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Kashima (43) Pub. Date: Aug. 4, 2005(54) GAMING MACHINE AND CONTROL  
METHOD OF GAMING MACHINE

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(57) ABSTRACT

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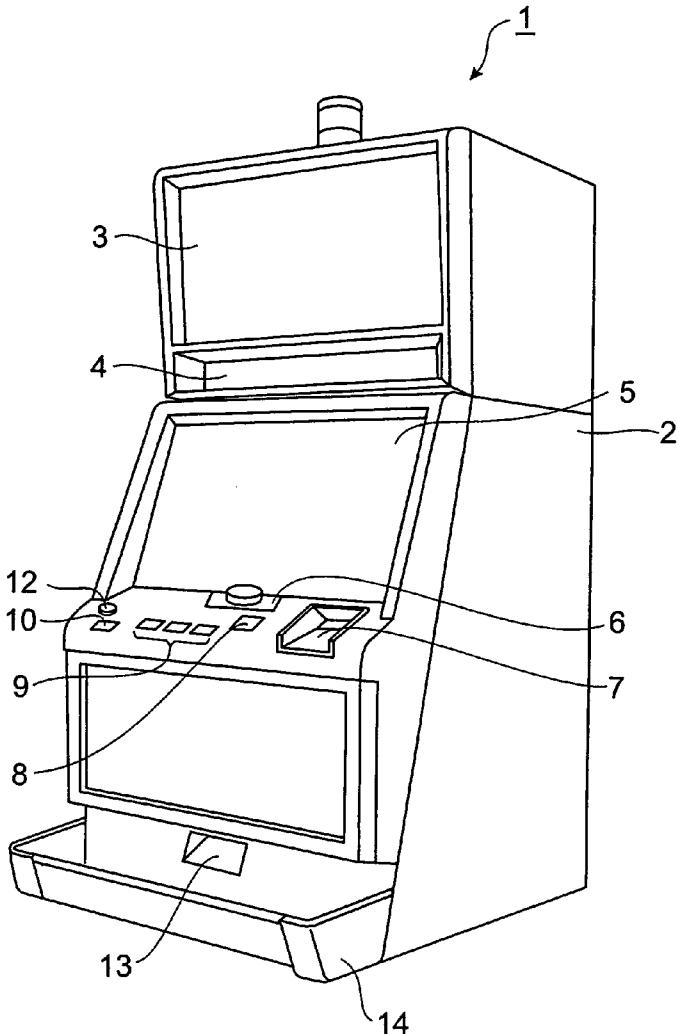
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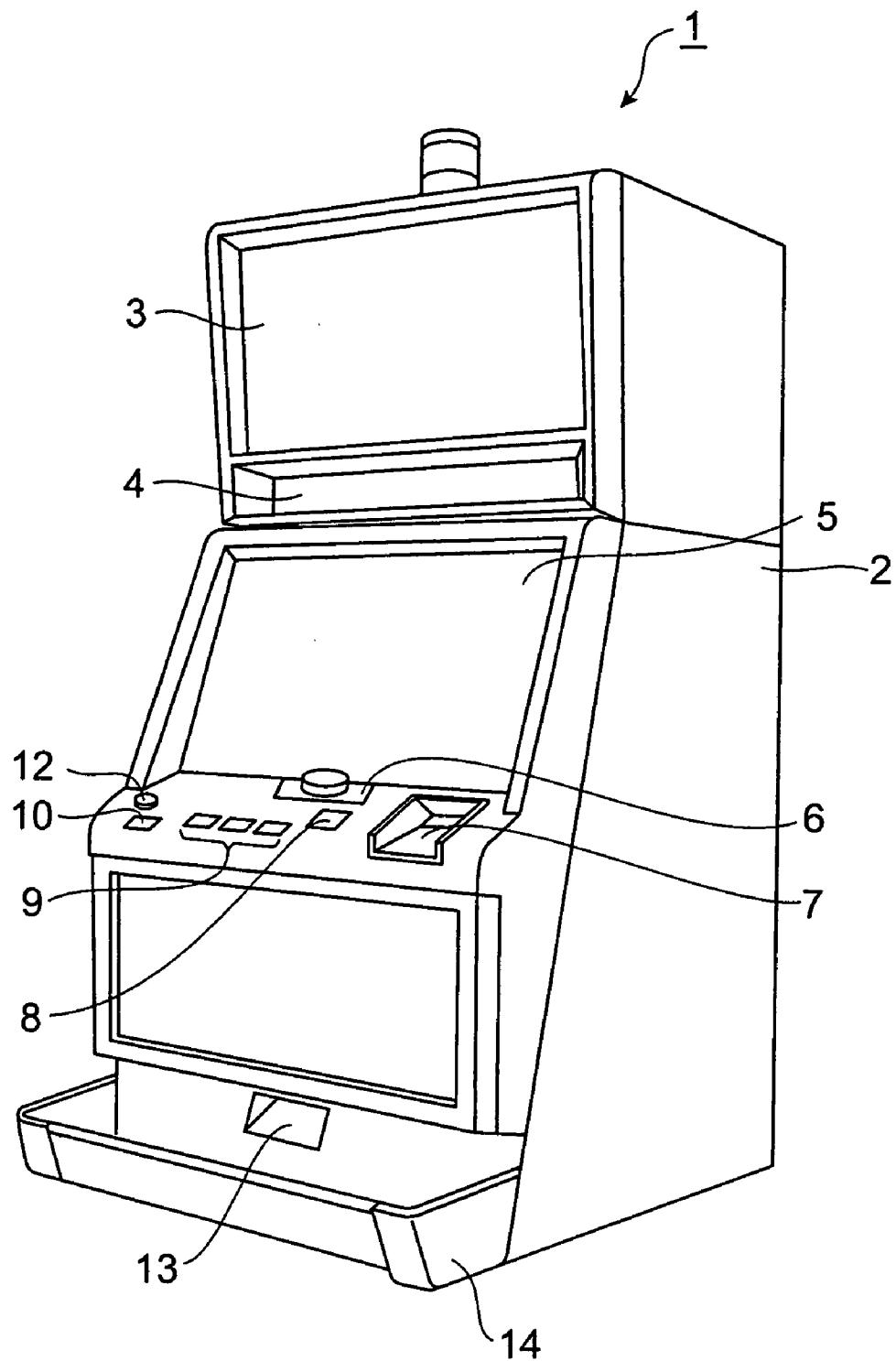
## Publication Classification

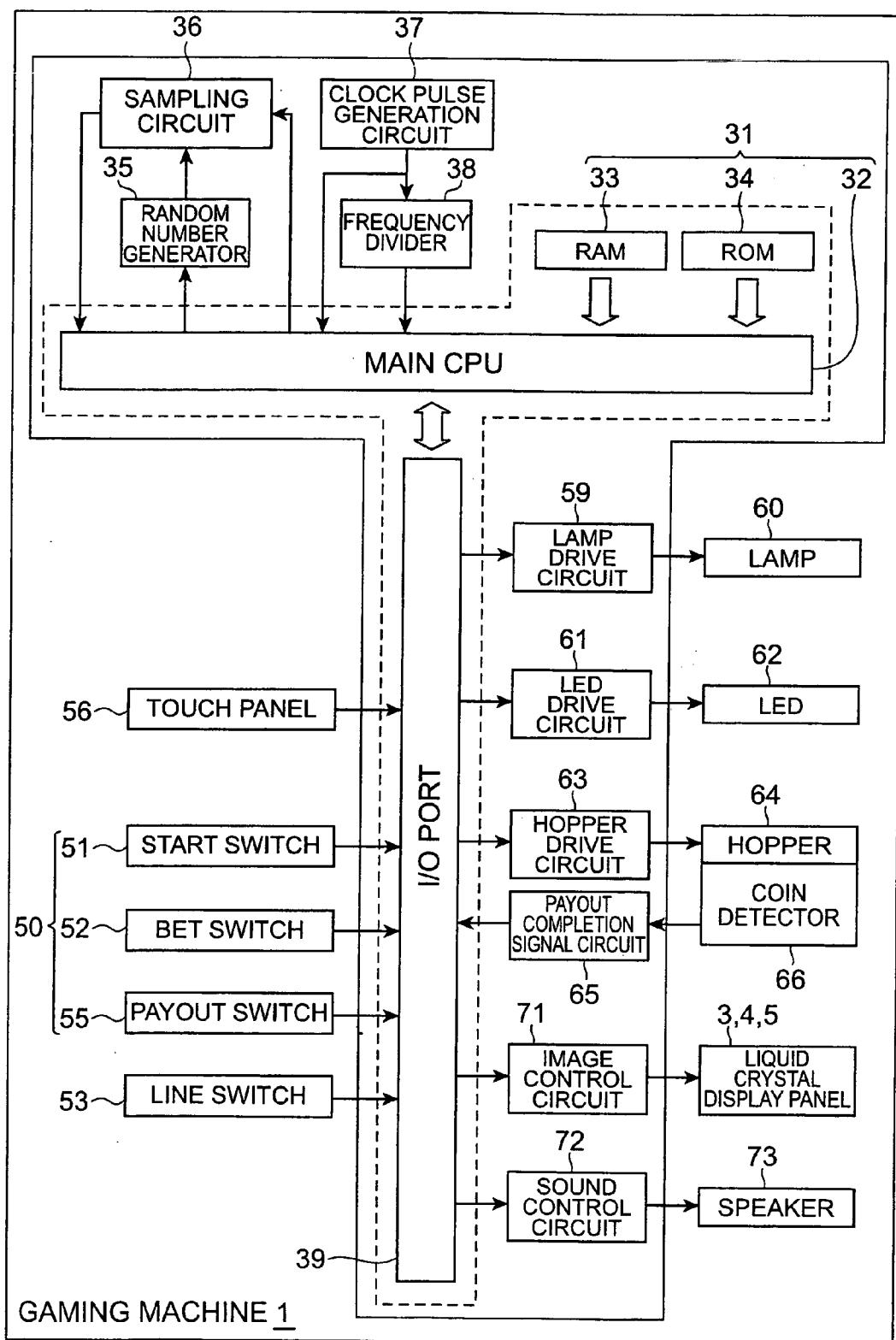
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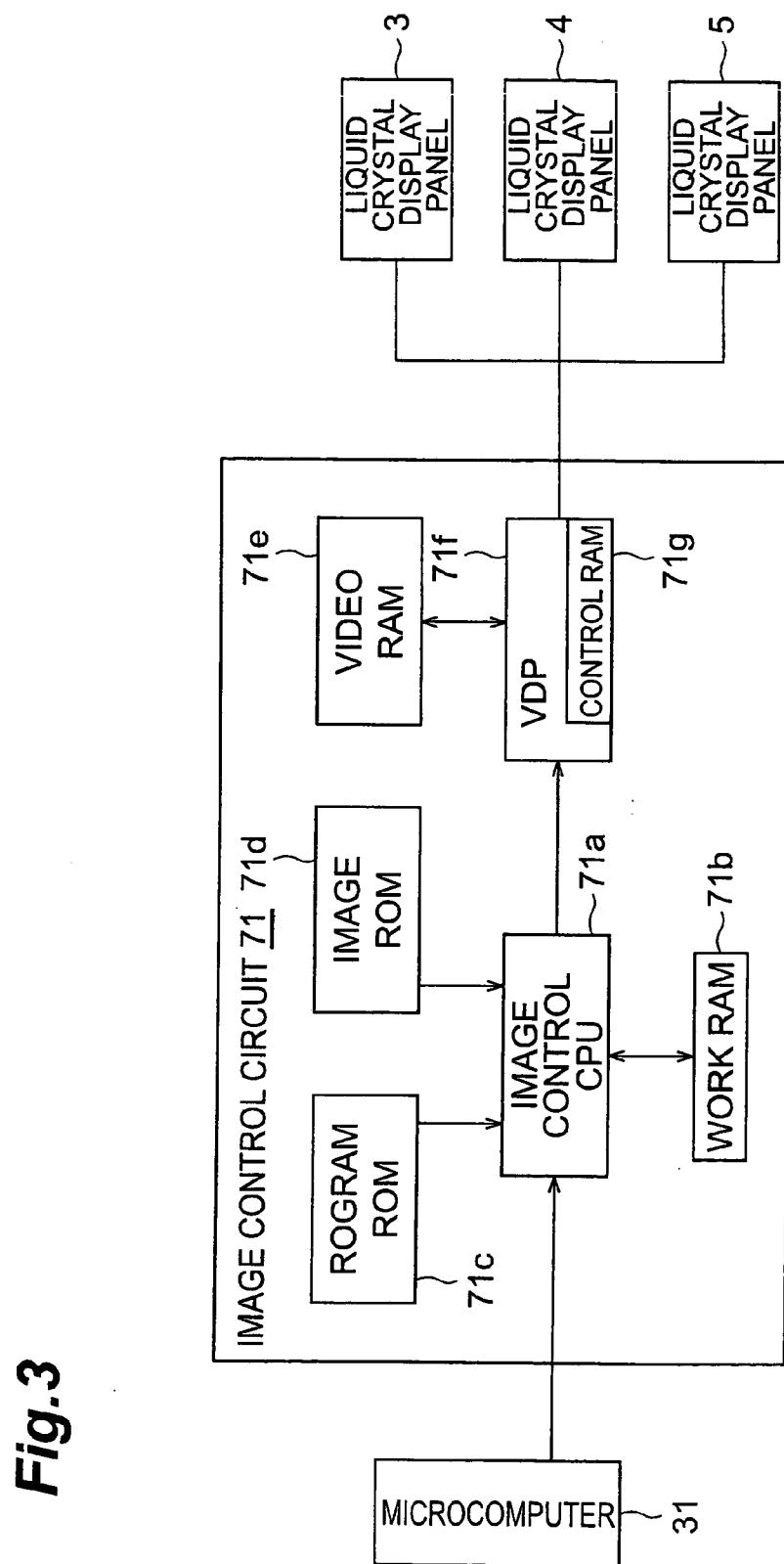
A gaming machine is configured to shift from a normal game mode to a special game mode based on the result of determination on establishment/non-establishment of a shift condition. After shifting to the special game mode, the gaming machine extracts a predetermined number of card data to be used in the special game mode, and selects card data to be assigned to a first group and card data to be assigned to second groups from among the extracted card data. Then, the gaming machine compares a winning combination based on the card data of the first group to winning combinations based on the card data of at least two the second groups, and pays the payout amount to the player in accordance with the comparison result.

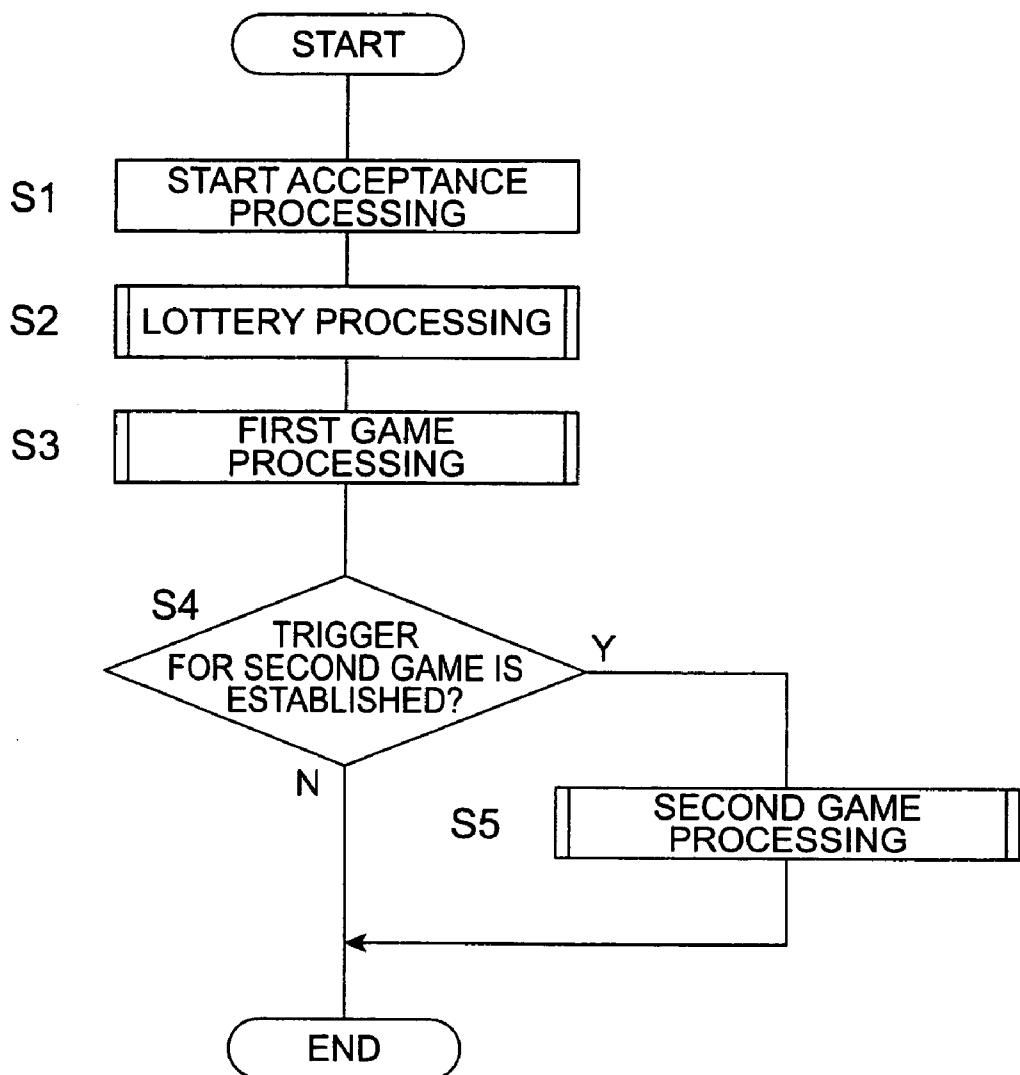


**Fig. 1**

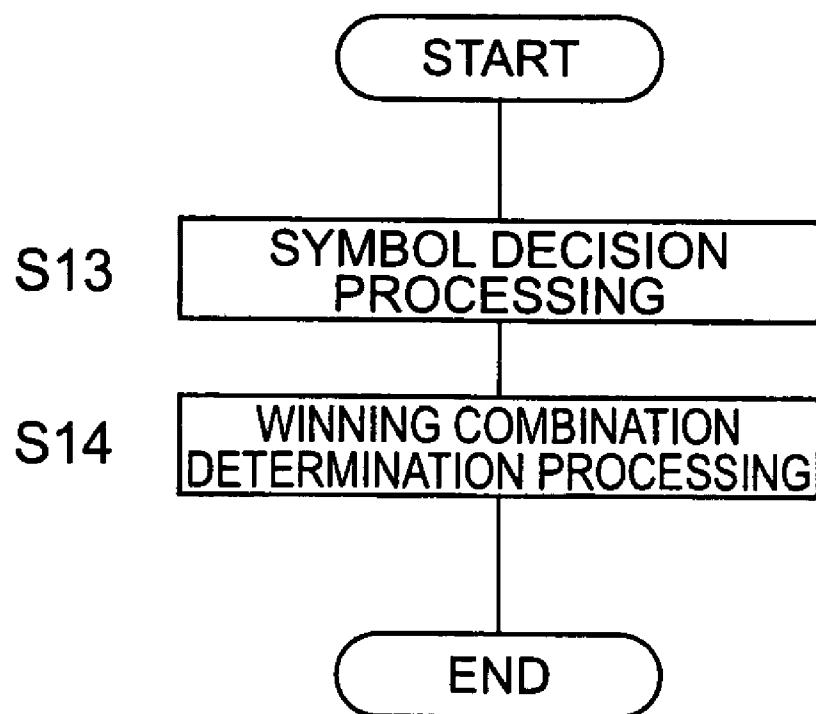


**Fig.2**

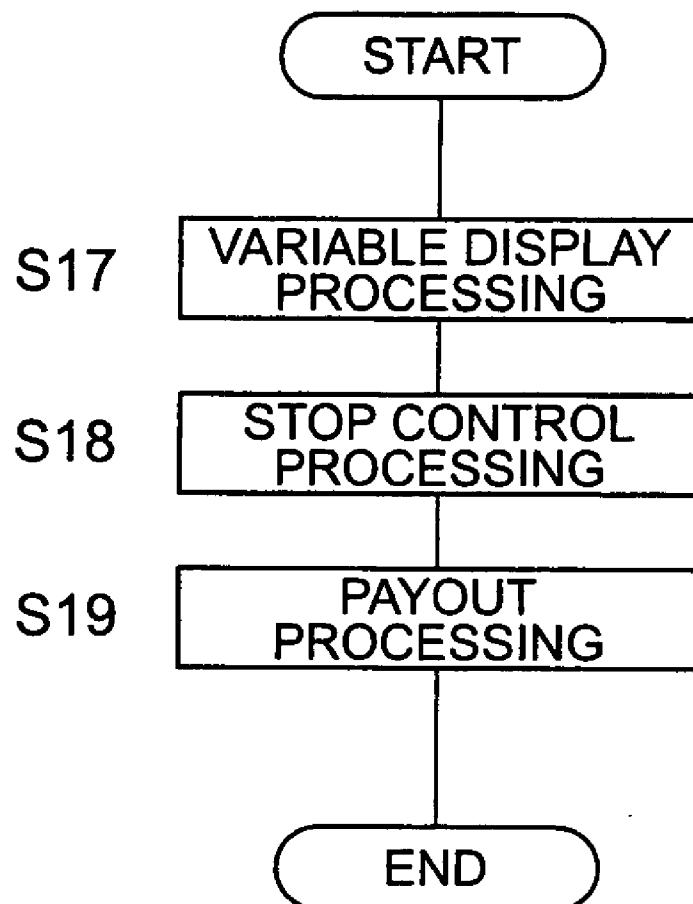


**Fig.4**

*Fig.5*



# Fig. 6



**Fig. 7**

(a)

CODE NO.	SYMBOL	RANDOM NUMBER RANGE
0	WILD	0~20
1	7	21~60
2	BLANK 1	61~70
3	3BAR	71~115
4	2BAR	116~170
5	1BAR	171~240
6	BLANK 2	241~255

81

(b)

CODE NO.	SYMBOL	RANDOM NUMBER RANGE
0	WILD	0~20
1	7	21~60
2	BLANK 1	61~70
3	3BAR	71~115
4	2BAR	116~170
5	1BAR	171~240
6	BLANK 2	241~255

82

(c)

CODE NO.	SYMBOL	RANDOM NUMBER RANGE
0	WILD	0~20
1	7	21~60
2	TRIGGER 1	61~70
3	3BAR	71~115
4	2BAR	116~170
5	1BAR	171~240
6	TRIGGER 2	241~255

83

**Fig.8**

90

90a      90b      90c      90d

CODE NO.	R1	R2	R3	RANDOM NUMBER RANGE
0	WILD	WILD	WILD	0~20
1	3BAR	3BAR	3BAR	21~60
2			TRIGGER 1	61~70
3	2BAR	2BAR	2BAR	71~115
4	7	7	7	116~170
5	1BAR	1BAR	1BAR	171~240
6			TRIGGER 2	241~255

**Fig.9**

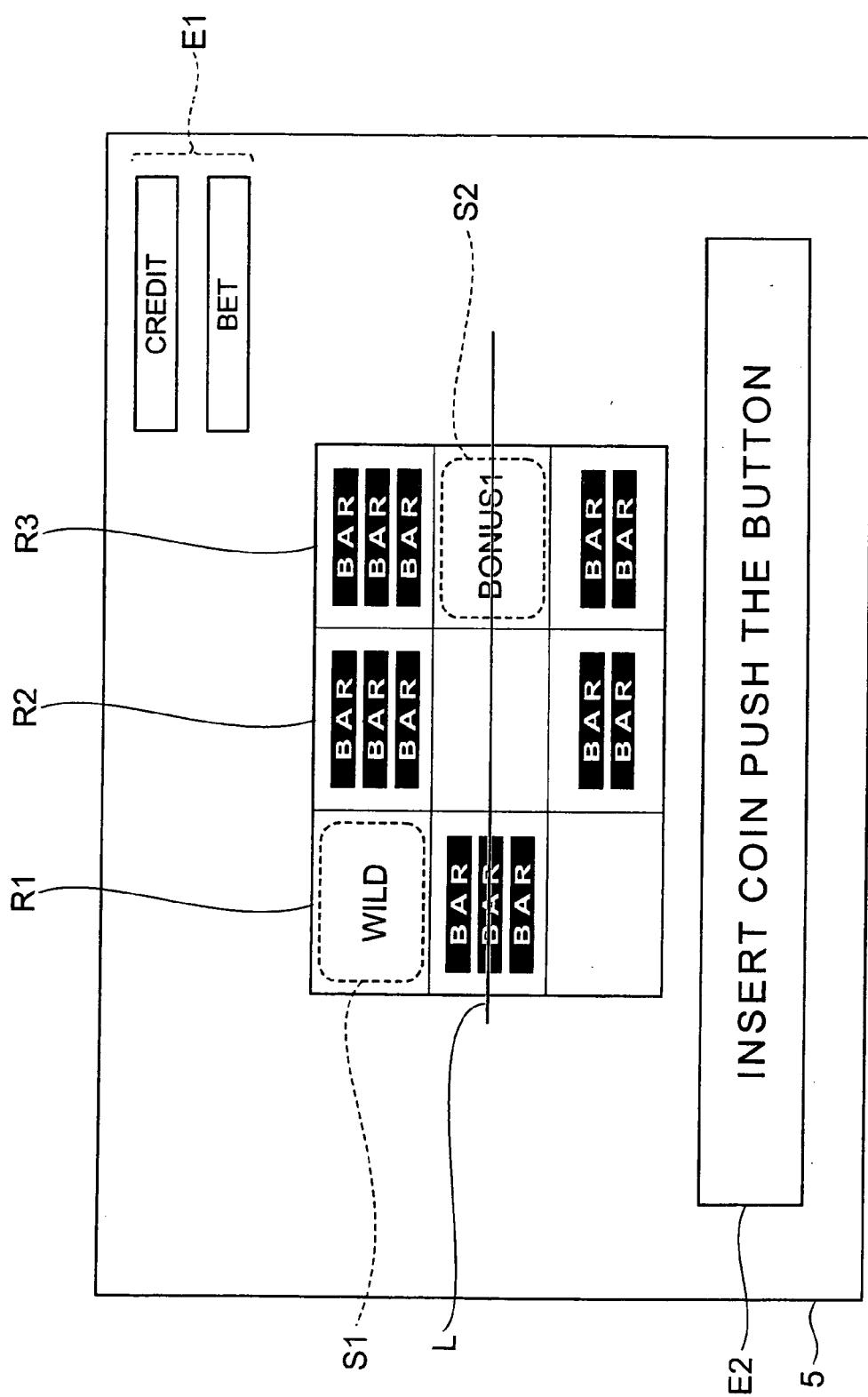
86

WINNING COMBINATION (R1-R2-R3)	CODE NO. PATTER
(ANY)-(ANY)-TRIGGER 1	「1-5-2」…
(ANY)-(ANY)-TRIGGER 2	「3-4-6」…
7-7-7	「4-4-4」
3BAR-3BAR-3BAR	「1-1-1」
2BAR-2BAR-2BAR	「3-3-3」
BAR-BAR-BAR	「5-5-5」
(LOSS)	「2-6-3」…

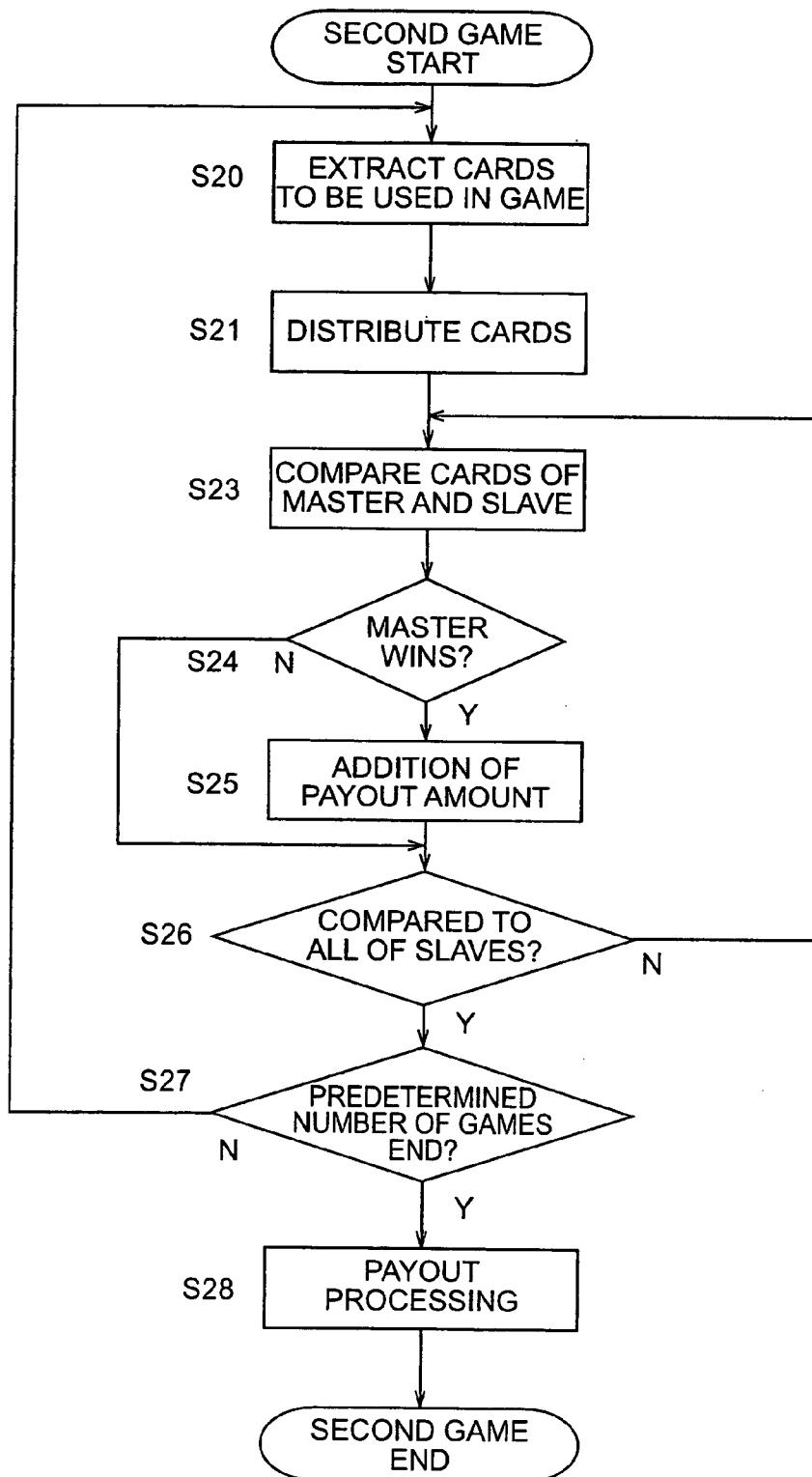
**Fig.10**

91

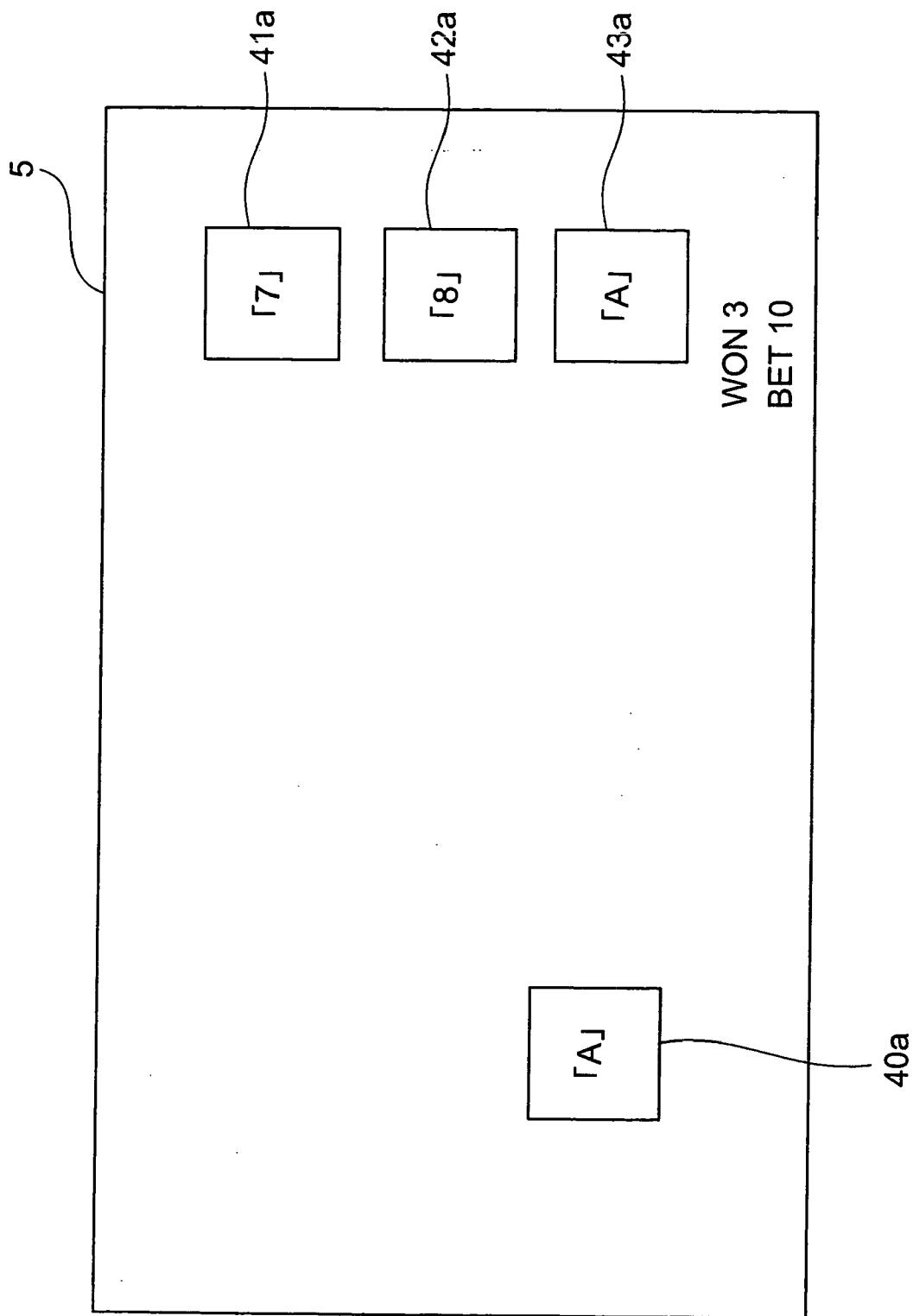
WINNING COMBINATION (R1-R2-R3)	PAYOUT AMOUNT
(ANY)-(ANY)-TRIGGER 1	BONUS1
(ANY)-(ANY)-TRIGGER 2	BONUS2
7-7-7	80
3BAR-3BAR-3BAR	40
2BAR-2BAR-2BAR	20
BAR-BAR-BAR	10
(LOSS)	0

*Fig. 11*

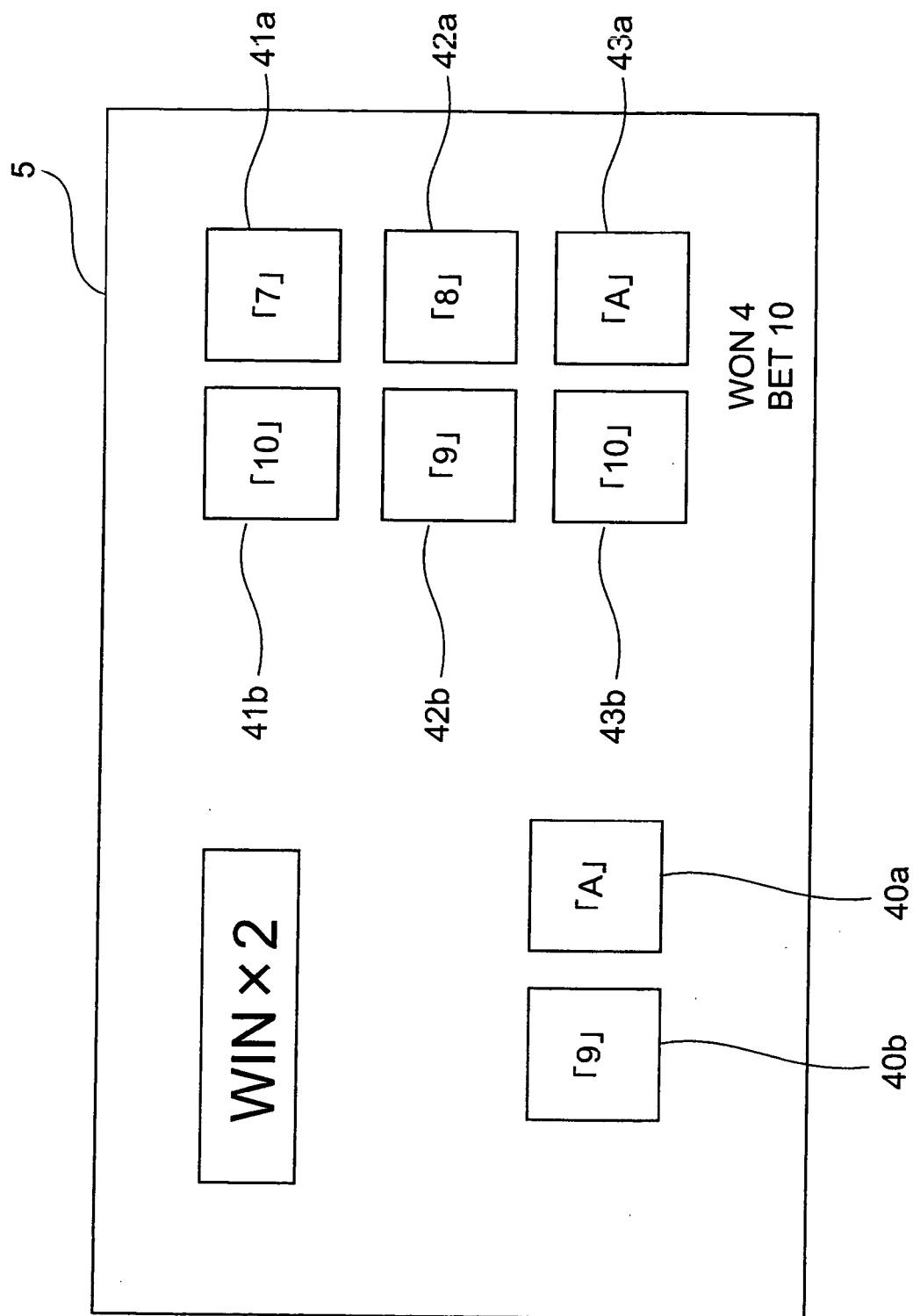
**Fig.12**

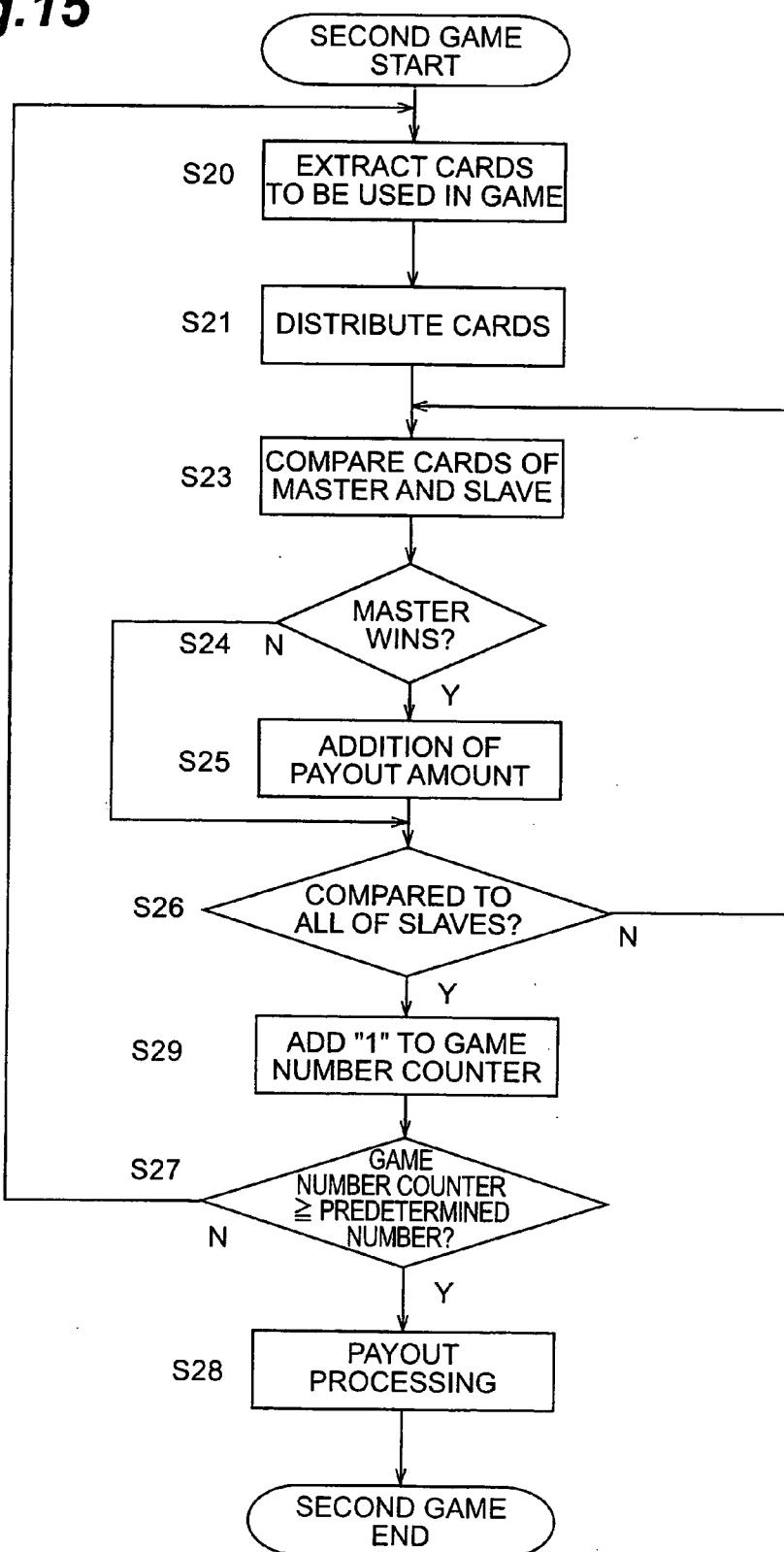


*Fig. 13*



*Fig. 14*



**Fig.15**

**GAMING MACHINE AND CONTROL METHOD OF GAMING MACHINE****CROSS REFERENCE TO RELATED APPLICATIONS**

[0001] This application is based upon and claims the benefit of priority from the prior Japanese Patent Application No. 2003-412256, filed on Dec. 10, 2003 the entire contents of which are incorporated herein by reference.

**BACKGROUND OF THE INVENTION****[0002] 1. Field of the Invention**

[0003] The present invention relates to a gaming machine on which card games such as blackjack and so on can be played with images of cards such as playing cards or the like being displayed on a screen, and a control method of the gaming machine.

**[0004] 2. Related Background Art**

[0005] Conventionally, a gaming machine is known which displays images showing cards such as playing cards on its display screen, which is realized by a liquid crystal display panel or CRT, and changes the display of each of the card images in accordance with operation input by a player to thereby make the game progress (for example, Japanese Patent Unexamined Application No. 2001-70642, hereinafter, reference of "Patent Document 1"). A real player playing games on such a gaming machine plays playing-card games (card games) such as a blackjack game and a poker game against a dealer being a virtual opponent controlled by the gaming machine, and receives payout as a winning such as medals in accordance with the result of play.

**SUMMARY OF THE INVENTION**

[0006] The card game in the above-described conventional gaming machine including the above-described Patent Document 1, however, is that the win/loss is decided by comparing superiority/inferiority between a winning combination of cards of the real player and a winning combination of cards of the dealer being the virtual opponent controlled by the gaming machine, so that when the player wins, a fixed payout amount in accordance with the winning combination of the player is paid out. Therefore, in the card game performed in the conventional gaming machine, once the winning combination of the cards of the player is decided, the payout amount to be paid out when the player wins is automatically decided (known), thus giving the player repeatedly playing games on this gaming machine a feeling of monotony. Accordingly, the conventional gaming machine is not enough to keep the interest of the player.

[0007] The present invention has been developed in consideration of the above-described problems and an object thereof is to provide a gaming machine capable of keeping the interest of a player by making the contents of a card game varied and new, and a control method of the gaming machine.

[0008] To achieve the above-described object, the present invention is a gaming machine including a determining means determining establishment/non-establishment of a shift condition for shifting a game mode from a normal game mode to a special game mode and shifting means shifting the

game mode from the normal game mode to the special game mode based on the determination result of the determining means, characterized by including: extraction means extracting a predetermined number of card data to be used in the special game mode, from a plurality of card data; selecting means selecting a card data to be assigned to the first group and card data to be assigned to each of a plurality of second group, from among the predetermined number of card data extracted by the extraction means; winning combination comparing means performing comparison between a winning combination based on the card data of the first group and winning combinations based on the card data of at least two the second groups; and payout calculating means calculating a payout based on the comparison result by the winning combination comparing means.

[0009] In the special game mode of the present invention, it is assumed there are a plurality of second groups, and winning combinations of the respective card data of the second group are compared to (played against) a winning combination of the card data of the first group to compete for superiority respectively. Therefore, a player of the first group is given a chance to receive a plurality of payout times by winning against the plurality of second groups. The payout amount (winnings) to be paid out to the first group is not defined until after the end of plays against all of the second groups even when the winning combination of the card data of the first group has been decided, thus allowing a player of the first group to continue having expectations till the last moment. Therefore, even if the game is repeatedly performed, the interest of a player of the first group can be kept.

[0010] In this case, it is preferable that the gaming machine further includes an instruction input device inputting instruction to the first group, wherein the selecting means selects the card data for the first group in accordance with the instruction inputted from the instruction input device. This allows the player of the first group to realize that his or her own will is reflected and he or she directly participates in the special game mode, so that the interest of a player of the first group can be kept longer.

[0011] Further, it is preferable that the payout changes in accordance with the number of the second group side against that the first group side has won. In this case, for example, when the payout is increased in proportion to the number of the second group side against that a player of the first group side has won, a player of the first group expects to win against the greater number of second groups, resulting in more interest added.

[0012] Further, it is preferable that, where processing from the extraction of the card data by the extraction means to the winning combination comparison by the winning combination comparing means is regarded as one game, a payout rate for calculating the payout by the payout calculating means is changed for each game. This allows a player of the first group to have expectations of winning of a game with a high payout rate, leading to more interest added.

[0013] Further, it is suitable that the gaming machine further includes a card display device displaying the card images using the card data selected by the selecting means.

[0014] Further, it is suitable that the selecting means select card data to be assigned to the first group as card data on a player side and select card data to be assigned to the second group as card data on the gaming machine.

[0015] Then, it is suitable that in the special game mode, a player is able to play a blackjack game.

[0016] The present invention provides a control method of a gaming machine including a determining means determining establishment/non-establishment of a shift condition for shifting a game mode from a normal game mode to a special game mode and shifting means shifting the game mode from the normal game mode to the special game mode based on the determination result of the determining means, the method including the step of: extracting a predetermined number of card data to be used in the special game mode, from a plurality of card data; selecting card data to be assigned to a first group and card data to be assigned to each of a plurality of second group, from among the predetermined number of extracted card data; performing a comparison between a winning combination based on the card data of the first group and winning combination based on the card data of at least two the second groups; and calculating a payout based on the comparison result of winning combination.

[0017] The present invention will be more fully understood from the detailed description given herein below and the accompanying drawings which are given by way of illustration only, and thus are not to be considered as limiting the present invention.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0018] FIG. 1 is a perspective view showing an entire configuration of a gaming machine being a gaming machine according to an embodiment of the present invention;

[0019] FIG. 2 is a block diagram of the gaming machine, mainly showing its internal configuration;

[0020] FIG. 3 is a block diagram showing an example of an internal configuration of an image control circuit;

[0021] FIG. 4 is a flowchart showing an operation procedure from a start to an end of a game in the gaming machine shown in FIG. 1;

[0022] FIG. 5 is a flowchart showing an operation procedure of lottery processing shown in FIG. 4;

[0023] FIG. 6 is a flowchart showing an operation procedure of first game processing shown in FIG. 4;

[0024] FIG. 7 is diagrams showing examples of contents of symbol decision tables for use in the first game;

[0025] FIG. 8 is a diagram showing an example of contents of a stop table for use in the first game; FIG. 9 is a diagram showing an example of a winning determination table for use in the first game;

[0026] FIG. 10 is a diagram showing an example of a state determination table for use in the first game;

[0027] FIG. 11 is a view showing a game execution screen in the first game;

[0028] FIG. 12 is a flowchart showing an operation procedure of second game processing shown in FIG. 4;

[0029] FIG. 13 is a schematic view showing an example of a game execution screen displayed on a liquid crystal display panel during the second game processing;

[0030] FIG. 14 is a schematic view showing an example of a game execution screen displayed on the liquid crystal display panel during the second game processing; and

[0031] FIG. 15 is a flowchart showing an operation procedure of other second game processing.

#### DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0032] Hereinafter, preferred embodiments of the present invention will be described with reference to the accompanying drawings. Note that the same reference numbers are assigned to the same or corresponding components and overlapping description thereof is omitted.

[0033] FIG. 1 is a perspective view showing an entire configuration of a gaming machine 1. The gaming machine 1, which is a gaming machine according to an embodiment of the present invention, has a variable display device which variably displays a plurality of symbols and a card display device which displays a plurality of card images. The gaming machine 1 can also execute a normal game mode in which a plurality of (three in this embodiment) pseudo-reels are displayed on the variable display device to allow a normal slot game (first game) to be played, and additionally a special game mode in which a plurality of card images are displayed on the card display device to allow blackjack being a match card game (second game) to be played. In the normal game mode, winning/non-winning is determined depending on the combination of symbols coming to an effective line(pay line) at the point of time when the pseudo-reels stop.

[0034] The gaming machine 1 has a cabinet 2, on the front of which liquid crystal display panels 3, 4, and 5 are mounted in order from the upper side. On the liquid crystal display panel 3, images that are not directly involved in games (for example, a payout table, three-dimensional moving image for game performance making games more exciting, and so on) are displayed. On the liquid crystal display panel 4, explanation of how to play games and so on are displayed.

[0035] The liquid crystal display panel 5 operates as the variable display device and the card display device. On this liquid crystal display panel 5, the plurality of pseudo-reels for the first game (slot game) are displayed in the normal game mode, such that the symbols on each of the pseudo-reels are variably displayed (scroll display). Further, the card images for the second game (card game) are displayed in the special game mode. Note that the contents of the pseudo-reels and the card images to be displayed on the liquid crystal display panel 5 will be described later.

[0036] Besides, the cabinet 2 is provided with a coin insertion slot 6 for inserting coins for betting in a game, and a bill insertion port 7 for inserting bills, below the liquid crystal display panel 5. Further, a spin button 8, a BET selection button 9, a line selection button 10, and a payout button 12 are provided in order leftward from the bill insertion port 7.

[0037] The spin button 8 inputs a start signal for a player to instruct start of a game to thereby start the variable display of the pseudo-reels on the liquid crystal display device 5 by an operation input of the player. The BET selection button 9 inputs a BET selection signal for the player to select and

set the number of coins (for example, 1, 2, or 10) to be an object of a BET. The line selection button 10 inputs a line selection signal for the player to select and set a desired effective line from among a plurality of effective lines not shown by an operation input of the player. Further, the cabinet 2 is provided, at the bottom, with a coin payout opening 13 and a coin receiving tray 14 which receives paid out coins.

[0038] FIG. 2 is a block diagram of the gaming machine 1, mainly showing its internal configuration. The gaming machine 1 has a plurality of components around a microcomputer 31.

[0039] The microcomputer 31 has a main CPU (Central Processing Unit) 32, a RAM (Random Access Memory) 33, and a ROM (Read Only Memory) 34. The main CPU 32 operates in accordance with a program stored in the ROM 34 to input/output signals from/to other components via an I/O port 39 to thereby control the operation of the entire gaming machine 1. The RAM 33 stores data and programs for use in operation of the main CPU 32, in which, for example, random number values sampled by a later-described sampling circuit 36 are temporarily held after start of a game, and data such as code Nos. (code numbers) and symbol Nos. (symbol numbers) of the pseudo-reels are stored. The ROM 34 stores programs executed by the main CPU 32 and permanent data.

[0040] The gaming machine 1 further has a random number generator 35, the sampling circuit 36, a clock pulse generation circuit 37, and a frequency divider 38. The random number generator 35 operates in accordance with the instruction from the main CPU 32 to generate random numbers within a certain range. The sampling circuit 36 extracts an arbitrary random number from the random numbers generated by the random number generator 35 in accordance with the instruction from the main CPU 32 and inputs the extracted random number into the main CPU 32. The clock pulse generation circuit 37 generates a reference clock for bringing the main CPU 32 to operate, and the frequency divider 38 inputs into the main CPU 32 a signal obtained by frequency-dividing the reference clock by a certain period.

[0041] A switch input unit 50 has a start switch 51, a BET switch 52, a line switch 53, and a payout switch 55. The start switch 51 inputs a start signal into the main CPU 32 upon detection of an operation input at the spin button 8. The BET switch 52 inputs a BET selection signal into the main CPU 32 upon detection of an operation input at the BET selection button 9. The line switch 53 inputs a line selection signal into the main CPU 32 upon detection of an operation input at the line selection button 10. The payout switch 55 inputs a payout signal into the main CPU 32 upon detection of an operation input at the payout button 12.

[0042] The gaming machine 1 further has a touch panel 56, a lamp drive circuit 59, a lamp 60, an LED drive circuit 61, an LED 62, a hopper drive circuit 63, a hopper 64, a payout completion signal circuit 65, and a coin detector 66. The gaming machine 1 further has an image control circuit 71, a sound control circuit 72, and a speaker 73.

[0043] The touch panel 56 is provided in such a manner as to cover the display screen of the liquid crystal display panel 5 to detect the position of a place where a finger of the player

touches and input into the main CPU 32 a position signal corresponding to the detected position. The lamp drive circuit 59 outputs to the lamp 60 a signal for turning on the lamp 60 to cause the lamp 60 to flash during execution of a game. With this flash, effective performance is realized. The LED drive circuit 61 controls flash display of the LED 62. The LED 62 performs credit-number display, acquired-coin number display, and so on. The hopper drive circuit 63 drives the hopper 64 under the control of the main CPU 32, and the hopper 64 performs operation for paying out coins for winning to pay out coins from the payout opening 13. The coin detector 66 counts the number of coins paid out by the hopper 64 and sends data on the counted number value to the payout completion signal circuit 65. The payout completion signal circuit 65 receives the data on the number value of coins from the coin detector 66 and inputs a signal notifying completion of the payout of coins into the main CPU 32 when the number value reaches data of the set number.

[0044] The image control circuit 71 controls image display on each of the liquid crystal display panels 3, 4, and 5 to cause the liquid crystal display panels 3, 4, and 5 to display various images such as the pseudo-reels which are variably displayed, card images, and the like.

[0045] The image control circuit 71 has, as shown in FIG. 3, an image control CPU 71a, a work RAM 71b, a program ROM 71c, an image ROM 71d, a video RAM 71e, and a VDP (Video Display Processor) 71f. The image control CPU 71a decides the images (the pseudo-reels, card images, and so on) to be displayed on the liquid crystal display panels 3, 4, and 5 based on parameters set by the microcomputer 31 in accordance with an image control program (relating to the displays on the liquid crystal display panels 3, 4, and 5) stored in the program ROM 71c in advance. The work RAM 71b is constituted as a temporary memory when the image control CPU 71a executes the image control program.

[0046] The program ROM 71c stores the image control program, various selection tables, and so on. The image ROM 71d stores dot data for forming images. The dot data includes, in this embodiment, image data not only on the pseudo-reels for use in the slot game in the first game but also on card images showing 52 playing cards (hereinafter referred to as a "card image group") for use in blackjack. The video RAM 71e is constituted as a temporary memory when the VDP 71f forms images. The VDP 71f having a control RAM 71g forms images matching the display contents on the respective liquid crystal display panels 3, 4, and 5 decided by the image control CPU 71a, and outputs the respective images formed to the liquid crystal display panels 3, 4, and 5.

[0047] Returning to FIG. 2, the sound control circuit 72 inputs into the speaker 73 a sound signal for outputting sound from the speaker 73. From the speaker 73, sound for making a game more exciting is outputted, for example, at an appropriate timing after start of the game.

[0048] Next, operation contents of the gaming machine 1 having the above-described configuration will be described with reference to flowcharts shown in FIG. 4 to FIG. 6 and FIG. 11. In the gaming machine 1, as shown in FIG. 4, the first game is executed first, and then the second game is executed under a certain condition. The first game is described as the slot game in the following illustration, but

the first game executed in the game in the present invention is not limited to the slot game. The game may be, for example, a card game such as a poker game or the like. On the other hand, the second game only needs to be a card game in which the gaming machine side and the player play a match against each other, and is not limited to blackjack.

[0049] FIG. 4 is a flowchart showing the operation procedure of the main processing from the start to the end of a slot game in the gaming machine 1. Note that Step is abbreviated to S in FIG. 4 to FIG. 6 and FIG. 11. As shown in FIG. 4, the gaming machine 1 after starting the main processing performs start acceptance processing in Step 1 for starting a game.

[0050] In the start acceptance processing in Step 1, the gaming machine 1 accepts the operation for starting the game from the player under the control of the main CPU 32. To start the slot game to activate the pseudo-reels (to variably display the pseudo-reels), the player first inserts a number of coins to be bet in one game through the coin insertion slot 6 and operates the BET selection button 9 to thereby decide the number of coins to be bet in one game. Further, the player operates the line selection button 10 to select an effective line. Subsequently, the player operates the spin button 8 (hereinafter a series of these operations is referred to as "start operation"). With this start operation, a start signal is inputted from the start switch 51 into the main CPU 32 (in the case of credit, a BET selection signal is inputted from the BET switch 52).

[0051] Then, the processing proceeds to Step 2, in which lottery processing in the first game is performed. When the lottery processing is started, the processing proceeds to Step 13 shown in FIG. 5, in which the main CPU 32 performs symbol decision processing. In this symbol decision processing, the main CPU 32 decides a symbol to be stopped on a selected effective line L for each pseudo-reel.

[0052] Further, in the lottery processing, when detecting the start operation of the player based on the input signal from the start switch 51, the main CPU 32 instructs the random number generator 35 to generate random numbers within a certain range upon receipt of the detection (in other words, regarding the start of the game as a trigger). The main CPU 32 further instructs the sampling circuit 36 to extract an arbitrary random number from the random numbers generated by the random number generator 35. When the random number is extracted, the main CPU 32 sets the random number in a search key to acquire the code No. of its corresponding symbol and the symbol, referring to symbol decision tables 81 to 83 shown in FIGS. 7(a) to (c) stored in the ROM 34. The symbol decision tables 81 to 83 shown in FIGS. 7(a) to (c), which correspond to the pseudo-reels R1 to R3 in order, are tables storing the code No. of each symbol and the symbol associated with the random numbers. For example, when the random number extracted by the sampling circuit 36 is a number ranging from 0 to 20, the code No. "0" and the symbol "(WILD)" are acquired. The processing of extracting a random number to acquire its code No. is performed for each of the pseudo-reels R1 to R3.

[0053] Alternatively, it is suitable to search a corresponding symbol for each of the pseudo-reels R1 to R3 referring to one stop table 90 as shown in FIG. 8, instead of the three symbol decision tables 81 to 83.

[0054] Here the stop table 90 is, as shown in FIG. 8, a table having a code No. area 90a where code Nos. (of

symbols) are stored, a symbol area 90b where the symbols corresponding to the code Nos. are stored, and a random number area 90c where random numbers are stored, and is configured such that when a random number is set in the search key to search the random number area 90c, the code No. of its corresponding symbol and the symbol can be searched for each of the pseudo-reels R1 to R3. In the symbol area 90b, symbols are registered corresponding to the code Nos. of "0" to "6" for each of the pseudo-reels (the order of the registered symbols is different from those of the symbol decision tables 81 to 83 shown in FIG. 7). For example, C1 shown in FIG. 8 shows a symbol pattern composed of symbols when the acquired code Nos. are "0" for all of the pseudo-reels R1 to R3.

[0055] Then, in the gaming machine 1, the extraction of a random number and the search of the symbol decision tables 81 to 83 or the stop table 90 are performed for each of the pseudo-reels R1 to R3. When symbols are decided for the pseudo-reels R1 to R3, stop positions of the reels for stopping the symbols on the effective line L are then decided.

[0056] Referring again to FIG. 5, upon decision of the stop positions of the reels, the main CPU 32 proceeds to Step 14 and determines winning/non-winning referring to a winning determination table 86 stored in the ROM 34. Here in the winning determination table 86, as shown in FIG. 9, either of a winning symbol pattern and a not-winning (non-winning) symbol pattern is distinguishably registered associated with the combination of the code Nos. (hereinafter referred to as a "code No. pattern"). Since the code No. pattern corresponding to the stop positions of the pseudo-reels is decided in Step 13, the main CPU 32 sets the code No. pattern in the search key and refers to the winning determination table 86, thereby determining winning/non-winning from the reference result. Note that, in the winning determination table 86, code No. patterns are set corresponding to the stop table 90.

[0057] Subsequently, the main CPU 32 refers to a contents table 91 shown in FIG. 10 and performs a winning contents determination processing of determining the winning contents (the "winning contents" is referred to also as a "winning combination"). Here the contents table 91 is for deciding the contents in winning (winning state), in which payout amounts (the payout of coins and the contents of the second game) corresponding to the winning contents are registered as shown in FIG. 10. For example, a winning combination "(any)-(any)-trigger-1 or 2" means a case when specific symbols (symbols when the code No. of the pseudo-reel R3 is 2 or 6, and the code Nos. of the pseudo-reels R1 and R2 are arbitrary numbers) appear, so that BONUS 1 or 2 here, that is, the second game is executed. Note that the difference between BONUS 1 and BONUS 2, described later in detail, is in that the number of opponents in the second game is different. Besides, a winning combination "7-7-7" means that the symbols on the pseudo-reels R1 to R3 match to "7," in which case the payout amount is 80 coins. With that the lottery processing ends.

[0058] Next, the processing proceeds to Step 3, the first game processing is performed. The first game processing is performed with the game mode is kept in the normal game mode and includes Step 17 to Step 19 shown in FIG. 6. In Step 17, variable display processing is performed. In this

case, the image control circuit 71 operates according to the instruction of the main CPU 32 to display, for example as shown in FIG. 11, a game execution image including variable display images of the plurality of pseudo-reels R1 to R3 is displayed on the liquid crystal display panel 5. FIG. 11 is a view showing the game execution image in the normal game mode on the liquid crystal display panel 5. On the liquid crystal display panel 5, the three pseudo-reels R1, R2, and R3 are variably displayed at the center thereof, and the laterally extending straight effective line L is displayed at the middle thereof. Each of the pseudo-reels R1 to R3 has a plurality of symbols (for example, a symbol S1 displaying "WILD," a symbol S2 displaying "BONUS 1," and so on) and is thus variably displayed such that the symbols appear successively in an irregular order. Note that the "BONUS 1" of the symbol S2 shown in FIG. 11 corresponds to the "trigger 1" shown in FIG. 10. Further, in the gaming machine 1, the three pseudo-reels are arranged side by side in a line in the horizontal direction, but the number of reels is not limited to three. For example, the number may be five or nine.

[0059] Further, in a region E1 on the upper right side of the pseudo-reels R1 to R3, the credit number and the BET number are displayed. Furthermore, in a region E2 on the lower side of the pseudo-reels R1 to R3, explanation of the game contents (in this embodiment, characters "INSERT COIN PUSH THE BUTTON") is displayed.

[0060] Though not shown, the main CPU 32 instructs, during the first game processing, the image control circuit 71 to display the payout table and the three-dimensional images for game performance on the liquid crystal display panel 3 and the image for explanation of how to play games and the like on the liquid crystal display panel 4.

[0061] Referring again to FIG. 6, after the end of Step 17, the processing proceeds to Step 18, in which stop control processing is performed. Here the pseudo-reels R1 to R3 in scrolling are stopped to correspond to the result of the lottery processing in Step 2.

[0062] Next, the processing proceeds to Step 19, in which payout processing is performed. In this case, when the main CPU 32 instructs the hopper drive circuit 63 to perform payout of a number of coins corresponding to the search result in the contents table 91, the hopper 64 performs payout of coins in the first game. Further, when determining that the payout of the instructed number of coins by the signal from the payout completion circuit 65 has been performed, the main CPU 32 ends the payout processing and proceeds to Step 4 shown in FIG. 4.

[0063] After proceeding to Step 4, the main CPU 32 operates as a determining means to determine whether the trigger for shifting to the second game is established or not (establishment/non-establishment of a shift condition for shifting the game mode from the normal game mode to the special game mode) from the result of the winning contents determination in Step 14. Here when the winning contents shows the possibility of shifting to the special game mode (for example, when the symbol pattern is "(any)-(any)-trigger 1 or 2" shown by B1 or B2 in FIG. 10), the main CPU 32 operates as shifting means and proceeds from Step 4 to Step 5 to shift the game mode to the special game mode, thereby performing the second game processing. If the shift condition is not established, the main CPU 32 ends the main processing without executing Step 5.

[0064] Next, the second game processing being a characteristic part of the present invention will be described.

[0065] In the second game processing in this embodiment, a game (card game) in which a first player (card assigned to first player is referred to as first group) plays against a plurality of second players (card assigned to second player is referred to as second group) can be performed. In this card game, the processing is performed with the first player standing on a position of a player really existing (hereinafter, referred to as a real player) and each of the second players standing on a position of a virtual player (hereinafter, referred to as a virtual player) on the main CPU (gaming machine) side. Further, the first player plays a role as a master (dealer) and the second players play roles as slaves, and the first player and the plurality of second players play a match on blackjack. In short, the real player plays against the plurality of virtual players.

[0066] After the processing proceeds to Step 5 shown in FIG. 4 and the second game is started, the processing proceeds to Step 20 shown in FIG. 12 in which the main CPU 32 operates as an extraction means to extract image data for a predetermined number of card images of cards to be used in the second game (image data for a card image is referred to as "card data"). Note that, in addition to image data, number on the card, mark on the card, and so on, information for specifying each of the card image are included in card data. In this event, the main CPU 32 extracts from the card image group the card data for displaying the predetermined number of cards on the liquid crystal display panel 5, referring to data obtained from the sampling circuit 36. In the second game, the liquid crystal display panel 5 operates as a card display device in the present invention. In this embodiment, the card data for displaying respective cards of the real player as the master and the virtual players as the slaves are extracted. In this event, the number of virtual players as the slaves is decided from the result of the above-described winning contents determination in Step 14. For example, when the result is "BONUS 1" (the symbol pattern is "(any)-(any)-trigger 1"), the number of the virtual players is decided to be three, and when the result is "BONUS 2" (the symbol pattern is "(any)-(any)-trigger 2"), the number of the virtual players is decided to be five. Note that, in the embodiment described below, the case of "BONUS 1," that is, the case in which the virtual player are three will be described.

[0067] Next, the processing proceeds to Step 21, in which cards are distributed to the real player and the virtual players, respectively. In more detail, the main CPU 32 operates as a selecting means to select card data which is assigned to the real player and is to be displayed as the card for the real player, from the card data extracted in Step 20. On the other hand, the main CPU 32, which also operates as a decision means deciding the card images to be assigned to the virtual players respectively, selects card data which are assigned to the virtual players and are to be displayed as cards for the virtual players, from the card data extracted in Step 20. Then, after the selection, the main CPU 32 causes the liquid crystal display panel 5 to display the card images using the selected card data. In this event, first of all, the main CPU 32 displays on the liquid crystal display panel 5 such that cards facing up are distributed to the real player and all of the virtual players, one for each.

**[0068]** FIG. 13 is a schematic view showing a state in which card images for the real player and the virtual players are displayed, one for each. In this drawing, a card image **40a** ("A" here) for the real player is displayed on the left side as the player faces, on the liquid crystal display **5**, and card images **41a** ("7" here), **42a** ("8" here), and **43a** ("A" here) for the virtual players are displayed on the right side as the player faces, on the liquid crystal display **5**. Further, at the lower right side on the liquid crystal display panel **5**, the number of games (three games here) that the real player has won until then, regarding processing from Step **20** to later-described Step **26** as one game, and the number of coins to be an object of BET selected and set by the real player (10 here) are displayed.

**[0069]** Next, the main CPU **32** operates as a selecting means to select card data for newly displaying as the cards for the real player and the virtual players, from the card data extracted in Step **20**, and causes the liquid crystal display panel **5** to display the card images using the card data. In this event, the main CPU **32** displays a card image **40b** such that a card facing down is distributed to the real player and displays card images **41b**, **42b**, and **43b** such that cards facing up are distributed to the virtual players, one for each. It is only required that the numbers on all of the card images to be distributed have been decided at this point of time, and various timings are conceivable as the timing of deciding the numbers on all of the card images. Thereafter, the card image **40b** ("9" here) for the real player facing down is turned up.

**[0070]** FIG. 14 is a schematic view showing a state in which card images for the real player and for the virtual players are displayed facing up, two for each. At this point of time, winning combinations based on the card data corresponding to the card images of the real player and the virtual players may be decided. In this case, the processing proceeds to Step **23**, in which the main CPU **32** operates as winning combination comparing means to perform a winning combination comparison in which the winning combination based on the card data corresponding to card images **40a** and **40b** of the real player is compared with the winning combinations based on the card data respectively corresponding to the card images **41a** and **41b**, the card images **42a** and **42b**, and the card images **43a** and **43b** of the virtual players, using the number on the card, mark on the card for specifying each of the card images (in this embodiment, the number on the card), out of card data corresponding to the respective card images of the real player being the master and the virtual players being the slaves. Note that the "winning combination" mentioned here is not the "winning contents" in the above-described first game but means the combination of the numbers on the plurality of card images. Then, the processing proceeds to Step **24**, the main CPU **32** compares superiority/inferiority between the winning combination of the card images of the real player and the winning combination of the card images of the virtual player to determine whether the real player wins or not. More specifically, the main CPU **32** compares the total of the numbers on the card images of the real player with the total of the numbers on the card images of the virtual player to determine which is closer to "21".

**[0071]** It is assumed that comparison with the virtual player corresponding to the card images **41a** and **41b** shown in FIG. 14 is performed first of all. Since the total of the

numbers on the card images of this virtual player is  $10+7=17$ , while the total of the numbers on the card images of the real player is  $9+11$  ( $A$  is assumed to be 11)=20, the real player is determined to win. Then, the processing proceeds to Step **25**, in which a payout amount to be paid to the real player is added. Next, the processing proceeds to Step **26**, the main CPU **32** operates as a determining means to determines whether or not the winning combination of the card images of the real player have been compared to the winning combinations of the card-images of all of the virtual players (whether or not the winning combination comparison has been performed for the card images of all of the virtual players).

**[0072]** In Step **26**, when it is determined that the winning combination of the card images of the real player has not been compared to the winning combinations of the card images of all of the virtual players, the processing returns to Step **23**, and when it is determined that the winning combination of the card images of the real player has been compared to the winning combinations of the card images of all of the virtual players, the processing proceeds to Step **27**. Thus, the main CPU **32** repeats the processing from Step **23** to Step **25** until the winning combination of the card images of the real player is compared to the winning combinations of the card images of all of the virtual players. In the state shown in FIG. 14, the totals of the numbers on the card images of the virtual players are  $10+7=17$ ,  $9+8=17$ , and  $10+11 =21$ , respectively. Accordingly, comparing the totals of the numbers on the card images of the real player and the virtual players, the real player has won against two virtual players, so that "WIN $\times 2$ " is displayed at the upper side on the liquid crystal display panel **5**, and "WON 4" is displayed at the lower right side on the liquid crystal display panel **5** since the number of games that the real player has won until then is increased by one. On the other hand, in Step **24**, when the real player has not won against the virtual players, the main CPU **32** proceeds to Step **26** without executing Step **25** and performs the determination similar to the above.

**[0073]** In Step **26**, when it is determined that the winning combination of the card images of the real player has been compared to the winning combinations of the card images of all of the virtual players, the processing proceeds to Step **27**, in which it is determined, regarding the processing from Step **20** to Step **26** as one game, whether or not the game has been executed a predetermined number of times (for example, seven times), and if executed, the processing proceeds to Step **28** and if not executed, the processing returns to Step **20**. For returning to Step **20**, the main CPU **32** instruct the image control circuit **71** to delete the cards already displayed on the liquid crystal display panel **5**, and to extract predetermined number of card data again in a manner similar to the above. In this case, for example, Step **29** is provided between Steps **26** and **27** as shown in FIG. 15, and count-up in which "1" is added to the game number counter is performed in Step **29**. Further, in Step **27**, whether or not a predetermined number of games have been completed may be determined depending on whether or not the game number counter indicates the predetermined number or greater in Step **27** (the game number counter is cleared after Step **28**).

**[0074]** In Step **28**, the main CPU **32** operates as payout calculating means to calculate the payout for a winning corresponding to the comparison result of the winning

combination of the card images in Step 23. Further, the main CPU 32 instructs the hopper drive circuit 63 to perform payout corresponding to the calculated payout. Then, upon receipt of the instruction, the hopper drive circuit 63 issues an instruction of payout of the payout of coins, so that the hopper 64 pays out coins. Here the main CPU 32 operating as the payout calculating means calculates the payout using a payout being a reference which is set separately from that for the first game. In this event, the payout changes in accordance with the number of virtual players against that the real player has won as a result of comparison between the winning combinations of the card images, for example, increases in proportion to the number of virtual players against that the real player has won. In this case, there is a possibility that the greater the number of virtual players playing against the real player, the larger the payout becomes, and therefore the real player expects that the symbol pattern becomes "BONUS 2" (a symbol pattern of "(any)-(any)-trigger 2") for five virtual players rather than "BONUS 1" (a symbol pattern of "(any)-(any)-trigger 1") for three virtual players in the above-described first game. Consequently, the first game is made more attractive. With that the second game ends.

[0075] In the above-described second game, though the winning combinations of the card images of the real player and the virtual players are decided at the point of time when two card images are distributed to each of them as shown in FIG. 14, it is also suitable to further select card data so that the totals of the numbers on the card images of the real player and the virtual players to be "21" or less in conformity with the rule of normal blackjack. In this case, the main CPU 32 may perform all of selections of the card data so as to progress the game automatically, or the main CPU 32 as a selecting means may select, for the card images of the real player, the card data one by one in response to the instruction of the real player inputted from the liquid crystal display panel 5 as an instruction input device. In this event, the main CPU 32 causes the liquid crystal display panel 5 covered with the touch panel 56 to display, for example, "HIT" and "STAND."

[0076] Then, for example, when the real player touches "HIT," card data for one card is selected and a card image is displayed using the card data on the liquid crystal display panel 5. The selection of card images by touching "HIT" can be performed any times unless the total of the numbers on the card images of the real player exceeds "21." On the other hand, when the real player touches "STAND," a winning combination is decided by the card images being displayed on the liquid crystal display panel 5 at the point of time. Note that, when the total of the numbers on the card images exceeds "21," it is regarded as a burst, so that a loss is decided at that point of time. Note that it is also suitable that buttons for inputting instructions "HIT" and "STAND" are provided on the cabinet 2 so that the real player pushes the buttons to select "HIT" and "STAND."

[0077] Besides, although the number of virtual players in the second game is decided to be three or five based on the result of winning contents determination in the above-described Step 14 in this embodiment, it is also suitable that the number of virtual players can be freely set by the real player inputting an instruction from the liquid crystal display panel 5 as an instruction input device. In this case, the designation of the number of virtual players is performed

prior to, for example, Step 20. Such a free selection of the number of virtual players allows the estimated payout amount to be greatly changed, thereby making the game contents more interesting.

[0078] As described above, according to the present invention, processing is performed with the first player standing on a position of a real player and each of the second players standing on a position of a virtual player, in which the real player thus plays against a plurality of opponents. This allows the real player to win a plurality of times in one game and obtain accordingly increased payout amount. Further, the payout amount to be paid to the real player is not defined until after plays against all of the virtual players are finished, which allows the real player to keep an expectation to the last moment of the game. Therefore, even when play of a game is repeatedly performed on the gaming machine 1, the payout amount to be paid for a win is not fixed but changes in each play of the game, which can keep the interest of the real player.

[0079] In the above-described second game of the gaming machine 1, the game can be repeatedly performed a plurality of times, and in this event the payout rate may be changed for each game. For example, the number of games is counted by the main CPU 32 so that the payout being a reference for payout set in accordance with the winning combination of the card images may be multiplied by a multiplier in accordance with the number of games (this multiplier is for calculating the payout and referred to as a "payout rate" hereinafter). For example, in the case of the total number of games is 7, when the number of games is 1 to 6 (a first game to a sixth game), the payout rate can be 1, and when the number of games is 7 (a seventh game), the payout rate can be 2. This can make the real player losing at the beginning expect to recover the loss if he or she wins in the last game, thus making the game more attractive.

[0080] Based on the foregoing, the payout (payout amount) in the second game can be calculated also by the following Equation 1. It should be noted that Equation 1 is an example, and the calculation equation for the payout in the second game, as a matter of course, is not limited to this.

$$\text{Payout amount } H = (\text{BET number} + X) \times S \quad \text{Equation 1}$$

[0081] X: payout amount when winning against one slave,  
S: payout rate in each game

[0082] In Equation 1, assuming that the BET number is 10, the payout amount when winning against one slave is five coins, the payout rates in the first to third games are 1, 2, and 3 respectively, and the numbers of slaves against that the master has won in the first to third games are two, one, and two respectively, the payout amount H is:

$$H = (10+5+5) \times 1 + (10+5) \times 2 + (10+5+5) \times 3 = 110 \text{ (coins)}$$

[0083] In the foregoing, the present invention has been described concretely based on the embodiments, but the present invention is not limited to the above-described embodiments. For example, the second game is started after the end of the first game in the above-described embodiments, but may be started during play of the first game. Besides, the number of slaves (virtual players) may be decided by lottery under the control of the main CPU 32.

[0084] Further, in the second game processing in this embodiment, the real player plays a role as a master and the

virtual players play roles as slaves, it is suitable that the real player plays a role as slave by a selection of real player. It is suitable that the real player select a role as slaves at any time. If the real player plays a role as a slave by the selection of real player, the real player players a plurality of role as slave against the virtual player.

[0085] According to the present invention, processing is performed with the first player standing on a position of the real player and each of the second players standing on a position of a virtual player. Further, when a plurality of second players playing against the first player appear on the game and the first player has played against all of the second players, the payout amount to be paid to the first player is decided in accordance with the play against each of the second players. This can keep the interest of the first player.

[0086] It is apparent that various embodiments and modifications of the present invention can be embodied, based on the above description. Accordingly, it is possible to carry out the present invention in the other modes than the above best mode, within the following scope of claims and the scope of equivalents.

What is claimed is:

1. A gaming machine comprising determining means determining establishment/non-establishment of a shift condition for shifting a game mode from a normal game mode to a special game mode and shifting means shifting the game mode from the normal game mode to the special game mode based on the determination result of said determining means, said gaming machine comprising:

extraction means extracting a predetermined number of card data to be used in the special game mode, from a plurality of card data;

selecting means selecting card data to be assigned to a first group and card data to be assigned to each of a plurality of second group, from among the predetermined number of card data extracted by said extraction means;

winning combination comparing means performing a comparison between a winning combination based on the card data of said first group and winning combinations based on the card data of at least two said second groups; and

payout calculating means calculating a payout based on the comparison result by said winning combination comparing means.

2. The gaming machine according to claim 1, further comprising an instruction input device inputting instruction to the first group, wherein said selecting means selects the card data for the first group in accordance with the instruction inputted from said instruction input device.

3. The gaming machine according to claim 1, wherein the payout changes in accordance with the number of the second group side against that the first group side has won.

4. The gaming machine according to claim 1, wherein, where processing from the extraction of the card data by said extraction means to the winning combination comparison by said winning combination comparing means is regarded as one game, a payout rate for calculating the payout by said payout calculating means is changed for each game.

5. The gaming machine according to claim 1, further comprising a card display device displaying the card image using the card data selected by said selecting means.

6. The gaming machine according to claim 1, wherein, said selecting means select card data to be assigned to said first group as card data on a player side and select card data to be assigned to said second group as card data on said gaming machine.

7. The gaming machine according to claim 1, wherein, in said special game mode, a player is able to play a blackjack game.

8. A control method of a gaming machine comprising determining means determining establishment/non-establishment of a shift condition for shifting a game mode from a normal game mode to a special game mode and shifting means shifting the game mode from the normal game mode to the special game mode based on the determination result of said determining means, said method comprising the step of:

extracting predetermined number of card data to be used in the special game mode, from a plurality of card data;  
selecting card data to be assigned to a first group and card data to be assigned to each of a plurality of second group, from among the predetermined number of extracted card data;

performing a comparison between a winning combination based on the card data of said first group and winning combination based on the card data of at least two said second groups; and

calculating a payout based on the comparison result of winning combination.

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