prize is established, the main CPU 41 varies and displays multiplying-factor symbols by the multiplying-factor reel 106, and then stop-displays a single multiplying-factor symbol in the multiplying-factor-symbol display area 105 (step S115). In the processing, the main CPU 41 executes the symbol selection program, determines a multiplying-factor symbol to be stop-displayed, and stop-displays the determined multiplying-factor symbol by the multiplying-factor reel 106.

When the main CPU 41, the ROM 42 and the RAM 43 execute the processing of step S115 in cooperation with one another, the main CPU 41, the ROM 42 and the RAM 43 function as the controller for executing the processing (C) of the present invention. Here, step S115 corresponds to the step (C) of the present invention.

Next, the main CPU 41 determines individual payout amounts for respective types of rearranged normal symbols (step S116). In the processing, the main CPU determines the individual payout amounts for the respective types of the normal symbols, based on the counted numbers of the rearranged symbols of the respective types and the table data (see FIG. 2) indicative of the relationships between the numbers of rearranged normal symbols and individual payout amounts.

When the main CPU 41, the ROM 42 and the RAM 43 execute the processing of step S116 in cooperation with one another, the main CPU 41, the ROM 42 and the RAM 43 function as the controller for executing the processing (B-2) of the present invention. Here, step S116 corresponds to the step (B-2) of the present invention.

Next, the main CPU 41 determines the normal payout amount that is an amount obtained as the total sum of the individual payout amounts (step S117).

When the main CPU 41, the ROM 42 and the RAM 43 execute the processing of step S117 in cooperation with one another, the main CPU 41, the ROM 42 and the RAM 43 function as the controller for executing the processing (B-1) of the present invention. Here, step S117 corresponds to the step (B-1) of the present invention.

Next, the main CPU 41 pays out coins corresponding to the amount obtained by multiplying the normal payout amount determined in step S117 by the number displayed on the multiplying-factor symbol stop-displayed in step S115 (step S118).

When the main CPU 41, the ROM 42 and the RAM 43 execute the processing of step S118 in cooperation with one another, the main CPU 41, the ROM 42 and the RAM 43 function as the controller for executing the processing (D-1) of the present invention. Here, step S118 corresponds to the step (D-1) of the present invention.

Subsequently, the main CPU 41 ends the present subroutine.

As described above, according to the slot machine 10 of the second embodiment, the multiplying-factor symbol is stop-displayed by the multiplying-factor symbol, after rearranging the normal symbols in the symbol matrix SM. That is, the multiplying factor for multiplication of the normal payout amount is determined, after the player recognizes the normal payout amount (the amount paid out for the established prize). Therefore, the player may greatly expect or may not expect so much the stop-display of the multiplying-factor symbol having a large number displayed thereon, depending on the amount paid out for the established prize.

For example, when the normal symbols rearranged in the symbol matrix SM results in establishment of a prize that offers a large amount of a payout, the player waits for the rearrangement of a multiplying-factor symbol having a larger number displayed thereon with expectation for a further increase in the amount of the payout. On the contrary, when the normal symbols rearranged in the symbol matrix SM results in no payout, since even stop-display of a multiplying-factor symbol having a large number displayed thereon only results in no increase in an amount of a payout, the player does not expect the stop-display of a multiplying-factor symbol having a large number displayed thereon.

As described above, when normal symbols are rearranged in the symbol matrix SM causes ups and downs in the sense of expectation for the stop-display of a multiplying-factor symbol having a large number displayed thereon, resulting in further enhancement of entertainment of the games.

In the second embodiment, the multiplying-factor symbols are varied and displayed by the multiplying-factor reel 106 in every game, and a payout is conducted by coins corresponding to the number obtained by multiplying the normal payout amount by the number displayed on the multiplying-factor symbol stop-displayed. However, in the present invention, varying and displaying of the multiplying-
factor symbols and stop-display of the multiplying-factor symbol may not be conducted in every game. For example, varying and displaying of the multiplying-factor symbols and stop-display of the multiplying-factor symbol may be conducted in every predetermined number of games. Further, varying and displaying of the multiplying-factor symbols and stop-display of the multiplying-factor symbol may be conducted, only when the normal payout amount is equal to or more than the predetermined amount (or equal to or less than the predetermined amount).

[0316] In the first and second embodiments described above, there have been described the cases where symbols are rearranged in the symbol matrix SM of the lower image display panel 16 (the slot machine 10 is a so-called a video slot machine). However, the slot machine according to the present invention may be configured to rearrange symbols using so-called mechanical reels.

[0317] FIG. 12 is a perspective view illustrating the general appearance of a slot machine according to another embodiment.

[0318] In the following description, the components corresponding to those of the slot machine 10 will be designated by the same reference numerals.

[0319] Further, the slot machine 310 has substantially the same external appearance, the same circuit structure and the like as those of the slot machine 10 and also executes substantially the same flowcharts as those executed by the slot machine 10, except that it employs mechanical reels and, therefore, only the mechanical reels will be described herein.

[0320] As illustrated in FIG. 12, 5 reels 314 (314A, 314B, 314C, 314D) and 314E) are rotatably provided within a cabinet 11. On the outer peripheral surfaces of the reels 314A, 314B, 314C, 314D, and 314E, there are drawn symbol sequences constituted by normal symbols such as “10”, “J”, “Q”, “K”, “UMBRELLA”, “CLOUD”, “THUNDER”, “SUN” and “BONUS”, and multiplying-factor symbols.

[0321] At the center portion of the lower image display panel 16, there is provided a display area 328 for displaying the symbols. Within the display area 328, there are formed five display windows 315 (315A, 315B, 315C, 315D, and 315E) visible through their back surfaces. Further, the symbols drawn on the outer peripheral surfaces of the reels 314A, 314B, 314C, 314D, and 314E are displayed on a three-by-three basis, through the display windows 315A, 315B, 315C, 315D, and 315E.

[0322] Although the present invention has been described with reference to embodiments thereof, these embodiments merely illustrate concrete examples, not restrict the present invention. The concrete structures of respective means and the like can be designed and changed as required. Furthermore, there have been merely described most preferable effects of the present invention, as the effects of the present invention, in the embodiments of the present invention. The effects of the present invention are not limited to those described in the embodiments of the present invention.

[0323] Further, in the aforementioned detailed description, characteristic portions have been mainly described, for ease of understanding the present invention. The present invention is not limited to the embodiments described in the aforementioned detailed description, but can be also applied to other embodiments over a wider range of applications. Further, the terms and phrases used in the present specification have been used for clearly describing the present invention, not for limiting the interpretation of the present invention. Further, those skilled in the art will easily conceive other structures, systems, methods and the like which are included in the concept of the present invention, from the concept of the present invention described in the present specification. Accordingly, the description of the claims is intended to include equivalent structures that fall within the technical scope of the invention. Further, the abstract aims at enabling engineers and the like who belong to the present technical field but are not familiar with the patent office and public institutions, the patent, law terms and technical terms to immediately understand the technical content and the essence of the present application through brief studies. Accordingly, the abstract is not intended to restrict the scope of the invention which should be evaluated from the description of the claims. It is desirable that literatures and the like which have been already disclosed are sufficiently studied and understood, in order to sufficiently understand the objects of the present invention and the specific effects of the present invention.

[0324] In the aforementioned detailed description, there have been described processing to be executed by computers. The aforementioned description and expressions have been described for the sake of enabling those skilled in the art to understand the present invention most effectively. In the present specification, each step for deriving a single result should be understood to be self-consistent processing. Further, each step includes transmission, reception, recording and the like of electric or magnetic signals. Although, in the processing at each step, such signals have been expressed as bits, values, symbols, characters, terms, numerical characters and the like, it should be noticed that they have been merely used for convenience of description. Further, although the processing at each step was described using expressions common to human behaviors in some cases, the processing described in the present specification are to be executed by various types of devices, in principle. Further, other structures required for conducting each step will be apparent from the aforementioned description.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A slot machine comprising:
a display capable of rearranging a plurality of normal symbols;
a multiplying-factor-symbol display device capable of varying and displaying a plurality of multiplying-factor symbols each having a different number from one another displayed thereon; and
a controller programmed to execute processing of:
(A) rearranging the plurality of the normal symbols to said display;
(B-1) determining a normal payout amount, based on the numbers of said normal symbols of respective types rearranged in said processing (A);
(C) stop-displaying a single multiplying-factor symbol by said multiplying-factor-symbol display device, after varying and displaying said multiplying-factor symbols; and
(D-1) paying out game media in amount obtained by multiplying the normal payout amount determined in said processing (B-1) by the number displayed on said multiplying-factor symbol stop-displayed in said processing (C).
2. The slot machine according to claim 1, wherein said multiplying-factor symbols are colored or have a colored background, and said processing (D-1) is processing for paying out, when a multiplying-factor symbol colored a predetermined color or having a background color the predetermined color is stop-displayed in said processing (C), game media in amount obtained by multiplying the normal payout amount determined in said processing (B-1) by the number displayed on said multiplying-factor symbol.

3. The slot machine according to claim 1, wherein said processing (C) is processing for stop-displaying said multiplying-factor symbol by said multiplying-factor-symbol display device, after rearranging the plurality of the normal symbols in said processing (A).

4. The slot machine according to claim 1, wherein said processing (D-1) is processing for paying out game media in amount obtained by multiplying the normal payout amount determined in said processing (B-1) by the number displayed on said multiplying-factor symbol stop-displayed in said processing (C), on condition that the normal symbols rearranged in said processing (A) or a combination thereof satisfy a predetermined condition.

5. The slot machine according to claim 4, wherein said processing (A) comprises processing of:
(A-1) rearranging a plurality of normal symbols to said display after game media are BET; and
(A-2) rearranging a plurality of normal symbols even without game media BET, on condition that the normal symbols rearranged in said processing (A-1) or a combination thereof satisfy the predetermined condition, and said processing (B-1) comprises processing of:
(B-1-1) determining the normal payout amount, based on the numbers of the normal symbols of respective types rearranged in said processing (A-1); and
(B-1-2) determining the normal payout amount, based on the numbers of the normal symbols of respective types rearranged in said processing (A-2), and said processing (D-1) is processing for paying out game media in amount obtained by multiplying the normal payout determined in said processing (B-1-2) by the number displayed on the multiplying-factor symbol stop-displayed in said processing (C).

6. A slot machine comprising:
a display capable of rearranging a plurality of normal symbols;
a multiplying-factor-symbol display device capable of varying and displaying a plurality of multiplying-factor symbols each having a different number from one another displayed thereon; and
a controller programmed to execute processing of:
(A) rearranging the plurality of normal symbols to said display;
(B-2) determining, based on the numbers of the normal symbols of respective types rearranged in said processing (A), individual payout amounts for said respective types; and
(C) stop-displaying a single multiplying-factor symbol by said multiplying-factor-symbol display device, after varying and displaying said multiplying-factor symbols; and
(D-2) paying out a special amount of game media and a normal amount of game media, the special payout amount being obtained by multiplying an amount obtained by summing said individual payout amounts for said types satisfying a predetermined condition by the number displayed on the multiplying-factor symbol stop-displayed in said processing (C), the standard payout amount being obtained by summing said individual payout amounts for types failing to satisfy the predetermined condition.

7. The slot machine according to claim 6, wherein said normal symbols and said multiplying-factor symbols are colored or have a colored background, and said processing (D-2) comprises processing of:
(D-2-1) determining the special payout amount by multiplying an amount obtained by summing individual payout amounts for types of normal symbols colored the same or having a background color the same as a color of said multiplying-factor symbol stop-displayed in said processing (C) or a color of the background of said multiplying-factor symbol, by the number displayed on said multiplying-factor symbol;
(D-2-2) determining the standard payout amount by summing individual payout amounts for types other than said types; and
(D-2-3) paying out the special payout amount of game media determined in said processing (D-2-1) and the standard payout amount of game media determined in said processing (D-2-2).

8. The slot machine according to claim 6, wherein said processing (C) is processing for stop-displaying said multiplying-factor symbol by said multiplying-factor-symbol display device, after rearranging the plurality of the normal symbols in said processing (A).

9. The slot machine according to claim 6, said processing (D-2) is processing for paying out the special amount of game media and the standard amount of game media, on condition that the normal symbols rearranged in said processing (A) or a combination thereof satisfy a predetermined condition, the special payout amount being obtained by multiplying an amount obtained by summing said individual payout amounts for said types satisfying the predetermined condition by the number displayed on the multiplying-factor symbol stop-displayed in said processing (C), the standard payout amount being obtained by summing said individual payout amounts for types failing to satisfy the predetermined condition.

10. The slot machine according to claim 9, said processing (A) comprises processing of:
(A-1) rearranging a plurality of normal symbols to said display after game media are BET; and
(A-2) rearranging a plurality of normal symbols even without game media BET, on condition that the normal symbols rearranged in said processing (A-1) or a combination thereof satisfy the predetermined condition,
said processing (B-2) comprises processing of:
(B-2-1) determining the individual payout amounts for
said respective types, based on the numbers of the normal
symbols of respective types rearranged in said processing (A-1); and
(B-2-2) determining the individual payout amounts for
said respective types, based on the numbers of the normal
symbols of respective types rearranged in said processing (A-2); and
said processing (D-2) is processing for paying out the
special amount of game media and the standard amount of
game media, the special payout amount being
obtained by multiplying an amount obtained by sum-
ing said individual payout amounts for types satisfy-
ing the predetermined condition by the number dis-
played on the multiplying-factor symbol stop-displayed
in said processing (C) out of the individual payout
amounts for said respective types determined in said
processing (B-2-2), the standard payout amount being
obtained by summing said individual payout amounts
for types failing to satisfy the predetermined condition
out of the individual payout amounts determined in said
processing (B-2-2).
11. A controlling method of a slot machine comprising steps of:
(A) rearranging a plurality of normal symbols to said display;
(B-1) determining a normal payout amount, based on the
numbers of said normal symbols of respective types
rearranged in said step (A);
(C) stop-displaying a single multiplying-factor symbol by
multiplying-factor-symbol display device, after varying and
displaying said multiplying-factor symbols; and
(D-1) paying out game media in amount obtained by mul-
tiplying the normal payout amount determined in said
step (B-1) by the number displayed on said multiplying-
factor symbol stop-displayed in said step (C).
12. A controlling method of a slot machine comprising steps of:
(A) rearranging a plurality of normal symbols to said display;
(B-2) determining, based on the numbers of the normal
symbols of respective types rearranged in said step (A),
individual payout amounts for said respective types;
(C) stop-displaying a single multiplying-factor symbol by
multiplying-factor-symbol display device, after varying and
displaying said multiplying-factor symbols; and
(D-2) paying out a special amount of game media and a
normal amount of game media, the special payout amount being obtained by multiplying an amount
obtained by summing said individual payout amounts
for said types satisfying a predetermined condition by
the number displayed on the multiplying-factor symbol
stop-displayed in said step (C), the standard payout
amount being obtained by summing said individual payout
amounts for types failing to satisfy the predeter-
mined condition.
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