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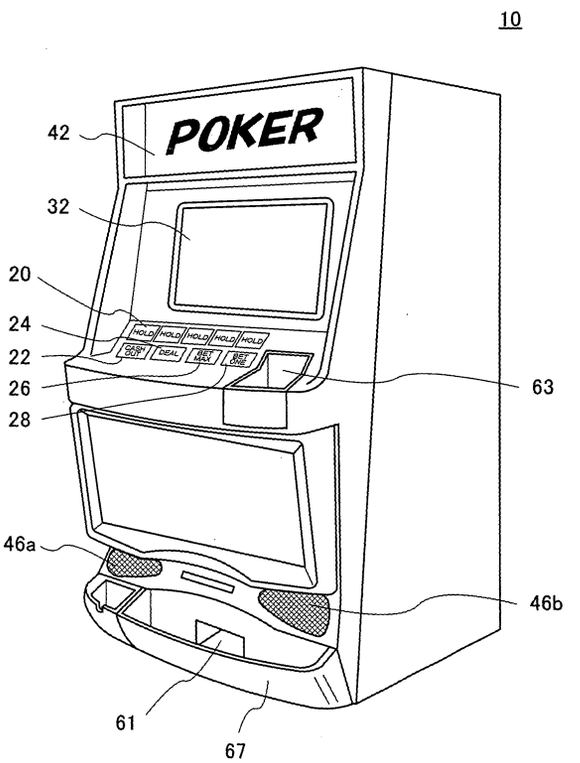
(54) Gaming machine

(57) A gaming machine, a server, and a program, which can make a player enjoy a game are provided. In a game where a plurality of cards are dealt to the player, the player can be made to enjoy the game by a method of display of the dealing of cards using this gaming machine. The above-mentioned display method can also be controlled according to combinations formed of the plurality of cards. At least two cards are selected or extracted by the gaming machine.

Fig. 1



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Description

FIELD OF THE INVENTION

[0001] The present invention relates to a gaming machine.

RELATED ART

[0002] A video poker gaming machine, where cards are displayed and dealt to a player such that the player may play a game, may be known as an example of an amusement gaming machine. In such a video poker game, one or more cards may be exchanged once by the player's selection operation after five cards are dealt to the player. Here, if the player selects cards that the player wishes to keep (not to have exchanged), i.e., holding cards, the rest cards that are not to be held are turned with the face down and new cards for an exchange are displayed (or turned up) upon the player's operation of pressing a button (see for example, Japanese Published Unexamined Patent Application No. 2001-70642). The game result is then determined by a winning combination that is formed within the cards that are held and newly displayed. Thus, such a poker gaming machine lets the player enjoy the game by exiting the player with the anticipation of a high winning combination (or a high poker hand).

[0003] However, no special attractions with image displays and sounds are not carried out from when the player determines the bet quantity to when initially dealt cards are displayed such that the game proceeds in the same manner whether a very high winning combination (or a very high ranking of poker hand) such as Royal Flush, Four of A Kind, etc. or no winning combination is formed. For example, when the bet quantity is determined and the DEAL switch is pressed, five dealt cards are displayed at once or are turned up one by one from the left side to the right such that all the dealt cards to the player are eventually displayed. However, whatever winning combination if any is formed at a point, the dealt cards are displayed in a predetermined pattern. Therefore, the player may feel the game is monotonous.

[0004] Also, the initially dealt cards, which are displayed as the player's hands, are determined by lottery and are displayed one by one in the order of determination. Thus, once the dealt cards are determined, the order to display the cards has no special meaning so that the player's anticipation that the forming of some winning combination is gradually revealed owing to the order of displaying the cards may not be increased so much.

[0005] For example, suppose "ace of spades," "ace of clovers," "five of hearts," "ace of hearts," and "ace of diamonds" are extracted and displayed in this order in a video poker gaming machine. Although a winning combination of Four of A Kind is formed as the game result, the player's anticipation is not increased so much when the third card of "five of hearts" is displayed because a higher winning combination is not formed ever since the second card of "ace of clovers" is displayed. Although Four of A Kind is formed in the final stage as the fourth and fifth cards are displayed, the player begins to anticipate the formation of Four of A Kind only after the display of the fourth card.

[0006] Further, no special attractions with image displays and sounds are not carried out from when the player determines the bet quantity to when initially dealt cards are displayed such that the game proceeds in the same manner whether a very high winning combination (or a very high ranking of poker hand) such as Royal Flush, Four of A Kind, etc. or no winning combination is formed. For example, when three of the five initially dealt cards are exchanged, the three cards are turned over and then new three cards are turned up one by one from the left the right in a certain manner whatever the final game result is such that the player may feel the game monotonous.

[0007] Also, exchange cards to be newly displayed upon exchange are determined by lottery and are displayed in the order of the determination. Thus, once the exchange cards are determined, the order to display the cards has no special meaning so that the player's anticipation that the forming of some winning combination is gradually revealed owing to the order of displaying the cards may not be increased so much.

[0008] For example, suppose "ace of spades," "nine of clovers," "ace of clovers," "five of hearts," and "eight of spades" are dealt and displayed, and the player holds just the "ace of spades" and "ace of clovers" so as to exchanges the rest cards in a video poker gaming machine. Then, suppose new cards for the exchange are "five of hearts," "ace of hearts," and "ace of diamonds," and these are displayed in this order. Here, Four of A Kind winning combination is formed as the game result. However, when the first exchange card of "five of hearts" is displayed, the anticipation of the player is not heightened since a higher winning combination than the established one before the exchange is not formed. Although Four of A Kind is formed in the final stage after exchanging the second and third cards, the player may begin to anticipate the formation of Four of A Kind after the second card is displayed.

SUMMARY OF THE INVENTION

[0009] In view of the above disadvantage, a first object may be to provide a poker gaming machine, with which a game is performed in rather not a monotonous way and anticipation of a player may be increased.

[0010] A second object may be to provide a gaming machine, server, and i program, with which, in an initial card display or in an exchange of cards, a player can be heightened in anticipation and thereby letting the player enjoy the game.

[0011] In an aspect of the present invention, there is

provided a gaming machine characterized in that determination of a winning combination is made on cards having been dealt to a player initially, and that an attraction is carried out based on the determination while the cards are being dealt. Furthermore, in another aspect of the present invention, there is provided a gaming machine characterized in that determination of a winning combination is made on both cards resulting from an exchange and having been held, and that an attraction is carried out based on the determination while the cards are being dealt.

[0012] In another aspect of the present invention, there is provided a gaming machine characterized in that determination of a winning combination is made on cards that are to be displayed initially, and the order of display of the cards is determined based on the determination such that successive display of the cards is performed. Furthermore, there is provided a gaming machine characterized in that determination of a winning combination is made on both cards resulting from a change and having been held, and the order of display of the cards is determined based on the determination such that successive display of the cards is performed.

[0013] In specifically, the following may be provided.

(1) There is provided a gaming machine comprising: extraction means for extracting at least two cards among a plurality of cards having respective symbols; display means for displaying the at least two cards extracted by the extraction means; storage means for storing a plurality of combinations being constituted of the plurality of cards to a player; determination means for determining whether a combination of the at least two cards matches any of a plurality of predetermined combinations among the plurality of combinations stored in the storage means; and time control means for controlling time before the at least two cards are displayed by the display means on determining the combination of the at least two cards matches any of the plurality of predetermined combinations.

The gaming machine according to (1) controls the time until the exchange cards are displayed to the player in the process of displaying the exchange cards if the combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination. The player can thus be made to recognize that the combination of the cards after the exchange is a specific combination by the time until display being changed from that of the normal state. The anticipation of the player can thus be increased in a game that tends to be monotonous otherwise.

A "specific combination" refers to a "winning combination," such as "royal flush," "four of a kind," etc. in a video poker, or a combination among such "winning combinations" that is associated with an allocation rate of certain value or greater. "Allocation rate" refers to the ratio of the number of medals that are acquired with respect to the number of medals betted by the player.

(2) The gaming machine according to (1) is characterized in that the time control means delays displaying one of the at least two cards from a beginning of a game.

As stated in (2), the gaming machine according to (1) makes a notification to the player by delaying the time until completion of the display of cards in the process of displaying the exchange cards when a combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination. The player can thus be made to recognize that the combination of the cards after the exchange is a specific combination by the delay of the time until completion of the display of cards, and the anticipation of the player can thus be amplified further in a game that otherwise tends to be monotonous in the rhythm of progress.

Also, for a so-called expert player, who has played the game several times, such a notification method can be recognized readily. Just the player who is an expert can thus be made to feel a feeling of superiority.

(3) The gaming machine according to (2) is characterized in that delay time by the time control means differs according to a type of the combination of the at least two cards.

As stated in (3), the gaming machine according to (2) makes a notification to the player by differing the delay time until the completion of the display of cards in accordance with the combination, formed by the non-exchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange. The player is thus enabled to predict the combination of cards after the exchange from the time required for the delay, and the anticipation of the player can thus be increased further in a game that tends to be monotonous otherwise.

(4) The gaming machine according to (1) further comprises sound generating means for emitting sound wherein an attraction with image display and/or sound emission is carried out when the time control means controls the time.

As stated in (4), the gaming machine according to (1) makes a notification to the player by means of an attraction arranged from an image display and/or sound generation during the display process when the combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination. The player is thus enabled to recognize from the attraction arranged from an image display and/or sound generation that the

cards after exchange are of a specific combination, and the anticipation of the player can thus be amplified further in a game that tends to be monotonous otherwise.

An "attraction arranged from an image display and/or sound generation" refers, for example, to movements of displayed characters that differ from those of the normal state, emissions of light that differs from those of the normal state, the generation of sounds that differ from those of the normal state, or a combination of the above.

(5) The gaming machine according to any one from (1) to (4) is characterized in that it is determined by a lottery whether the time control means controls the time..

As stated in (5), the gaming machine according to any one from (1) to (4) determines, by a lottery, whether or not to make a notification to the player by controlling the display time in a manner differs from that of the normal state when the combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination. A notification will thus not be made necessarily even if the cards after exchange are of a specific combination, and the player can be made to maintain his/her anticipation since the cards may be of a specific combination even if a notification is not made.

(6) The gaming machine according to any one from (1) to (5) is characterized in that the display means displays other faces of the at least two cards than faces thereof on which symbols are depicted.

As stated in (6), when the gaming machine controls the card display time, the gaming machine may not only control the time of display of the symbol on the surface on which is depicted the symbol, such as "three of hearts," that indicates the type of the card, but may also control the time of display of the symbol of the card surface besides this surface on which the above-mentioned symbol is depicted, that is, the time of display of the symbol of the back surface. If the combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination, the gaming machine may perform control of the display time to make a notification concerning a specific combination even when the cards are displayed with the back surface up.

(7) There is provided a gaming machine for performing a card game by an image, which comprises: display means for displaying a state of the card game; game control means for controlling the card game; storage means for storing a plurality of winning combinations of the card game; winning combination determination means for determining whether a combination of displayed cards matches a predetermined winning combination among a plurality of winning combinations of cards by referring to the storage means; and display order change means for changing an initial display order of cards based on a result by the winning combination determination means, wherein the game control means has a function of displaying the cards in a changed initial display order.

As stated in (7), the gaming machine for performing a card game through images performs the control of the game in which the display of cards is carried out successively, determines in advance which of the above-mentioned plurality of winning combinations is formed by the types of the cards that are to be displayed, and changes the order of display of the cards in the initial card display based on the determination result. The card display order will thus not depend simply on the order in which the cards have been determined by a lottery, etc. and an intentional attraction can be carried out by means of the display order of the cards. A player can thus be made to further enjoy a card game that tends to be monotonous otherwise.

Here, the "initial card display" refers to a first display in the case where a predetermined number of cards are displayed as a first display in a card game and thereafter, all or part of the cards displayed as the first display are exchanged based on selections by a player and other cards are displayed as a second display. In a case where there is no exchange of cards in a card game, the display of cards that is performed just once corresponds to being the "initial card display."

(8) The gaming machine according to (7) is characterized in that the winning combination determination means determines whether the combination of displayed cards matches the predetermined winning combination in advance; and wherein the display order change means changes the initial display order of cards such that cards that constitute the predetermined winning combination are displayed in a forming order.

As stated in (8), the gaming machine according to (7), in the process of displaying the cards, performs the display in the order starting from the cards that form the winning combination that is formed as a result of the display. By thus using the cards that form the winning combination as factors for determining the display order of the cards, the display order will not depend simply on the order in which the cards were determined by lottery but will be closely associated with the winning combination that is formed. A player can thus be made to further enjoy a card game that tends to be monotonous otherwise.

(9) The gaming machine according to (7) is characterized in that the winning combination determination means determines in advance whether the

combination of displayed cards matches the predetermined winning combination in advance; and wherein the display order change means changes a display order of the cards such that one of the cards is displayed after the rest cards are displayed.

As stated in (9), the gaming machine according to (7) first displays cards that form the winning combination, with the exception of one card among these cards, and displays the one card last. The gaming machine thus makes a player anticipate the forming of a winning combination from an early stage in the display of cards and yet can maintain the anticipation until the last card is displayed.

(10) The gaming machine according to (7) is characterized in that the storage means stores ranks in association with respective winning combinations: wherein the winning combination determination means determines a winning combination of highest rank to be formed by assuming one of the cards to be displayed is any possible type of card; and the display order change means changes an order of redisplay based on a determination result by the winning combination determination means.

As stated in (10), the gaming machine according to (7) determines the winning combination of highest rank that will be formed if a target card, which is any one of the above-mentioned cards that have been displayed, is assumed to be a card of a different type, and changes the order of redisplay based on the determination result. The display order is thus determined not on a winning combination that is actually formed but on a hypothetical winning combination that will be formed if one of the cards is a specific card. The gaming machine can thus make a player anticipate the forming of a winning combination of high rank.

(11) The gaming machine according to (10) is characterized in that the display order change means changes the order of redisplay such that the assumed one card is redisplayed later than any other cards to be displayed.

As stated in (11), the gaming machine changes the card display order to an order wherein the card, which is assumed to be a specific card in the case where the winning combination of highest rank will be formed, is displayed last. The gaming machine can thus make a player anticipate the forming of a winning combination of high rank until the end of the card display.

(12) There is provided a server being connected via a communication line to terminal devices, each of which comprises display means for displaying cards of a card game, wherein the server controls the terminal devices. The server comprises: game control means for controlling card display of the cards on the display means; storage means for storing a plurality of winning combinations of the card game; winning combination determination means for determining in advance whether a combination of the cards to be displayed matches any of the plurality of winning combinations in reference to the storage means; and display order change means for changing a display order of the cards to be displayed based on a determination result by the winning combination determination means, wherein the game control means has a function of displaying the cards successively on the display means based on the display order having been changed by the display order change means.

As stated in (12), the server, which is connected via the communication line to the terminal devices, determines in advance, based on the plurality of winning combinations, which of the above-mentioned plurality of winning combinations is formed by the types of the cards that are to be displayed and makes the terminal devices display card images in a manner such that the card display order is changed based on the determination result obtained in advance. The server can thus provide in a game to be displayed on terminal devices, a game that can be enjoyed more by the players.

(13) There is provided a program making a computer execute a game comprising the steps of: controlling the game in which cards are displayed successively; paying out game media based on a result of displaying the cards; determining in advance whether a combination of initially-displayed cards forms any of a plurality of winning combinations stored in a storage unit; and changing a card display order of the initially-displayed cards based on a determination result obtained in the winning combination determination step, wherein the initially-displayed cards are to be displayed in a changed card display order during controlling the game.

As stated in (13), the program makes the computer perform the game control of determining in advance, based on a plurality of winning combinations, which of the above-mentioned plurality of winning combinations is formed by the types of cards that are to be displayed and changing the card display order based on the determination result that is provided in advance. Here, the storage unit may comprise any types of disks such as a magnetic disk (e.g., flexible disk and hard disk), an optical disk (e.g., LD, CD, DVD) etc., any types of electronic parts such as a memory (e.g., RAM and ROM), an IC, etc., or a combination thereof. The present invention thus provides in a game that tends to be monotonous, a game that can be enjoyed more by a player.

(14) There is provided a gaming machine comprising: extraction means for extracting a predetermined number of cards from a plurality of cards having respective symbols; display means for displaying symbols of cards extracted by the extraction

means; card exchange means for exchanging at least one of the predetermined number of cards based on an operation by a player such that cards extracted by the extraction means are displayed; storage means for storing a plurality of combinations of cards; determination means for determining whether a combination of cards which initially exist and remain, and are added in exchange by the card exchange means matches any of the plurality of combinations of cards stored by the storage means; and time control means for controlling time before the cards which are added in exchange are displayed to a player if the determination means determines that the combination of the cards which initially exist and remain, and are added in exchange by the card exchange means matches a specific combination among the plurality of combinations stored by the storage means.

The gaming machine according to (14) controls the time until the exchange cards are displayed to the player in the process of displaying the exchange cards if the combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination. The player can thus be made to recognize that the combination of the cards after the exchange is a specific combination by the time until display being changed from that of the normal state. The anticipation of the player can thus be amplified in a game that tends to be monotonous otherwise.

A "specific combination" refers to a "winning combination," such as the "royal flush," "four of a kind," etc. in video poker, or a combination among such "winning combinations" that is associated with an allocation rate of certain value or greater. "Allocation rate" refers to the ratio of the number of medals that are acquired with respect to the number of medals betted by the player.

(15) The gaming machine according to (14) is characterized in that the time control means control time to delay displaying to the player the cards which initially exist and remain, and are added in exchange from the operation by the player.

As stated in (15), the gaming machine according to (14) makes a notification to the player by delaying the time until completion of the display of cards in the process of displaying the exchange cards when a combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination. The player can thus be made to recognize that the combination of the cards after the exchange is a specific combination by the delay of the time until completion of the display of cards, and the anticipation of the player can thus be amplified further in a game that otherwise tends to be monotonous in the rhythm of progress.

Also, for a so-called expert player, who has played the game several times, such a notification method can be recognized readily. Just the player who is an expert can thus be made to feel a feeling of superiority.

(16) The gaming machine according to (15) is characterized in that the time to delay by the control means differs according to the combination of the cards.

As stated in (16), the gaming machine according to (15) makes a notification to the player by differing the delay time until the completion of the display of cards in accordance with the combination, formed by the non-exchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange. The player is thus enabled to predict the combination of cards after the exchange from the time required for the delay, and the anticipation of the player can thus be amplified further in a game that tends to be monotonous otherwise.

(17) The gaming machine according to (14) further comprises sound generating means for emitting sound wherein an attraction with image display and/or sound emission is carried out when the time control means controls the time.

As stated in (17), the gaming machine according to (14) makes a notification to the player by means of an attraction arranged from an image display and/or sound generation during the display process when the combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination. The player is thus enabled to recognize from the attraction arranged from an image display and/or sound generation that the cards after exchange are of a specific combination, and the anticipation of the player can thus be amplified further in a game that tends to be monotonous otherwise.

An "attraction arranged from an image display and/or sound generation" refers, for example, to movements of displayed characters that differ from those of the normal state, emissions of light that differs from those of the normal state, the generation of sounds that differ from those of the normal state, or a combination of the above.

(18) The gaming machine according to any one from (14) to (17) is characterized in that it is determined by a lottery that the time control means controls the time.

As stated in (18), the gaming machine according to any of (14) to (17) determines, by a lottery, whether or not to make a notification to the player by controlling the display time in a manner differs from that of the normal state when the combination, formed by the unexchanged cards, among the

cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination. A notification will thus not be made necessarily even if the cards after exchange are of a specific combination, and the player can be made to maintain his/her anticipation since the cards may be of a specific combination even if a notification is not made.

(19) The gaming machine according to any one from (14) to (18) is characterized in that the display means displays other faces of the cards than faces thereof on which symbols are depicted.

As stated in (19), when the gaming machine controls the card display time, the gaming machine may not only control the time of display of the symbol on the surface on which is depicted the symbol, such as the "three of hearts," that indicates the type of the card, but may also control the time of display of the symbol of the card surface besides this surface on which the above-mentioned symbol is depicted, that is, the time of display of the symbol of the back surface. If the combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination, the gaming machine may perform control of the display time to make a notification concerning a specific combination even when the cards are displayed with the back surface up.

(20) There is provided a gaming machine comprising: extraction means for extracting a predetermined number of cards from a plurality of cards having respective symbols; display means for displaying the predetermined number of cards extracted by the extraction means; card exchange means for exchanging at least one of the predetermined number of cards based on an operation by a player such that cards extracted by the extraction means are displayed; storage means for storing a plurality of combinations of cards; determination means for determining whether a combination of cards which initially exist and remain, and are added in exchange by the card exchange means matches any of the plurality of combinations of cards stored by the storage means; and display order change means for changing a display order of the cards to be displayed based on a determination result by the determination means.

As stated in (20), the gaming machine extracts a part of a plurality of cards, in each of which is drawn any of a plurality of symbols, performs image display of the extracted cards, exchanges, based on operations of a player, a part or all of the plurality of cards, with other cards, extracted by the above-mentioned extraction means, performs successive image display of the above-mentioned other cards, determines whether or not the new combination mode, formed by the cards besides those that were exchanged by the above-mentioned card exchanging means and the other cards extracted by the above-mentioned extraction means, matches any of specific combinations among the plurality of combination modes, each formed of a plurality of cards and stored in the above-mentioned storage means, and changes the order in which the other cards are displayed based on this determination result. Of the displayed cards, the gaming machine exchanges the cards that have been selected by the player's operations, and since the order of display of the cards in this card exchange process does not depend on an order that is simply determined by a lottery, etc. but changes in accordance with the card combination after the exchange, the player can be made to anticipate the forming of a winning combination.

(21) The gaming machine according to (20) is characterized in that the determination means determines whether the combination of cards which initially exist and remain, and are added in exchange forms any of the plurality of combinations; and wherein the display order change means changes the display order of the cards added in exchange such that the winning combination that is determined to be formed by the determination means is formed as the cards are displayed.

As stated in (21), the gaming machine according to (20), in the process of displaying the exchange cards, performs the display in the order starting from the cards that form the winning combination that is formed as a result of the exchange. By thus using the cards that form the winning combination as factors for determining the display order of the cards, the display order will not be dependent simply on the order in which the cards were determined by a lottery but will be closely associated with the winning combination that is formed. The forming of a winning combination can thus be notified in the card exchanging process to make the player anticipate the forming of a winning combination.

(22) The gaming machine according to (20) is characterized in that the determination means determines whether the combination of cards which initially exist and remain, and are added in exchange forms any of the plurality of combinations; and wherein the display order change means changes the display order of the cards such that one of the cards is displayed after the rest cards are displayed.

As stated in (22), the gaming machine according to (20) first displays the cards that form the winning combination, with the exception of one card among these cards, and displays the one card last. The gaming machine thus makes a player anticipate the forming of a winning combination from an early stage in the process of displaying the new cards resulting from exchange and yet can maintain

the anticipation until the last exchange card is displayed.

(23) The gaming machine according to (20) is characterized in that the storage means stores ranks in association with respective winning combinations, wherein the determination means determines a winning combination of highest rank to be formed by assuming one of the cards in exchange is any possible type of card; and wherein the display order change means changes an order of redisplay based on a determination result by the determination means.

As stated in (23), the gaming machine according to (20) determines the winning combination of highest rank that will be formed if a target card, which is any one card among the above-mentioned selected cards or the above-mentioned other cards, is assumed to be a card of a different type, and changes the order of redisplay based on the determination result. The display order is thus determined not on the winning combination that is actually formed but on a hypothetical winning combination that will be formed if one of the exchange cards is a specific card. The gaming machine can thus make a player anticipate the forming of a winning combination of high rank.

(24) The gaming machine according to (20) is characterized in that the display order change means changes the order of redisplay such that the assumed one card is redisplayed later than any other cards in exchange.

As stated in (24), the gaming machine changes the card display order to an order wherein the card, which is assumed to be a specific card in the case where the winning combination of highest rank will be formed, is displayed last. The gaming machine can thus make a player anticipate the forming of a winning combination of high rank until the end of the card display.

(25) There is provided a server being connected via a communication line to terminal devices, each of which comprises display means for displaying extracted cards from cards having respective symbols, the server controlling the terminal devices. The server comprises: card exchange means for exchanging at least one of the cards displayed on the display mean based on an operation by a player such that cards replacing the at least one of the cards are displayed in an order; storage means for storing a plurality of winning combinations of a plurality of cards; determination means for determining in advance whether a combination of the cards which initially exist and remain, and are added in exchange by the card exchange means matches any of the plurality of winning combinations in reference to the storage means; and display order change means for changing a display order of the added cards to be displayed based on a determination result by the determination means.

As stated in (25), the server, which is connected via the communication line to the terminal devices, determines in advance, based on the plurality of winning combinations, which of the above-mentioned plurality of winning combinations is formed by the types of cards that are to be displayed and makes the terminal devices display card images in a manner such that the card display order is changed based on the determination result. The server can thus provide in a game to be displayed on terminal devices, a game that can be enjoyed more by the players.

(26) There is provided a program making a computer execute a game comprising the steps of: displaying cards extracted from a plurality of cards having respective symbols; displaying cards in an order, which replace the at least one of the extracted cards based on an operation by a player; storing a plurality of winning combinations of a plurality of cards; determining whether a combination of cards which are initially extracted and remain, and replace matches a specific winning combination; and changing a card display order of the replacing cards based on a determination result obtained in the determination step.

As stated in (26), the program makes the computer perform the game control of determining in advance, based on a plurality of winning combinations, which of the above-mentioned plurality of winning combinations is formed by the types of cards that are to be displayed and changing the card display order based on the determination result that is provided in advance. The present invention thus provides in a game that tends to be monotonous, a game that can be enjoyed more by the players.

(27) There is provided a gaming machine comprising: a storage unit which stores a program running a game and data, the storage unit being installed on the gaming machine; a processor which reads and executes the program in communication with the storage unit; and a display device which is controlled by the processor such that the display device displays progress of the game or a game effect, wherein, as the program runs, at least two cards among a plurality of cards having respective symbols are extracted such that it is determined whether a combination of the at least two cards matches any of a plurality of predetermined combinations among a plurality of combinations being constituted of the plurality of cards which are stored in the storage unit; and the at least two cards are displayed on the display device at a display timing when it is determined that the combination of the at least two cards matches any of the plurality of predetermined combinations.

Here, the processor may comprise any types of processing unit such as a central processing unit, a

micro processing unit, and so on. The display device may comprise any types of devices which is capable of displaying or showing at least one of characters, letters, images, designs, and so on. The display device may comprise a CRT, a LCD, an EL, and so on. The display means may comprise the display device.

(28) The gaming machine according to (27) is characterized in that the display timing is controlled such that display of one of the at least two cards is delayed from a beginning of the game.

(29) The gaming machine according to (27) is characterized in that the display timing differs according to a type of the combination of the at least two cards.

(30) The gaming machine according to (27) further comprises a speaker emitting sound, wherein an attraction with image display and/or sound emission is carried out when the display timing is controlled.

(31) The gaming machine according to any one from (27) to (30) is characterized in that it is determined by a lottery whether the display timing is controlled.

(32) The gaming machine according to any one from (27) to (31) is characterized in that the display device displays other faces of the at least two cards than faces thereof on which symbols are depicted.

(33) There is provided a server being connected via a communication line to terminal devices, each of which comprises a display device which displays cards of a card game, the server controlling the terminal devices. The server comprises a processor which controls card display of the cards on the display device; and a storage unit which stores a plurality of winning combinations of the card game, wherein it is determined in advance whether a combination of the cards to be displayed matches any of the plurality of winning combinations in reference to the storage unit such that a display order of the cards to be displayed is changed based on a determination result and that the cards are successively displayed on the display device in the changed display order.

[0014] Further features of the invention, its nature and various advantages will be more apparent from the accompanying drawings and the following detailed description of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015]

Fig. 1 is a perspective view showing the general appearance of a poker gaming machine according to an embodiment of the present invention.

Fig. 2 is a block diagram showing a main control circuit of a poker gaming machine according to an embodiment of the present invention.

Fig. 3 is a schematic view showing an image display of a poker gaming machine according to an embodiment of the present invention.

Fig. 4 is a schematic view showing an image display of a poker gaming machine according to an embodiment of the present invention.

Fig. 5 is a schematic view showing an image display of a poker gaming machine according to an embodiment of the present invention.

Fig. 6 is a schematic view showing an image display of a poker gaming machine according to an embodiment of the present invention.

Fig. 7 is a diagram showing a flowchart of a control process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 8 is a diagram showing a bet process subroutine executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 9 is a diagram showing a card display process subroutine executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 10 is a diagram showing a card exchange process subroutine executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 11 is a diagram showing an example of a card display process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 12 is a diagram showing an example of a card display process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 13 is a diagram, which follows Fig. 12 and shows the example of a card display process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 14 is a diagram showing a card display process subroutine executed by a poker gaming machine according to a second embodiment of the present invention.

Fig. 15 is a diagram showing an example of a card display process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 16 is a diagram showing a card display process subroutine executed by a poker gaming machine according to a third embodiment of the present invention.

Fig. 17 is a diagram showing an example of a card display process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 18 is a diagram showing a flowchart of a control process executed by a poker gaming machine according to a fourth embodiment of the present invention.

Fig. 19 is a diagram showing a card exchange process subroutine executed by a poker gaming machine according to the fourth embodiment of the present invention.

Fig. 20 is a diagram showing a card redisplay process subroutine executed by a poker gaming machine according to the fourth embodiment of the present invention.

Fig. 21 is a diagram showing an example of a card display process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 22 is a diagram, which follows Fig. 21 and shows the example of a card display process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 23 is a diagram showing an example of a card display process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 24 is a diagram, which follows Fig. 23 and shows the example of a card display process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 25 is a diagram showing a card redisplay process subroutine executed by a poker gaming machine according to a fifth embodiment of the present invention.

Fig. 26 is a diagram showing an example of a card redisplay process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 27 is a diagram showing a card redisplay process subroutine executed by a poker gaming machine according to a sixth embodiment of the present invention.

Fig. 28 is a diagram showing an example of a card redisplay process executed by a poker gaming machine according to an embodiment of the present invention.

Fig. 29 shows a server and poker gaming machines connected via network according to an embodiment of the present invention.

Fig. 30 is a block diagram showing a server schematically according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0016] Embodiments of the present invention will now be described in reference to the drawings.

[Arrangement of a Poker Gaming Machine]

[0017] A general appearance of a gaming machine according to an embodiment of the present invention is shown in Fig. 1. In gaming machines to be described later according to preferable embodiments of the present invention, poker gaming machines are employed as preferred embodiments of the present invention.

[0018] Though coins, medals, tokens, or cards storing game value information, etc. may be used as game media to be used in gaming machines according to embodiments of the present invention, the following describes gaming machines using medals, by way of example.

[0019] A display device 32 is disposed on a front face of a poker gaming machine 10. The display device 32 shows cards to be dealt to a player and an allocation table showing winning combination allocations in reference to card combinations.

[0020] A display panel 42 is installed at an upper part of the display device 32. The display panel 42 displays a name of the gaming machine, a gaming method, etc.

[0021] Also, a medal insertion slot 63 is provided near a central part of the front face of the poker gaming machine 10, and a medal payout opening 61 and a medal receiving tray 67 are provided at a lower part of the front face. Gaming is enabled by the insertion of medals into the medal insertion slot 63 by a player. Also, medals are paid out in accordance with gaming results from the medal payout opening 61 and retained in the medal receiving tray 67. As described later, a medal detection sensor 31 (see Fig. 2) is installed onto the gaming machine interior near which the medal insertion slot 63 is provided, and the insertion of medals into the poker gaming machine 10 by the player is detected by the medal detection sensor 31.

[0022] Also, speakers 46a and 46b are provided above the medal receiving tray 67 and these speakers 46a and 46b are arranged to generate effect sounds, etc. in accordance with the progress of a game.

[0023] Various switches that are used for proceeding with the game are disposed below the display device 32.

[0024] A BET MAX switch 26 and a BET ONE switch 28 are used when the player starts the game. As the BET ONE switch 28 is pressed, the number of bet medals increases in accordance with the number of times the BET ONE switch 28 is operated. The BET MAX switch 26 is used to bet five medals, in other words, the maximum number of medals at once.

[0025] A DEAL switch 24 and a CASH OUT switch 22 are disposed at the left side of the BET MAX switch 26 and five HOLD switches 20 are disposed above the BET MAX switch 26. The DEAL switch 24 is used for dealing cards to the player such that the player presses the DEAL switch 24 after performing the operation of insertion of medals so as to have images of the dealt cards and/or new cards resulting from exchange displayed.

[0026] The CASH OUT switch 22 is used for payout of the medals stored (referred to hereinafter as "credit") in the poker gaming machine 10, and when the player presses so as to turn on the CASH OUT switch 22, the medals are paid out in the medal receiving tray 67.

[0027] There are five HOLD switches 20 in all, which

are positioned so as to correspond to respective card images displayed on the display device 32. The HOLD switches 20 are used by the player to select cards that are to remain (not to be exchanged) after the cards are dealt. When the player presses so as to turn on selected HOLD switches 20 positioned below respective selected cards among the five cards displayed on the display device 32, the selected cards will remain (not being exchanged).

[Arrangement of the Control Unit of the Poker Gaming Machine]

[0028] Fig. 2 shows a block diagram of a control circuit of the poker gaming machine according to an embodiment of the present invention.

[0029] A main control circuit 60 is arranged by a central processing unit (referred to hereinafter as "CPU") 66, a read-only memory (referred to hereinafter as "ROM") 68, a random access memory (referred to hereinafter as "RAM") 70, a random number generating unit 65, and interface circuit sets 62 and 72 being connected via an input/output bus 64. The input/output bus 64 is arranged for the input and output of data signals and address signal to and from the CPU 66.

[0030] Based on computer programs stored in the ROM 66, the CPU 66 performs reading and writing of data from and into the respective elements and devices that are connected to the input/output bus 64 and works together with these elements and devices to perform various processes. Also, a timer (not shown) to be described below is equipped inside the CPU 66.

[0031] The above-mentioned medal detection sensor 31 is connected to the interface circuit set 62 of the main control circuit 60. The detection signal from the medal detection sensor 31 is converted into a predetermined signal by the interface circuit set 62 and supplied to the input/output bus 64.

[0032] The above-described DEAL switch 24 is also connected to the interface circuit set 62. The DEAL switch 24 issues a pressing operation detection signal, resulting from the detection of the turning on of this switch by the player's pressing operation, to the interface circuit set 62 and this signal is supplied to the input/output bus 64.

[0033] Furthermore, the HOLD switch 20, the CASH OUT switch 22, the BET MAX switch 26, and the BET ONE switch 28 are connected to the interface circuit set 62, and each of these issues a pressing operation detection signal to the interface circuit set 62 when turned on by the player's pressing operation. This detection signal is supplied to the input/output bus 64.

[0034] The speakers 46 (46a and 46b) and a decorative lamp 36 are connected to the interface circuit set 72, and the interface circuit set 72 supplies drive signals and drive power to control each of these devices in accordance with the results of computing processes carried out at the CPU 66.

[0035] The ROM 68 and the RAM 70, which serve as storage means, are also connected to the input/output bus 64. The ROM 68 stores a control program that controls the flow of the entirety of the game of the poker gaming machine 10. The ROM 68 also stores initial data for execution of the control program, a program that controls the blinking operation pattern of the decorative lamp 36 (see Fig. 2), which is incorporated in the poker gaming machine 10, a program for display control of the display device 32, etc. The ROM 68 furthermore stores a lottery table for associating random numbers, sampled by the random number generating unit 65 to be described later, with the card images displayed on the display device 32, a winning combination determination table for determining whether or not the combination mode of the symbols indicated in the plurality of card images displayed on the display device 32 is a specific combination mode, etc.

[0036] The RAM 70 stores the values of flags and variables that are used in the above-described program.

[0037] The random number generating unit 65 for generating random numbers is connected to the input/output bus 64. When an instruction for generating a random number is issued from the CPU 66 to the random number generating unit 65, the random number generating unit 65 generates a random number in a predetermined range and issues a signal indicating the value of this random number to the input/output bus 64. The CPU 66 performs an internal lottery process, to be described later, in accordance with this generated random number. The random number that is issued from the random number generating unit 65 is stored in the RAM 70.

[0038] Though in the present embodiment, random numbers are sampled by means of the random number generating unit 65 that is connected via the input/output bus 64 to the CPU 66, the present invention is not limited thereto, and as a means for random number sampling, arrangements may be made so that an operating program of the CPU 66 executes random number sampling. In this case, the random number generating unit 65 may be omitted.

[0039] A display control device 200 is also connected to the interface circuit set 72, and based on an image display instruction issued from the main control circuit 60, the display control device 200 issues a drive signal for driving the display device 32 that is connected to the display control device 200.

[0040] Furthermore, a hopper control device 210 is also connected to the interface circuit set 72. Based on a medal payout instruction issued from the main control circuit 60, the hopper control device 210 issues a drive signal for driving a hopper 50 that is connected to the hopper control device 210.

[Image Display Examples]

[0041] As described above, images are displayed on the image display device 32 in accordance with the drive

signals that are issued from the display control device 200 and the game is thereby made to proceed. Display examples of the images that are displayed in this game are shown in Figs. 3 to 6.

[0042] Fig. 3 shows a display example at the point at which the game is started and five cards are dealt. The images of the top surfaces of the five cards are displayed at a lower part of the display device 32. These become the hand cards that are dealt first to the player.

[0043] Also, an allocation table is displayed at an upper part of the display device 32. The allocation table indicates the number of medals that are paid out to the player based on the number of medals betted by the player and the card symbol combination being formed in the final stage.

[0044] Furthermore, the number of medals betted by the player, that is, the bet number, and the number of credited medals in the poker gaming machine 10, that is, the credit number are displayed below the images of the five cards. In Fig. 3, five medals are betted by the player in the present game and 30 medals are credited at this point.

[0045] The bet number is determined by the insertion of medals or the turning on by pressing of a bet switch by the player, and when the DEAL switch 24 is turned on by a pressing operation, five cards are displayed as shown in Fig. 3.

[0046] Fig. 4 is a display example showing a state in which the player has selected cards to be held. In Fig. 4, the two cards of "ace of hearts" and "ace of clubs" are held. This indicates that the player wishes to keep these cards (not to exchange them) and to exchange the rest three cards.

[0047] When the player decides the cards that are to be kept in hand (not to be exchanged), the player turns on by pressing HOLD switches, among the five HOLD switches 20, that correspond to cards to be held. In this process, the characters of "HOLD" are displayed below the cards to be held to notify the player that these cards have been selected.

[0048] Fig. 5 is a display example showing an intermediate state in the process of card exchange. Of the five cards, the three cards that were determined not to be held are faced down for exchange and the back surfaces of the cards are displayed. That is, the surface (back surface) on the side opposite to the other side showing a symbol that indicates the card type is displayed on the display device. When the player has selected the cards to be held and then presses the DEAL switch 24, the exchange of the rest cards is carried out.

[0049] Fig. 6 is a display example showing the state in which all images of the new cards after exchange are displayed along with the game result. The combination mode of the symbols of the cards contains four "aces" and thus a "Four of A Kind" is formed. Since the bet number for this game is 5, the number of medals won by the player is "125" in accordance with the allocation table displayed at the upper part. This is notified by the highlighting of the numerical value at the corresponding location of the allocation table and the display of "WIN 125" at the center of the lower part of the display device 32.

[0050] The cards that were faced down in Fig. 5 are thus turned to face up one by one from the left side and the symbols of the newly dealt cards for the exchange are displayed in this process. When all cards are faced up, the game result is displayed.

[0051] After the DEAL switch 24 is turned on by a pressing operation in the display state shown in Fig. 4, the display states shown in Figs. 5 and 6 are displayed within a series of actions.

[Operation of the Poker Gaming Machine]

[0052] A main flowchart of the control of the poker gaming machine 10 that is executed at the above-described main control circuit 60 is shown in Fig. 7, and subroutines that are called from the main flowchart are shown in Figs. 8 to 10.

[0053] In the following, it is assumed that the poker gaming machine 10 has been started up in advance and put in steady-state operation with the variables used in the above-described CPU 66 being initialized to predetermined values.

[0054] First, the CPU 66 executes a bet process as shown in Fig. 7 (step S11).

[0055] In this process, the CPU 66 performs a bet process based on and in accordance with the insertion of coins or the turning on of the BET MAX switch 26 or the BET ONE switch 28 by the player. The details of the bet process is described later. The CPU 66 controls the time from the start of the game, that is, from that point at which the card lottery by the bet process is started. A delay process in the card display is carried out based on this controlled time. After the bet process is completed, the CPU 66 enters a process of step S12.

[0056] The CPU 66 then executes an internal lottery process and performs the extraction of cards (step S12).

[0057] In this process, the CPU 66 sends the random number generating instruction to the random number generating unit 65 and a random number is sampled by the random number generating unit 65 that has received this signal. The random number that is obtained by the random number generating unit 65 is recorded in the RAM 70 as the random number that indicates the lottery result, and the CPU 66 determines the type of the card that corresponds to this random number by referring to the lottery table stored in the ROM 68. The data concerning the corresponding card type is then recorded in the RAM 70.

[0058] In this process, ten cards are extracted from among the cards that can be used in the game. Contents thereof are the five cards to be dealt at first to the player and the five cards that may be dealt to the player by card exchange. The five cards that are first dealt to the player are displayed on the display device 32 in all cases.

Meanwhile, of the five cards that may be dealt to the player by card exchange, only the number of cards desired by the player are displayed on the display device 32 when the player desires the exchange of cards. In the present embodiment, though the exchange cards are determined in advance by a lottery at the same time as the lottery of the cards to be dealt to the player at first, the present invention is not limited thereto, and arrangements may be made so that just the number of cards that are to be exchanged are selected after the number of cards to be exchanged has been determined.

[0059] Also, though the number of cards extracted in this process is ten, the number of cards extracted is not limited thereto, and, for example, may be ten or more.

[0060] When the internal lottery has ended, the CPU 66 enters a process of step S13.

[0061] The CPU 66 then executes a card display process (step S13).

[0062] In this process, the CPU 66 sends to the display control device 200 the data concerning the types of the five cards, among the cards determined by the internal lottery in the above-described step S12, that are to be dealt to the player first and makes these cards be displayed on the display device 32.

[0063] In the present embodiment, the CPU 66 determines whether or not the symbols of the five cards that are to be displayed form any of specific winning combinations prior to the first display of the images of the cards and changes the time of display of the cards based on this determination result.

[0064] The details of this process is described later. When the card display process is completed, the CPU 66 enters a process of step S14.

[0065] The CPU 66 then executes a card exchange process (step S14).

[0066] In this process, the CPU 66 makes images of new cards displayed on the display device 32 in accordance with the card exchange operations by the player. The details of this process will be described later. When the card exchange process is completed, the CPU 66 enters a process of step S15.

[0067] The CPU 66 then executes a result determining process (step S15).

[0068] In this step, the CPU 66 determines which winning combination is formed in combination modes of symbols of the five cards that are displayed on the display device after the card exchange process. This determination is made by referring to the winning combination determination table stored in the RAM 70. Here, in order to control the card display time in the first card display of step S13, the CPU 66 has determined whether or not the symbols of the five cards to be displayed form any of specific winning combinations before displaying the cards. Even if the card exchange in step S14 is not performed and if the above determination is made just for the specific winning combinations for adjusting the card display time, in the result determination process of the step, it is determined whether or not any winning combinations are finally formed in combined symbols of the displayed cards. If the determination is made for all winning combinations (not only for the specific winning combinations), the above-mentioned determination result before the card display may be utilized without making another determination in the result determination process of the step.

[0069] The CPU 66 then executes an attraction and payout process (step S16).

[0070] In this process, the CPU 66 performs an attraction and payout process based on the determination result in the above-described step S15. Specifically, if the determination which winning combination is formed is made, it is displayed on the display device 32 that some winning combination is formed and the number of medals won by the player is added to the credit number at the same time. If it is determined that no winning combination is formed, it is displayed on the display device 32 that no winning combination is formed. After the end of the attraction and payout, the CPU 66 terminates this main flowchart.

[Bet Process]

[0071] In the above-described step S11 (Fig. 7), a bet process subroutine (shown in Fig. 8) is called.

[0072] First, the CPU 66 executes a process of determining whether a medal has been inserted, and then whether a bet switch is turned on (step S21).

[0073] In this process, the CPU 66 determines whether a detection signal from the medal detection sensor 31, which indicates that a medal is inserted into the medal insertion slot 63, or another detection signal, which indicates that either the BET MAX switch 26 or the BET ONE switch 28 is turned on, is received. If the CPU 66 determines that either detection signal is received, a process of step S22 is entered, while if it is determined that neither signal is received, the present step is repeated.

[0074] The CPU 66 then executes a process of addition to the bet number (step S22).

[0075] In this process, the CPU 66 performs an addition to the credit number based on the result of the above-described step S21. Specifically, the summation of the number of times the insertion of a coin has been detected and the number of times the BET ONE switch 28 has been turned on is recorded as the bet number in the RAM 70. However, since the maximum value of the summation is "5," the maximum value of "5" is recorded in the RAM 70 regardless of the number of times the insertion of a coin has been detected and the number of times the BET ONE switch 28 has been turned on if the BET MAX switch 26 has been turned on. When the addition of the bet number is ended, the CPU 66 enters a process of step 23.

[0076] The CPU 66 then executes a process of determining whether or not the DEAL switch 24 is turned on (step S23).

[0077] In this process, the CPU 66 determines whether or not it has received the detection signal, which indicates that the DEAL switch 24 is turned on. If the CPU 66 determines that it has not received this signal, the present step is repeated while if it is determined that the detection signal has been received, the present bet process subroutine is ended.

[Card Display Process]

[0078] A card display process subroutine (shown in Fig. 9) is called in the above-described step S13 (Fig. 7).

[0079] First, the CPU 66 executes a process of determining a combination of the cards.

[0080] In this process, the CPU 66 refers to the winning combination determination table stored in the RAM 70 to perform such determination that any winning combination is formed in the five cards as the game result, which are determined by the internal lottery in the above-described step S12 and are dealt to the player initially. The data concerning the winning combination are then stored in the RAM 70. After the combination determination, the CPU 66 enters a process of step S32.

[0081] The CPU 66 then executes a process of determining whether the obtained winning combination is "Royal Flush," "Straight Flush," or "Four of A Kind" (step S32).

[0082] In this process, the CPU 66 determines whether the data concerning the winning combination determined in the above-described step S31 and recorded in the RAM 70 match data of "Royal Flush," "Straight Flush," or "Four of A Kind." If the CPU 66 determines that the data concerning the winning combination matches any one of such winning combinations, a process of step S36 is entered, while if it is determined that the data do not match any one of the above winning combinations, a process of step S33 is entered.

[0083] The CPU 66 then executes a process of determining whether or not the obtained winning combination is "Full House," "Flush," or a "Straight" (step S33.

[0084] In this process, the CPU 66 determines whether or not the data concerning the winning combination determined in the above-described step S31 and recorded in the RAM 70 match "Full House," "Flush," or "Straight." If the CPU 66 determines that the data concerning the winning combination match any one of the winning combinations, a process of step S34 is entered, while if it is determined that the data do not match any one of the above winning combinations, a process of step S35 is entered.

[0085] The CPU 66 then performs a lottery concerning whether or not a delay attraction is to be performed and then executes a process of determining whether or not the lottery result indicates that the delay attraction is to be performed (step S34).

[0086] In this process, the CPU 66 first sends the random number generating instruction to the random number generating unit 65 and, when a random number has been sampled by the random number generating unit 65 upon receiving of the instruction signal, determines whether or not the lottery result based on the random number indicates that the delay attraction is to be performed. For example, one-third of the random numbers that are generated indicate the result that the delay attraction is to be performed and the rest two-thirds of the random numbers indicate the result that the delay attraction is not to be performed. If the CPU 66 determines that the delay attraction is to be performed, a process of step S36 is entered while if it is determined that the delay attraction is not to be performed, a process of step S35 is entered.

[0087] The CPU 66 then executes a normal mode card display process (step S35).

[0088] In this process, the CPU 66 performs the display of cards in the normal mode. The display of cards in the normal mode refers to the performing of the display without performing a delay attraction in the process of displaying the five cards that are dealt initially to the player and refers to the display method used in the case where no specific winning combination is formed in the dealing process and in the case where it has been determined by lottery that the delay attraction will not be performed even if a specific winning combination is formed. The CPU 66 supplies the data, which concern the types of the five cards, among the cards determined by the internal lottery in the above-described step S12 (Fig. 7) and recorded in the RAM 70, that are dealt initially to the player, and the card image display instruction to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 reads the corresponding image data and records the data in a video RAM provided inside the display control device 200. Cards are thereby displayed on the display device 32. When the card display is ended, the CPU 66 ends the card display process subroutine.

[0089] Meanwhile in step S36, the CPU 66 executes a delayed mode card display process.

[0090] In this process, the CPU 66 performs the display of cards in the delayed mode. The display of cards in the delayed mode refers to the performing of display while carrying out the delay attraction in the process of displaying the five cards that are dealt at first to the player and refers to the display method in the case where a specific winning combination is formed in the dealing process and it has been determined by lottery that the delay attraction is to be carried out. The CPU 66 supplies the data, which concern the types of the five cards, among the cards determined by the internal lottery in the above-described step S12 and recorded in the RAM 70, that are dealt initially to the player, the card image display instruction, and a delay attraction instruction to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 reads the corresponding image data and records the data in the video RAM provided inside the display control device 200. The display of the cards is

thereby carried out in accompaniment with the delay attraction on the display device 32.

[0091] As an example of the delay attraction, a delay time of 200ms with respect to the normal mode is generated in the process of card display, etc. This delay time may be of any length, and the delay time may be associated in advance with a card combination so that a different delay time may be generated.

[0092] When the card display is ended, the CPU 66 ends the card display process subroutine.

[0093] Thus, when the cards that are dealt initially to the player are in a specific combination, the poker gaming machine 10 can make a notification to the player by performing the processes of steps S31 to S36 as described above and thereby carrying out control in a manner that differs from that of the normal state in the process of display. The player can thus be made to recognize that the cards having been dealt initially are in a specific combination by the control that differs from that of the normal state in the process of display. The anticipation of the player can thus be increased in a game that tends to be monotonous otherwise.

[0094] Also, when the cards that are dealt initially to the player are in a specific combination, the poker gaming machine 10 can make a notification to the player by performing the process of step S36 and thereby delaying the time until completion of the card display in the process of display. The player can thus be made to recognize that the cards having been dealt initially are in a specific combination by the delay of the time until completion of the card display. The anticipation of the player can thus be increased even in a game that may tend to be monotonous.

[0095] The notification, which is made in step S36 when the cards having been dealt initially to the player are in a specific combination, is not limited to the above-described attraction by delay. By way of example, the notification may be an attraction comprising image displays and/or sound generation such as a different movement of a displayed character than the usual, a different emission of light than the usual, a different emission of sound than the usual, or a combination thereof. The attraction may be performed by utilizing decorative lamp 36 or speakers 46 may also be carried out.

[Card Exchange Process]

[0096] A card exchange process subroutine (shown in Fig. 10) is called in the above-described step S14 (Fig. 7).

[0097] First, the CPU 66 executes a process of determining whether or not a HOLD switch 20 has been turned on (step S41).

[0098] In this process, the CPU 66 determines whether or not the detection signal indicating that any of the five HOLD switches 20 is turned on has been received. If the CPU 66 determines that such detection signal has not been received, a process of step S43 is entered while if it is determined that the detection signal has been received, a process of step S42 is entered.

[0099] The CPU 66 then executes a process of putting the corresponding card on hold (step S42).

[0100] In this process, the CPU 66 sets a card having a corresponding HOLD switch 20 turned on in the above-described step S41 in such a condition that the card will not be exchanged even after the DEAL switch 24 is turned on and makes the characters of "HOLD" displayed below an image of the corresponding card on the display device 32 at the same time. When the holding of the corresponding card is completed, CPU 66 enters a process of step S43.

[0101] The CPU 66 then executes a process of determining whether the DEAL switch 24 is turned on (step S43) or not.

[0102] In this process, the CPU 66 determines whether or not the detection signal indicating that the DEAL switch 24 is turned on has been received. If the CPU 66 determines that this detection signal has not been received, the process is returned to step S41, and if it is determined that the detection signal has been received, a process of step S44 is entered.

[0103] The CPU 66 then executes a process of determining the cards for the exchange (step S44). In this process, the CPU 66 determines the number of cards not to be held from among the five cards having been selected by the lottery in the above-described step S12 as cards that may be dealt to the player for the card exchange, in other words, the number of cards the player wishes to exchange. With regard to the method for determining the cards for the exchange, the number of cards to be exchanged may be determined from among the five cards by a lottery in the present step, or the five cards may be provided in an order in the process of a lottery selection in the above-described step S12 (Fig. 7) and the number of cards to be exchanged may be determined according to the order. There may also be a case where the number of cards that the player wishes to exchange is five, in other words, the player may wish to exchange all the cards at hand. When the determination of the cards for the exchange is ended, the CPU 66 enters a process of step S45.

[0104] The CPU 66 then executes a card redisplay process (step S45).

[0105] In this process, the CPU 66 provides data concerning types of the exchange cards having been determined in the above-described step S44 and a card image display instruction to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 reads and store corresponding image data into the video RAM installed in the display control device 200. The exchange cards are thereby displayed in the place where respective card images of the non-held cards among the five cards are displayed on the display device 32. After the end of the card redisplay, the CPU 66 terminates this card exchange process subroutine. [Examples of Card Displays with

Delay Attractions]

[0106] Figs. 11 to 13 show display examples for comparing the display of cards in the normal mode in the above-described step S35 (Fig. 9) and the display of cards in the delayed mode in the above-described step S36. These figures show the change of display with the elapse of time in regard to only the parts of the image displayed on the display device 32 that concern the five cards.

[0107] In the delayed mode shown in Fig. 11, all five cards having been dealt are turned to face up simultaneously after the moving images are paused for a predetermined amount of time.

[0108] As shown in (1) of Fig. 11, the five cards are displayed with the face down. When the DEAL switch 24 is turned on in this state of (1), the display process of the dealt cards is started such that the facing up of the five cards is completed within the states from (2) to (4) in the normal mode.

[0109] On the other hand, the change of the images is paused or frozen in the states from (2) to (4) in the delayed mode and thereafter the facing up of the five cards is completed within the states from (5) to (7).

[0110] In the delayed mode as shown in Figs. 12 and 13, as the plurality of cards are turned to face up successively one by one, it takes longer that the first card is turned to face up if compared with the normal mode.

[0111] As shown in (1) of Fig. 12, the five cards are displayed with the face down. When the DEAL switch 24 is turned on in this state, the display of the dealt cards is started and the cards are turned to face up one by one from the left card. In the normal mode, facing up of the first card is completed within the states from (2) to (3).

[0112] In the delayed mode, on the other hand, facing up of the first card is completed within the states from (2) to (6) and thus the completion of the turning of the card is delayed if compared to the normal mode. The time required for turning the second card to face up is substantially the same in either mode.

[0113] These display examples are merely examples according to an embodiment of the present invention. So, a delay attraction may be carried out for any one from the second to the last cards to face up in the process of turning the five cards one by one or delay attractions may be carried out for each card in the process of turning the five cards one by one, etc.

[0114] In the case where the control of the card display time is performed, the gaming machine may not only control the time of indication of the symbol on the surface where the symbol is drawn such as "three of hearts," which indicates a type of card, but the gaming machine may also control the time of display of the other card surface (i.e., the back surface) than the surface on which the above-mentioned symbol is depicted. In this case, if the combination, formed by the cards that were dealt initially to the player, is in a specific combination, the gaming machine may control the display time to make a notification concerning the specific combination even when the cards are displayed with the face down.

[Second Embodiment]

[0115] A gaming machine according to a second embodiment of the present invention will now be described. With the gaming machine of the second embodiment, winning combination determination is made on the cards that are to be displayed initially, and the display order of the cards is determined and successive display is performed based on the determination result.

[0116] The gaming machine of the second embodiment differs from the above-described gaming machine according to the first embodiment only in the contents of the card display process of step S13 of Fig. 7, and the contents of the other arrangements and processes are the same. Thus, only the contents of the card display process will be described for the second embodiment.

[0117] Though description of the processes of steps S11 and S12 of the gaming machine process and the processes of steps S15 and S16 in Fig. 7 is omitted, the CPU 66, which performs these processes, is an example of the gaming control means that performs the game control.

[0118] The card display process of the gaming machine of the second embodiment will now be described in reference to the flowchart in Fig. 14.

[0119] First, after lottery selection of the cards by the internal lottery process (step S12 in Fig. 7), the CPU 66 searches for a winning combination in the selected cards (step S51). The respective winning combinations such as royal flush, straight flush, etc., are recorded in association with rank data of the respective winning combinations in the ROM 68. The rank of each winning combination is, for example, the number of medals that are paid out in accordance with the winning combination when the player has bet one medal, as indicated in the allocation table displayed on the display device 32 in Fig. 3. For example, the rank of "royal flush" winning combination is 250, the rank of "straight flush" winning combination is 50, the rank of "four of a kind" winning combination is 25, and in this case, the greater the numerical value, the higher the rank. However, the ranks of winning combinations may be ordinal numbers, such as "1," "2," and "3," as long as the order of the respective winning combinations is indicated. The CPU 66 searches for the winning combination recorded in the ROM 68 that exists in the combination of the cards extracted by the internal lottery. Subsequently, the CPU 66 determines whether or not forming of any winning combination is found in the search of step S51 (step S52). If it is determined that some winning combination is formed in this step, the CPU 66 enters a process of step S53 while if it is determined that no winning combination is formed, a process of step S54 is entered. The process by the winning combination determining means is thus carried out in steps S51 and S52.

[0120] In step S53, a process of changing the card display order is carried out. Normally, the data of the five cards having been determined as the initial cards to be displayed by the internal lottery process of step S12 in Fig. 7 are recorded in the order of determination in the RAM 70 and are displayed successively from the first to the fifth cards. In the present step, the CPU 66 rewrites the card data having been recorded in the above-mentioned order so that the cards except one card constituting a winning combination is displayed and then the excepted card is displayed at the last. In this process, most of the cards relating to the winning combination are displayed first and the last one card related to the winning combination is displayed at the last.

[0121] Specifically, with the example shown in Fig. 15, the five cards of "ace of spades," "ace of hearts," "four of hearts," "ace of clovers," and "ace of diamonds" are extracted as the cards to be displayed at first. The data of these cards are recorded in the RAM 70 in the order in which they have been extracted (in the state of (1) in Fig. 15). By a combination of these extracted five cards, "four of a kind" winning combination is formed.

[0122] In the step of S53, the CPU 66 rewrites the data of the cards so that all cards except one card among the cards that form the four-of-a-kind winning combination is displayed first and the excepted card is displayed at the last. That is, the data of "four of hearts" and "ace of clovers" are switched in an order and rewritten so that three cards among the "ace" cards that form the four-of-a-kind winning combination is displayed first (in the state of (2) in Fig. 15).

[0123] The cards are then displayed in accordance with the display order in step S54. Specifically, the CPU 66 supplies the image display instruction for the first card to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 then reads out the required image data and records the data in the video RAM installed inside the display control device 200. The card is thereby displayed on the display device 32. The CPU 66 then performs a time waiting process for a predetermined time in the range of 0.2 seconds to 2 seconds and then supplies the image display instruction for the second card to the display control device 200 and makes the display device 32 display the card. Cards are then displayed successively with a time waiting interval between the cards.

[0124] By this process of successively displaying the cards, for example as shown in the states from (3) to (7) in Fig. 15, first, "ace of spades," which is the first card among the lottery selected cards is displayed. Then after waiting for a predetermined time, the second ("ace of hearts"), third ("ace of clovers"), fourth ("four of hearts"), and fifth ("ace of diamonds") cards are displayed and the four-of-a-kind winning combination is formed at the point at which the five cards are displayed (in the state of (7) in Fig. 15). Here, at the point at which the third card is displayed, three "aces" are lined up and thus a three-of-a-kind wining combination is formed. However, two cards are still in the undisplayed state at this point. The player can thus be made to anticipate that an even better winning combination may be formed in the two opportunities where the two undisplayed cards are displayed.

[0125] Then, after waiting for the predetermined time, "four of hearts," which is the fourth card, is displayed (in the sate of (6) in Fig. 15). Even in this case, the player can be made to still anticipate that an even better winning combination may be formed in the last opportunity where the one undisplayed card is displayed.

[0126] Lastly, the fifth "ace of diamonds" is displayed (in the state of (7) in Fig. 15). As a result of this deal, the four-of-a-kind winning combination is formed and the player can be made to feel the satisfaction of obtaining an anticipated winning combination.

[0127] After carrying out this process, the CPU 66 terminates the present subroutine.

[0128] The following processes are thus carried out in the card display process in step S13 in Fig. 7. That is, the five cards of the cards determined by internal lottery, which have been initially dealt to the player, are displayed on the display device 32. The cards are displayed one by one successively and the order that the cards are displayed is changed based on the winning combination formed by the cards as a result of display. Prior to performing the first card display, the CPU 66 determines whether or not the symbols of the five cards to be displayed form any of the specific winning combinations and changes the order of display of the cards based on the determination result.

[0129] Though with the poker gaming machine 10 according to the present embodiment described above, the display is performed starting from a part of the cards related to the winning combination, the present invention is not limited thereto, and for example, all the cards that are directly related to the forming of the winning combination may be displayed first, as in the order of "ace of spades," "ace of hearts," "ace of diamonds," "ace of clovers," and "four of hearts," etc. An attraction of another display order that the player can be made to maintain his/her anticipation may be carried out as well. An attraction is also possible that some cards irrelevant to the winning combination are displayed first and the other cards relevant to a winning combination of higher rank are displayed in displaying the five cards as the display proceeds so that the player can enjoy watching formation of the winning combination.

[Third Embodiment]

[0130] A gaming machine according to a third embodiment of the present invention will now be described. With the gaming machine according to the third embodiment, the order of the displayed cards is determined not based on the winning combination that is actually formed, but based on a hypothetical winning combina-

tion that will be formed if one of the five cards is a specific card. For example, even when the winning combination that is actually formed as a result of the displayed cards is "one pair" as shown in Fig. 17, the cards that form the one pair are not displayed first in the display process, but the cards forming "royal flush" with addition of one desired card are displayed first. The player is thereby made to anticipate formation of such a high ranking winning combination until the end of the display.

[0131] The gaming machine according to the third embodiment differs from the above-described gaming machine according to the second embodiment only in the contents of the card display process of step S13 in Fig. 7, and the contents of the other arrangements and processes are the same. Thus, only the contents of the card display process will be described for the third embodiment.

[0132] The card display process of the gaming machine according to the third embodiment will now be described based on the flowchart in Fig. 16. For the third embodiment, the case where the cards selected by lottery for the first display are "queen of hearts," "jack of hearts," "jack of diamonds," "king of hearts," and "ten of hearts" as shown in the state of (1) in Fig. 17 will be described.

[0133] First, as shown in Fig. 16, the CPU 66 performs a process of determining the winning combination in the lottery selected cards by a search (step S61). This winning combination is referred to as the final winning combination since it is secured when the display of cards as the first display is completed. Based on the combination of the cards, the CPU 66 searches for a winning combination recorded in the ROM 68. With the present embodiment, the one-pair winning combination formed with "jack of spades" and "jack of diamonds" is found to be the final winning combination as the result of the card display.

[0134] In the subsequent step S62, the CPU 66 searches for the winning combination of the highest rank that can be obtained if it is assumed that one of the cards among the lottery selected cards is any possible type of card. This winning combination is a hypothetical winning combination that will not be formed actually. To be more specific, the CPU 66 first searches for a winning combination that can be formed with respective cards while changing "queen of hearts," which is the first card among the lottery selected cards, to another possible type of card and thereby searches for the winning combination of the highest rank that can be formed in this case. Next, the CPU 66 searches for a winning combination that can be formed with the respective cards while changing "jack of hearts," which is the second card among the lottery selected cards, to another possible type of card and thereby searches for the winning combination of the highest rank that can be formed in this case. Each of the lottery selected cards is thus to be the target card one at a time and the winning combination of the highest rank that can be formed is searched while changing each target card to another type of card. With the example shown in Fig. 17, the hypothetical winning combination of the royal flush winning combination is formed as the winning combination of the highest rank when "jack of diamonds" is the target card and is assumed to be "ace of spades" instead.

[0135] The CPU 66 then compares the rank of the final winning combination having been obtained in step S61 with the rank of the hypothetical winning combination having been obtained in step S52 (step S63). If the rank of the hypothetical winning combination is greater than the rank of the final winning combination, the CPU 66 enters a process of step S65. On the other hand, if the rank of the hypothetical winning combination is lower than or equal to that of the final winning combination, the CPU 66 enters a process of step S64. The process of the winning combination determining means is thus carried out in steps S61 and S62.

[0136] In step S64, the CPU 66 carries out a change of display order based on the final winning combination. For example, if the final winning combination is the one-pair winning combination formed by "jack of spades" and "jack of diamonds," the display order becomes that "jack of diamonds" card is displayed first.

[0137] On the other hand, in step S65, the CPU 66 carries out a change of display order based on the hypothetical winning combination. Specifically, the display order is changed so that the target card for the case where the hypothetical winning combination is formed will be displayed a the last. Since the target card with which the hypothetical winning combination of the royal flush is formed is "jack of diamonds" in the present example, the display order is changed so that the "jack of diamonds" card will be displayed at the last (in state of (2) in Fig. 17).

[0138] In the subsequent step S66, the CPU 66 displays the cards in accordance with the changed display order. Specifically, the CPU 66 supplies the image display instruction for the first card to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 then reads out the required image data and records the data in the video RAM inside the display control device 200. The card is thereby displayed on the display device 32. The CPU 66 then performs a time waiting process for a predetermined time in the range of 0.2 seconds to 2 seconds and then supplies the image display instruction for the second card to the display control device 200 and makes the display device 32 display the card. Cards are then displayed successively with a time waiting interval between the cards.

[0139] By this process of successively displaying the cards, for example as shown in the state of (3) in Fig. 17, the first card among the lottery selected cards (i.e., "queen of hearts") is displayed. The second card ("jack of hearts"), the third card ("ten of hearts"), and the fourth card ("king of hearts") are then displayed. At this point, the player can anticipate that if the last card that is un-

displayed is "ace of spades," the royal flush will be formed. In actuality, "jack of diamonds," which is the last card not being displayed, is thereafter displayed and just the one-pair winning combination is formed as the final winning combination.

[0140] By thus changing the order of display of the cards based on a hypothetical winning combination, the player can be made to anticipate the formation of the winning combination until the last card is displayed.

[0141] After carrying out this process, the CPU 66 terminates the present routine.

[0142] Though a poker gaming machine is used as an example to describe the gaming machine according to an embodiment of the present invention, the present invention is not limited thereto and may also be applied to gaming machines for performing other card games, Japanese card games, etc.

[0143] Also, as a function of the gaming machine according to an embodiment of the present invention, an example of changing the order of display of the cards is described such that the player may anticipate the formation of the winning combination and thereby enjoying the game more. However, the example can be regarded as a mere example, and thus besides such a change of display order, attractions with a delay in the time until the display of the cards occurs in comparison to other cases when a specific winning combination is formed and with the cards blinking before being displayed are also possible. Also, the changing of the order of card display of the above-described example may be combined with an attraction of delaying of the display time.

[0144] Also, though a poker gaming machine installed in a gaming place is described above as the poker gaming machine 10 according to the embodiment, the present invention is not limited thereto. An arrangement in which a game is played via a communication line at terminal devices connected to a server is also possible.

[0145] Here, an object of the present invention can be achieved by using personal computers, portable telephones, etc. as terminal devices connected to the server, and the same actions and effects may be obtained by the server sending image data for making images be displayed on the display devices of the terminals, data indicating such image data, and audio data, etc. to the terminal devices.

[Fourth Embodiment]

[0146] The gaming machine according to a fourth embodiment of the present invention will now be described. With the gaming machine according to the fourth embodiment, prior to the display of the images of new cards, whether or not the symbols of five cards that are to be displayed as a result of exchange form any of specific winning combinations is determined and the time of display of the cards is changed based on the determination result.

[0147] As shown in Fig. 18, the gaming machine according to the fourth embodiment differs from the gaming machine according to the first embodiment (see step S13 in Fig. 7) in that the card display process subroutine is not called (see step S73 in Fig. 18).

[0148] Also as shown in Fig. 19, the gaming machine according to the fourth embodiment differs from the gaming machine according to the first embodiment (see step S45 in Fig. 10) in that a card redisplay process subroutine is called (see step S85 in Fig. 19). The contents of the gaming machine process, card exchange process, and card redisplay process will thus be described for the fourth embodiment.

[Gaming Machine Process]

[0149] First, the gaming machine process is described based on the flowchart in Fig. 18. Since the processes of steps S71 and S72 with this gaming machine are the same in content as the processes of steps S11 and S12 with the gaming machine according to the first embodiment (see Fig. 7), description thereof will be omitted.

[0150] In step S73, the CPU 66 executes the card display process.

[0151] In this process, the CPU 66 supplies the data, concerning the types of the five cards, among the cards determined by the internal lottery in step S72 and recorded in the RAM 70, that are to be dealt to the player initially, and the card image display instruction to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 reads corresponding image data and records such data in the video RAM installed inside the display control device 200. The five cards that are dealt to the player initially are thus displayed on the display device 32.

[0152] After the end of the card display process, the CPU 66 enters a process of step S74.

[0153] The CPU 66 then executes the card exchange process (step S74).

[0154] In this process, the CPU 66 performs exchange of cards in accordance with card exchange operations by the player and makes the images of the new cards displayed on the display device 32. Prior to the display of the new cards, the CPU 66 determines whether or not the symbols of the five cards that are to be displayed as a result of the exchange form any of the specific winning combinations and changes the display time of the cards based on the determination result. After the end of the card exchange process, the CPU 66 enters a process of step S15.

[0155] The CPU 66 then executes a process of determining the results (step S75).

[0156] In this step, the CPU 66 determines which winning combination is formed with the symbols of the five cards that will be displayed on the display device 32 as a result of the card exchange process. This determination is made in reference to the winning combination determination table stored in the RAM 70. Here, in the

above-mentioned card exchange process and prior to the card display for the exchange, the CPU 66 has already made the determination whether or not the symbols of the five cards to be displayed after the exchange form a specific winning combination in order to control the card display time. However, if the above-mentioned determination in the exchange process is made only in regard to the specific winning combinations that are used to control the card display time, it is determined which winning combination is formed with the symbols of the cards that will be displayed as a result of the card exchange process in the result determination process of the present step.

[0157] If the above-mentioned determination prior to the card display in the card exchange process is made not only in regard to the specific winning combinations, but in regard to all winning combinations, new determination does not have to be made in the result determination process of the present step and the above-mentioned determination result prior to the card display of the card exchange process may be used as it is.

[0158] If the CPU 66 determines that a winning combination is formed, the number of medals that the player can acquire is determined. This number is determined by the type of the winning combination and the bet number and is indicated in the allocation table displayed on the display device 32. When the result determination is ended, the CPU 66 enters a process of step S76.

[0159] The CPU 66 then executes an attraction and payout process (step S76).

[0160] In this process, the CPU 66 performs an attraction and payout process based on the determination result in the above-described step S75. Specifically, if the determination that some winning combination is formed is made, it is displayed on the display device 32 that the winning combination is formed and the number of medals won by the player is added to the credit number at the same time. If the determination that no winning combination is formed is made, it is displayed that no winning combination is formed on the display device 32. After the end of the attraction and payout, the CPU 66 terminates this main flowchart.

[Card Exchange Process]

[0161] The contents of the card exchange process will now be described based on the flowchart in Fig. 19. Since the processes from steps S81 to S83 of the processes with this gaming machine are the same in content as the processes from steps S41 to S43 of the card exchange process according to the first embodiment (see Fig. 10), description thereof will be omitted.

[0162] In step S84, the CPU 66 executes the process of determining the exchange cards. In this process, the CPU 66 determines the number of cards not being held from among the five cards having been selected by the lottery in step S82 as the cards that may be dealt to the player by the card exchange, in other words, the number of cards the player wishes to exchange. With regard to the method of determining these cards, the number of cards to be exchanged may be determined from among the five cards by lottery in the present step, or the five cards may be provided with ranks in the process of lottery selection in the above-described step S12 and the cards corresponding to the number of cards to be exchanged may be determined, starting with that of higher rank. There may also be a case where the number of cards that the player wishes to exchange is five, in other words, the player may wish to exchange all the cards at hand.

[0163] In the present step, the CPU 66 controls the time from the point at which the DEAL switch 24 is turned on, that is, the point at which the lottery of the cards is started. The delay process is carried out based on this controlled time. When the determination of the exchange cards has ended, the CPU 66 enters a process of step S85.

[0164] The CPU 66 then executes a card redisplay process (step S85).

[0165] In this process, the CPU 66 sends the data concerning the types of the exchange cards having been determined in the above-described step S34 and makes the images of these exchange cards displayed in place of the not-held cards among the five cards that are displayed on the display device 32. The details of this process will be described below. After the end of the card redisplay process, the CPU 66 terminates the card exchange process subroutine.

[Card Redisplay Process]

[0166] The card redisplay process will now be described based on the flowchart in Fig. 20.

[0167] First, the CPU 66 executes a process of determining the combination of the cards after exchange (step S91).

[0168] In this process, the CPU 66 refers to the winning combination determination table recorded in the RAM 70 to make determination of the winning combination that is to become the game result, with respect to a combination formed with the cards having been held in the above-described step S82 and the exchange cards having been determined in the above-described step S84. The data concerning this winning combination are then recorded in RAM 70. After the end of the combination determination, the CPU 66 enters step S92.

[0169] The CPU 66 then executes a process of determining whether or not the winning combination having been obtained is "royal flush" or "straight flush" (step S92).

[0170] In this process, the CPU 66 determines whether or not the data, which concern the winning combination that has been determined in the above-described step S91 and have been recorded in the RAM 70, indicate "royal flush" or "straight flush." If the CPU 66 determines that the data concerning the winning combina-

tion indicate any of these winning combinations, a process of step S93 is entered while if it is determined that data do not indicate any of these winning combinations, a process of step S94 is entered.

[0171] The CPU 66 then performs a lottery concerning whether or not a delay attraction is to be performed and then executes a process of determining whether or not the lottery result indicates that the delay attraction is to be performed (step S93).

[0172] In this process, the CPU 66 first sends the random number generating instruction to the random number generating unit 65 and when a random number has been sampled by the random number generating unit 65 upon receiving of the instruction signal, determines whether or not the lottery result based on the random number indicates that the delay attraction is to be performed. For example, one-third of the random numbers that are generated indicate the result that the delay attraction is to be performed and the remaining two-thirds of the random numbers indicate the result that the delay attraction is not to be performed. If the CPU 66 determines that the delay attraction is to be performed, a process of step S99 is entered while if it is determined that the delay attraction is not to be performed, a process of step S94 is entered.

[0173] The CPU 66 then executes a process of determining whether or not the winning combination having been obtained is "four of a kind" (step S94).

[0174] In this process, the CPU 66 determines whether or not the data, which concern the winning combination that has been determined in the above-described step S91 and have been recorded in the RAM 70, indicate "four of a kind." If the CPU 66 determines that the data concerning the winning combination indicate any of these winning combinations, a process of step S95 is entered while if it is determined that data do not indicate any of these winning combinations, a process of step S96 is entered.

[0175] The CPU 66 then performs a lottery concerning whether or not a delay attraction is to be performed and then executes a process of determining whether or not the lottery result indicates that the delay attraction is to be performed (step S95).

[0176] In this process, the CPU 66 first sends the random number generating instruction to the random number generating unit 65 and when a random number has been sampled by the random number generating unit 65 upon receiving of the instruction signal, determines whether or not the lottery result based on the random number indicates that the delay attraction is to be performed. For example, one-third of the random numbers that are generated indicate the result that the delay attraction is to be performed and the remaining two-thirds of the random numbers indicate the result that the delay attraction is not to be performed. If the CPU 66 determines that the delay attraction is to be performed, a process of step S99 is entered while if it is determined that the delay attraction is not to be performed, a process of step S96 is entered.

[0177] The CPU 66 then executes a process of determining whether or not the winning combination having been obtained is "three of a kind" (step S96).

[0178] In this process, the CPU 66 determines whether or not the data, which concern the winning combination that has been determined in the above-described step S91 and have been recorded in the RAM 70, indicate "three of a kind." If the CPU 66 determines that the data concerning the winning combination indicate any of these winning combinations, a process of step S97 is entered while if it is determined that data do not indicate any of these winning combinations, a process of step S98 is entered.

[0179] The CPU 66 then performs a lottery concerning whether or not a delay attraction is to be performed and then executes a process of determining whether or not the lottery result indicates that the delay attraction is to be performed (step S97).

[0180] In this process, the CPU 66 first sends the random number generating instruction to the random number generating unit 65 and when a random number has been sampled by the random number generating unit 65 upon receiving of the instruction signal, determines whether or not the lottery result based on the random number indicates that the delay attraction is to be performed. For example, one ninety-fifth of the random numbers that are generated indicate the result that the delay attraction is to be performed and the remaining ninety four ninety-fifths of the random numbers indicate the result that the delay attraction is not to be performed. If the CPU 66 determines that the delay attraction is to be performed, a process of step S99 is entered while if it is determined that the delay attraction is not to be performed, a process of step S98 is entered.

[0181] The CPU 66 then executes a normal mode card redisplay process (step S98).

[0182] In this process, the CPU 66 performs the redisplay of cards in the normal mode. The redisplay of cards in the normal mode refers to the performing of the display without performing a delay attraction in the process of displaying the new cards and refers to a display method for the case where the winning combination is not a specific winning combination and the case where, even if the winning combination is the specific winning combination, it has been determined by lottery that the delay attraction will not be performed. The CPU 66 supplies the data, which concern the types of the exchange cards, determined in the above-described step S34 and recorded in the RAM 70, and the card image display instruction to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 reads the corresponding image data and records the data in the video RAM provided inside the display control device 200. The exchange cards are thereby displayed on the display device 32. After the card redisplay ends, the CPU 66 terminates the card redisplay process subroutine.

[0183] Meanwhile in step S99, the CPU 66 executes a delayed mode card redisplay process.

[0184] In this process, the CPU 66 performs the redisplay of cards in the delayed mode. The redisplay of cards in the delayed mode refers to the performing of display while carrying out the delay attraction in the process of displaying the new cards and refers to the display method in the case where the winning combination that is formed is a specific winning combination and it has been determined by lottery that the delay attraction is to be carried out. The CPU 66 supplies the data, which concern the types of the exchange cards, determined in the above-described step S34 and recorded in the RAM 70, the card image display instruction, and the delay attraction instruction to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 reads the corresponding image data and records the data in the video RAM provided inside the display control device 200. The display of the exchange cards is thereby carried out in accompaniment with the delay attraction on the display device 32.

[0185] As an example of the delay attraction, a delay time of 500ms with respect to the normal mode is generated in the process of card display, etc. This delay time may be of any length, and the delay time may be associated in advance with the card combination so that a different delay time is generated.

[0186] After the card redisplay ends, the CPU 66 terminates the card redisplay process subroutine.

[0187] Thus, when the combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, comprises a specific combination, the poker gaming machine 10 can make a notification to the player by performing the processes of steps S91 to S99 as described above and thereby carrying out control in a manner that differs from that of the normal state in the process of displaying the exchange cards. The player can thus be made to recognize that the combination of the cards after the exchange is a specific combination by the control that differs from that of the normal state in the process of display. The anticipation of the player can thus be increased in a game that tends to be monotonous otherwise.

[0188] Also, when the combination, formed by the unexchanged cards, among the cards dealt first to the player, and the new cards, resulting from the exchange, is a specific combination, the poker gaming machine 10 can make a notification to the player by performing the process of step S99 and thereby delaying the time until completion of the card display in the process of displaying the exchange cards. The player can thus be made to recognize that the combination of the cards after the exchange is a specific combination by the delay of the time until completion of the card display. The anticipation of the player can thus be increased further in a game that tends to be monotonous otherwise.

[0189] The notification, which is made in step S99 when the combination, formed by the unexchanged cards, among the cards dealt initially to the player, and the new cards, resulting from the exchange, is a specific combination, is not limited to the above-described attraction by delay, and for example, may be an attraction using image displays and/or sound generation, such as movements of displayed characters that differ from those of the normal state, emissions of light that differ from those of the normal state, emissions of sounds that differs from those of the normal state, or the combination of such, etc. An attraction using decorative lamp 36 or speakers 46 may also be carried out.

[Examples of Display of Cards in Delay Attractions]

[0190] Figs. 21 to 24 show display examples in comparison with the redisplay of cards in the normal mode in the above-described step S98 (Fig. 20) and the redisplay of cards in the delayed mode in the above-described step S99. These figures show the change of display with the elapse of time in regard to only the parts of the image displayed on the display device 32 that concern the five cards.

[0191] In the delayed mode shown in Figs. 21 and 22, the plurality of exchange cards are turned to face up in succession one by one and, in comparison to the normal mode, more time is taken for the process of turning the first card to face up.

[0192] In the state of (1) in Fig. 21, two cards are held. When the DEAL switch 24 is turned on in this state, the exchange of cards is started, and first, the cards having not been held are faced down as shown in the state of (2). These cards are then turned to face up one by one, and in the normal mode, the turning of the first card is completed within the states from (3) to (4).

[0193] On the other hand, in the delayed mode, the turning of the first card is completed within the states from (3) to (6) and thus the completion of the turning of the card is delayed if compared to the normal mode. The time required for the turns of the second card to face up is the same in either mode.

[0194] In the delayed mode shown in Figs. 23 and 24, the plurality of exchange cards are turned to face up in succession one by one and in the process of turning the last card to face up, the turn is carried out after stopping the movement of the images for a predetermined amount of time.

[0195] In the state of (1) in Fig. 23, two cards are held. When the DEAL switch 24 is turned on in this state, the exchange of cards is started, and first, the cards having not been held are faced down as shown in the state of (2). The first and second cards are then turned to face up within the states from (3) to (6).

[0196] Though in the normal mode, the turn of the first card is completed within the state from (7) in Fig. 23 to (8) in Fig. 24, in the delayed mode, the change of images is stopped in the states from (6) in Fig. 23 and (7) in Fig.

23 and (8) in Fig. 24, and thereafter, the third card is turned to face up in the states from (9) to (10). The completion of the turn of the card is thus delayed in comparison with the normal mode.

[0197] These display examples are merely an example according to an embodiment of the present invention, and a plurality of the exchange cards may be turned simultaneously or a delay attraction may be carried out on all cards in the process of turning a plurality of exchange cards one by one, etc.

[0198] In the case where the gaming machine controls the card display time, the gaming machine may not only control the time of indication of the symbol of the surface on which the symbol is depicted, such as "three of hearts," that indicates the type of the card, but may also control the time of display of the symbol of the card surface besides this surface on which the above-mentioned symbol is depicted, that is, the time of display of the symbol of the back surface. In this case, if the combination, formed by the unexchanged cards, among the cards dealt first to the player, and the new cards, resulting from the exchange, is a specific combination, the gaming machine may perform control of the display time to make a notification concerning the specific combination even when the cards are displayed with the face down.

[Fifth Embodiment]

[0199] A gaming machine according to a fifth embodiment of the present invention will now be described. With the gaming machine according to the fifth embodiment, prior to displaying the images of new cards in accordance with card exchange operations of the player, the CPU 66 determines whether or not the symbols of the five cards that are to be displayed as a result of the exchange form a specific combination and changes the order of display of the cards based on the determination result.

[0200] The gaming machine according to the fifth embodiment differs from the above-described gaming machine according to the fourth embodiment only in the contents of the card redisplay process of step S85 in Fig. 19, and the contents of the other arrangements and processes are the same. Thus only the contents of the card redisplay process will be described for the fifth embodiment.

[0201] Also, though description of the processes of steps S11 and S12 of the gaming machine process and the processes of steps S15 and S16 in Fig. 7 will be omitted, the CPU 66, which performs these processes, corresponds to being an example of the gaming control means that performs control of the game. [Card Redisplay Process]

[0202] The card redisplay process will now be described in reference to the flowchart of Fig. 25.

[0203] First as shown in Fig. 25, the CPU 66 searches whether or not a winning combination is formed by the held cards and the cards after exchange (step S101). The respective winning combinations, such as "royal flush," "straight flush," etc., are recorded along with the data on the ranks of the respective winning combinations in the ROM 68. The rank of each winning combination is, for example, the number of medals that are paid out in accordance with the winning combination when the player has bet one medal, as indicated in the allocation table displayed in the display device 32 in Fig. 3. For example, the rank of the "royal flush" winning combination is 250, the rank of the "straight flush" winning combination is 50, the rank of the "four of a kind" winning combination is 25, and in this case, the greater the numerical value, the higher the rank. However, the ranks of winning combinations may be ordinal numbers, such as "1," "2," and "3," as long as the order of the respective winning combinations is indicated. The CPU 66 searches for the winning combination recorded in the ROM 68 that exists in the combination of the exchange cards that are to be displayed anew as a result of exchange and the held cards. Subsequently, the CPU 66 determines whether or not the formation of a winning combination is found by the search of step S101 (step S102). If it is determined that the winning combination is formed in this step, the CPU 66 enters a process of step S103 while if it is determined that the winning combination is not formed, a process of step S104 is entered. The process by the winning combination determining means is thus carried out in the steps S101 and S102.

[0204] In step S103, a process of changing the order of display of the exchange cards is carried out. Normally, the data of the exchange cards having been determined by the internal lottery process of step S84 (Fig. 19) are recorded in the order of determination in the RAM 70 and are displayed successively as the first, second, and third exchange cards. In this step, the CPU 66 rewrites the data of the exchange cards that have been recorded in the above-mentioned order so that, with the exception of one card, the cards that form the winning combination will be displayed first and the excepted card will be displayed last. By this process, most of the cards related to the winning combination are displayed first and one card related to the winning combination is displayed at the last.

[0205] Specifically, when for example the cards shown in Fig. 26 have been selected, whereas in the state of (3) in Fig. 26, "four of hearts" is the first card and "ace of hearts" is the second card, as a result of the process of step S103, the display order is switched so that "ace of hearts" becomes the first card and "four of hearts" becomes the second card.

[0206] The exchange cards are then displayed in accordance with the display order in step S104. Specifically, the CPU 66 supplies the image display instruction for the first exchange card to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 then reads out

the desired image data and records the data in the video RAM installed inside the display control device 200. The exchange card is thereby displayed on the display device 32. The CPU 66 then performs a time waiting process for a predetermined time in the range of 0.2 seconds to 2 seconds and then supplies the image display instruction for the second exchange card to the display control device 200 and makes the display device 32 display the exchange card. The exchange cards are then displayed successively with a time waiting interval between the cards.

[0207] By this process of successively displaying the exchange cards, for example as shown in the state of (4) in Fig. 26, the first card, among the three exchange cards that are faced down at the hand side, is turned to face up and "ace of hearts" is thus displayed. Three "aces" are thus lined up and thus "three of a kind" is formed. However, two cards are still faced down and are in the undisplayed state at this point. The player can thus be made to anticipate that an even better winning combination may be formed in the two opportunities in which the two undisplayed exchange cards will be displayed.

[0208] Then after waiting for the predetermined time, "four of hearts," which is the second exchange card, is displayed (in the state of (5) in Fig. 26). Even in this case, the player can still be made to anticipate that an even better winning combination may be formed in the last opportunity in which the one undisplayed exchange card will be displayed.

[0209] Lastly, "ace of diamonds," which is the third exchange card, is displayed (in the state of (6) in Fig. 26). The result of this game is "four of a kind," and the player can thus be made to feel satisfaction upon obtaining an anticipated winning combination.

[0210] After carrying out this process, the CPU 66 terminates the present subroutine.

[0211] Though with the poker gaming machine 10 according to the present embodiment described above, the display is performed starting from a part of the cards related to the winning combination, the present invention is not limited thereto, and for example, all of the cards that are directly related to the forming of the winning combination may be displayed first, as in the order of "ace of hearts," "ace of diamonds," and "four of hearts" in the state of (3) in Fig. 26, etc., and attractions of other display orders by which the player can be made to maintain his/her anticipation may be carried out. Also, in a case where all five cards are exchanged, an attraction is also possible wherein the cards that are not relevant to the winning combination are displayed first and the winning combination of higher rank may be displayed as the display proceeds so that the player can enjoy the formation of the winning combination.

[Sixth Embodiment]

[0212] A gaming machine according to a sixth embodiment of the present invention will now be described. With the gaming machine according to the sixth embodiment, the order of the exchange cards that are displayed in the card exchange process is determined not based on the winning combination that is actually formed, but based on a hypothetical winning combination that will be formed if one of the exchange cards is a specific card. For example, even when, as shown in Fig. 28, the winning combination that is actually formed as a result of the player exchanging cards is "one pair," the cards that form "one pair" are not displayed first in the exchange process, but the cards that will form "royal flush," if one desired card is provided, are displayed first. The player is thereby made to anticipate the formation of a high ranking winning combination until the completion of the display.

[0213] The gaming machine according to the sixth embodiment differs from the above-described gaming machine according to the fourth embodiment only in the contents of the card redisplay process of step S85 of Fig. 19, and the contents of the other arrangements and processes are the same. Thus only the contents of the card redisplay process will be described for the sixth embodiment.

[0214] The card redisplay process of the gaming machine of the sixth embodiment will now be described in reference to Fig. 28. For the sixth embodiment, the case, wherein after the cards of "ten of spades," "jack of spades," "queen of spades," "three of diamonds," and "two of diamonds" are displayed first as shown in the state of (1) in Fig. 28, "ten of spades," "jack of spades," and "queen of spades" are selected as the held cards (in the state of (2) in Fig. 28) and "jack of diamonds" and "king of spades" are selected by lottery as the exchange cards to be exchanged with the remaining two cards, will be described.

[0215] First the CPU 66 performs a process of searching for the winning combination that is formed by the combination of the held cards and the exchange cards (step S111). This winning combination is deemed as the final winning combination as it is finalized when the card exchange process ends. Based on the combination of the held cards and the cards after exchange, the CPU 66 searches for a winning combination among the winning combinations recorded in the ROM 68. With the present embodiment, the one-pair winning combination, formed with "jack of spades" and "jack of diamonds," is found to be the final winning combination that is the result of the card exchange.

[0216] In the subsequent step S112, the CPU 66 searches for the winning combination of the highest rank that can be obtained from the combination of the held cards and the exchange cards if it is assumed that one of the exchange cards is another type of card. This winning combination is a hypothetical winning combination that will not be formed actually. The CPU 66 first searches for the winning combination of the highest rank that can be formed by the combination of the held cards and the exchange cards if "jack of diamonds," which is one

of the exchange cards, is assumed to be another desirable card. More specifically, the winning combination that can be formed by the respective cards is searched while changing "jack of diamonds" to another type of card and the winning combination of the highest rank is thereby searched. With the present example, the royal-flush winning combination will be formed if "jack of diamonds" is assumed to be "ace of spades" instead.

[0217] Next, the CPU 66 searches for the winning combination of the highest rank while changing the exchange card of "king of spades." With the present example, a two-pair winning combination of "J's" and "Q's" will be formed if "king of diamonds" is assumed to be "queen of diamonds" instead. Here, since between the prior royal-flush winning combination and the present two-pair winning combination, the royal flush winning combination is of higher rank, the royal-flush winning combination, for the case where "jack of diamonds" is used as the target card, is found to be the hypothetical winning combination of highest rank.

[0218] The CPU 66 then compares the rank of the final winning combination having been obtained in step S51 with the rank of the hypothetical winning combination having been obtained in step S52 (step S113). If the rank of the hypothetical winning combination is greater than the rank of the final winning combination, the CPU 66 enters a process of step S115. On the other hand, if the rank of the hypothetical winning combination is less than or equal to that of the final winning combination, the CPU 66 enters a process of step S114.

[0219] In step S114, the CPU 66 carries out a change of display order based on the final winning combination. For example, if the final winning combination is the one-pair winning combination formed by "jack of spades" and "jack of diamonds," the display order becomes that in which the exchange card of "jack of diamonds" is displayed first.

[0220] On the other hand, in step S115, the CPU 66 carries out a change of display order based on the hypothetical winning combination. Specifically, the display order is changed so that the target card for the case where the hypothetical winning combination is formed will be displayed at the last. Since in the present example, the target card with which the hypothetical winning combination of "royal flush" is formed is the "jack of diamonds" card, the exchange order is changed so that this "jack of diamonds" card will be displayed at the last (in the state of (3) in Fig. 28).

[0221] In the subsequent step S116, the CPU 66 displays the exchange cards in accordance with the changed display order. Specifically, the CPU 66 supplies the image display instruction for the first exchange card to the display control device 200 via the input/output bus 64 and the interface circuit set 72. The display control device 200 then reads out the desired image data and records the data in the video RAM inside the display control device 200. The exchange card is thereby displayed on the display device 32. The CPU 66 then performs a time waiting process for a predetermined time in the range of 0.2 seconds to 2 seconds and then supplies the image display instruction for the second exchange card to the display control device 200 and makes the display device 32 display the exchange card. The exchange cards are then displayed successively with the time waiting process carried out in between.

[0222] By this process of successively displaying the exchange cards, for example as shown in the sate of (5) in Fig. 28, the first of the two exchange cards that are faced down is turned to face up and "king of spades," is thus displayed. The player can thus anticipate that if the other exchange card that is undisplayed is "ace of spades," the royal flush will be formed. In actuality, "jack of diamonds," which is the other exchange card that is undisplayed is thereafter displayed and just the one-pair winning combination is formed as the final winning combination.

[0223] By thus changing the order of display of the exchange cards based on a hypothetical winning combination, the player can be made to anticipate the forming of the winning combination until the last exchange card is displayed.

[0224] After carrying out this process, the CPU 66 terminates the present subroutine process.

[0225] Though a poker gaming machine is used as an example to describe an embodiment of the present invention, the present invention is not limited thereto and may also be applied to gaming machines for performing other card games, Japanese card games, etc.

[0226] Also, an example of changing the order of display of cards is described as a function of the gaming machine according to an embodiment of the present invention such that the player may anticipate the formation of the winning combination and thereby enjoy the game more. However, this example can be regarded as being a type of attraction, and thus besides such a change of display order, attractions, for example, wherein when a specific winning combination is formed, a delay in the time until the display of the cards occurs in comparison to other cases or the cards blink before they are displayed, are also possible. Also, the changing of the order of card display of the above-described example may be combined with an attraction of delaying of the display time.

[0227] Also, though a poker gaming machine installed in a gaming place is described above as the poker gaming machine 10 according to the embodiment of the present invention, the present invention is not limited thereto, and an arrangement in which a game is played via a communication line 92 and a network N at terminal devices 10A, 10B, 10C connected to a server 80 is also possible as shown in Figs 29 and 30. Fig. 30 shows a block diagram of a control circuit of the server 80 according to an embodiment of the present invention.

[0228] The server 80 comprises a central processing unit (referred to hereinafter as "CPU") 82, a read-only memory (referred to hereinafter as "ROM") 84, a ran-

dom access memory (referred to hereinafter as "RAM") 86, and communication interface circuit 90 being connected via an input/output bus 87. The input/output bus 87 is arranged for the input and output of data signals and address signal to and from the CPU 82.

[0229] Based on computer programs stored in the ROM 84, the CPU 82 performs reading and writing of data from and into the respective elements and devices that are connected to the input/output bus 87 and works together with these elements and devices to perform various processes. Also, a timer (not shown) to be described below is equipped inside the CPU 82.

[0230] Here, an object of the present invention may be achieved by using personal computers, portable telephones, etc. as the terminal devices connected to the server, and the same actions and effects can be obtained by the server sending image data for making images be displayed on the display parts of these terminals, data indicating such image data, and audio data, etc. to the terminal devices.

[0231] With the present invention, a player can be made to recognize that a combination of the cards that are dealt initially in a game is a specific combination by control of the display time in the process of displaying the cards. The anticipation of the player may thus be increased in the game that tends to monotonous otherwise.

[0232] Also with the present invention, the player can be made to anticipate the formation of a winning combination of high rank in the process of displaying the cards and can thereby be made to enjoy the game.

[0233] Also with the present invention, the player can be made to recognize that a combination of the cards after an exchange of cards is a specific combination by control of the display time in the process of displaying the new cards resulting from the exchange. The anticipation of the player may thus be increased in the game that tends to monotonous otherwise.

[0234] Also with the present invention, the player can be made to anticipate the formation of the winning combination of high rank in the card exchanging process and can thereby be made to enjoy the game.

Claims

1. A gaming machine comprising:

extraction means for extracting at least two cards among a plurality of cards having respective symbols;
display means for displaying the at least two cards extracted by the extraction means;
storage means for storing a plurality of combinations being constituted of the plurality of cards;
determination means for determining whether a combination of the at least two cards matches any of a plurality of predetermined combinations among the plurality of combinations stored in the storage means; and
time control means for controlling time before the at least two cards are displayed by the display means on determining the combination of the at least two cards matches any of the plurality of predetermined combinations.

2. The gaming machine according to claim 1, wherein the time control means delays displaying one of the at least two cards from a beginning of a game.

3. The gaming machine according to claim 2, wherein delay time by the time control means differs according to a type of the combination of the at least two cards.

4. The gaming machine according to claim 1, further comprising sound generating means for emitting sound wherein an attraction with image display and/or sound emission is carried out when the time control means controls the time.

5. The gaming machine according to any one of claims 1 to 4, wherein it is determined by a lottery that the time control means controls the time..

6. The gaming machine according to any one of claims 1 to 5, wherein the display means displays other faces of the at least two cards than faces thereof on which symbols are depicted.

7. A gaming machine for performing a card game by an image, comprising:

display means for displaying a state of the card game;
game control means for controlling the card game;
storage means for storing a plurality of winning combinations of the card game;
winning combination determination means for determining whether a combination of displayed cards matches a predetermined winning combination among a plurality of winning combinations of cards by referring to the storage means; and
display order change means for changing an initial display order of cards based on a result by the winning combination determination means;

wherein the game control means has a function of displaying the cards in a changed initial display order.

8. The gaming machine according to claim 7, wherein the winning combination determination means de-

termines whether the combination of displayed cards matches the predetermined winning combination in advance; and

wherein the display order change means changes the initial display order of cards such that cards that constitute the predetermined winning combination are displayed in a forming order.

9. The gaming machine according to claim 7, wherein the winning combination determination means determines in advance whether the combination of displayed cards matches the predetermined winning combination in advance; and

wherein the display order change means changes a display order of the cards such that one of the cards is displayed after the rest cards are displayed.

10. The gaming machine according to claim 7, wherein the storage means stores ranks in association with respective winning combinations:

wherein the winning combination determination means determines a winning combination of highest rank to be formed by assuming one of the cards to be displayed is any possible type of card; and

the display order change means changes an order of redisplay based on a determination result by the winning combination determination means.

11. The gaming machine according to claim 10, wherein the display order change means changes the order of redisplay such that the assumed one card is redisplayed later than any other cards to be displayed.

12. A server being connected via a communication line to terminal devices, each of which comprises display means for displaying cards of a card game, the server controlling the terminal devices, the server comprising:

game control means for controlling card display of the cards on the display means;
storage means for storing a plurality of winning combinations of the card game;
winning combination determination means for determining in advance whether a combination of the cards to be displayed matches any of the plurality of winning combinations in reference to the storage means; and
display order change means for changing a display order of the cards to be displayed based on a determination result by the winning combination determination means;

wherein the game control means has a function of displaying the cards successively on the display means based on the display order having been changed by the display order change means.

13. A program making a computer execute a game comprising the steps of:

controlling the game in which cards are displayed successively;
paying out game media based on a result of displaying the cards;
determining in advance whether a combination of initially-displayed cards forms any of a plurality of winning combinations stored in a storage unit; and
changing a card display order of the initially-displayed cards based on a determination result obtained in the winning combination determination step;

wherein the initially-displayed cards are to be displayed in a changed card display order during controlling the game.

14. A gaming machine comprising:

extraction means for extracting a predetermined number of cards from a plurality of cards having respective symbols;
display means for displaying symbols of cards extracted by the extraction means;
card exchange means for exchanging at least one of the predetermined number of cards based on an operation by a player such that cards extracted by the extraction means are displayed;
storage means for storing a plurality of combinations of cards;
determination means for determining whether a combination of cards which initially exist and remain, and are added in exchange by the card exchange means matches any of the plurality of combinations of cards stored by the storage means; and
time control means for controlling time before the cards which are added in exchange are displayed to a player if the determination means determines that the combination of the cards which initially exist and remain, and are added in exchange by the card exchange means matches a specific combination among the plurality of combinations stored by the storage means.

15. The gaming machine according to claim 14, wherein the time control means control time to delay displaying to the player the cards which initially exist and remain, and are added in exchange from the operation by the player.

16. The gaming machine according to claim 15, wherein the time to delay by the control means differs according to the combination of the cards.

17. The gaming machine according to claim 14, further comprising sound generating means for emitting sound wherein an attraction with image display and/or sound emission is carried out when the time control means controls the time.

18. The gaming machine according to any one of claims 14 to 17, wherein it is determined by a lottery that the time control means controls the time.

19. The gaming machine according to any one of claims 14 to 18, wherein the display means displays other faces of the cards than faces thereof on which symbols are depicted.

20. A gaming machine comprising:

extraction means for extracting a predetermined number of cards from a plurality of cards having respective symbols;
display means for displaying the predetermined number of cards extracted by the extraction means;
card exchange means for exchanging at least one of the predetermined number of cards based on an operation by a player such that cards extracted by the extraction means are displayed;
storage means for storing a plurality of combinations of cards;
determination means for determining whether a combination of cards which initially exist and remain, and are added in exchange by the card exchange means matches any of the plurality of combinations of cards stored by the storage means; and
display order change means for changing a display order of the cards to be displayed based on a determination result by the determination means.

21. The gaming machine according to claim 20, wherein the determination means determines whether the combination of cards which initially exist and remain, and are added in exchange forms any of the plurality of combinations; and

wherein the display order change means changes the display order of the cards added in exchange such that the winning combination that is determined to be formed by the determination means is formed as the cards are displayed.

22. The gaming machine according to claim 20, wherein the determination means determines whether the combination of cards which initially exist and remain, and are added in exchange forms any of the plurality of combinations; and

wherein the display order change means changes the display order of the cards such that one of the cards is displayed after the rest cards are. displayed.

23. The gaming machine according to claim 20, wherein the storage means stores ranks in association with respective winning combinations:

wherein the determination means determines a winning combination of highest rank to be formed by assuming one of the cards in exchange is any possible type of card; and

wherein the display order change means changes an order of redisplay based on a determination result by the determination means.

24. The gaming machine according to claim 20, wherein the display order change means changes the order of redisplay such that the assumed one card is redisplayed later than any other cards in exchange.

25. A server being connected via a communication line to terminal devices, each of which comprises display means for displaying extracted cards from cards having respective symbols, the server controlling the terminal devices, the server comprising:

card exchange means for exchanging at least one of the cards displayed on the display mean based on an operation by a player such that cards replacing the at least one of the cards are displayed in an order;
storage means for storing a plurality of winning combinations of a plurality of cards;
determination means for determining in advance whether a combination of the cards which initially exist and remain, and are added in exchange by the card exchange means matches any of the plurality of winning combinations in reference to the storage means; and
display order change means for changing a display order of the added cards to be displayed based on a determination result by the determination means.

26. A program making a computer execute a game comprising the steps of:

displaying cards extracted from a plurality of cards having respective symbols;
displaying cards in an order, which replace the at least one of the extracted cards based on an operation by a player;
storing a plurality of winning combinations of a plurality of cards;

determining whether a combination of cards which are initially extracted and remain, and replace matches a specific winning combination; and

changing a card display order of the replacing cards based on a determination result obtained in the determination step.

27. A gaming machine comprising:

a storage unit which stores a program running a game and data, the storage unit being installed on the gaming machine;

a processor which reads and executes the program in communication with the storage unit; and

a display device which is controlled by the processor such that the display device displays progress of the game or a game effect;

wherein, as the program runs,

at least two cards among a plurality of cards having respective symbols are extracted such that it is determined whether a combination of the at least two cards matches any of a plurality of predetermined combinations among a plurality of combinations being constituted of the plurality of cards which are stored in the storage unit; and

the at least two cards are displayed on the display device at a display timing when it is determined that the combination of the at least two cards matches any of the plurality of predetermined combinations.

28. The gaming machine according to claim 27, wherein the display timing is controlled such that display of one of the at least two cards is delayed from a beginning of the game.

29. The gaming machine according to claim 27, wherein the display timing differs according to a type of the combination of the at least two cards.

30. The gaming machine according to claim 27, further comprising:

a speaker emitting sound, wherein an attraction with image display and/or sound emission is carried out when the display timing is controlled.

31. The gaming machine according to any one of claims 27 to 30, wherein it is determined by a lottery whether the display timing is controlled.

32. The gaming machine according to any one of claims 27 to 31, wherein the display device displays other faces of the at least two cards than faces thereof on which symbols are depicted.

33. A server being connected via a communication line to terminal devices, each of which comprises a display device which displays cards of a card game, the server controlling the terminal devices, the server comprising:

a processor which controls card display of the cards on the display device; and

a storage unit which stores a plurality of winning combinations of the card game;

wherein it is determined in advance whether a combination of the cards to be displayed matches any of the plurality of winning combinations in reference to the storage unit such that a display order of the cards to be displayed is changed based on a determination result and that the cards are successively displayed on the display device in the changed display order.

Fig. 1

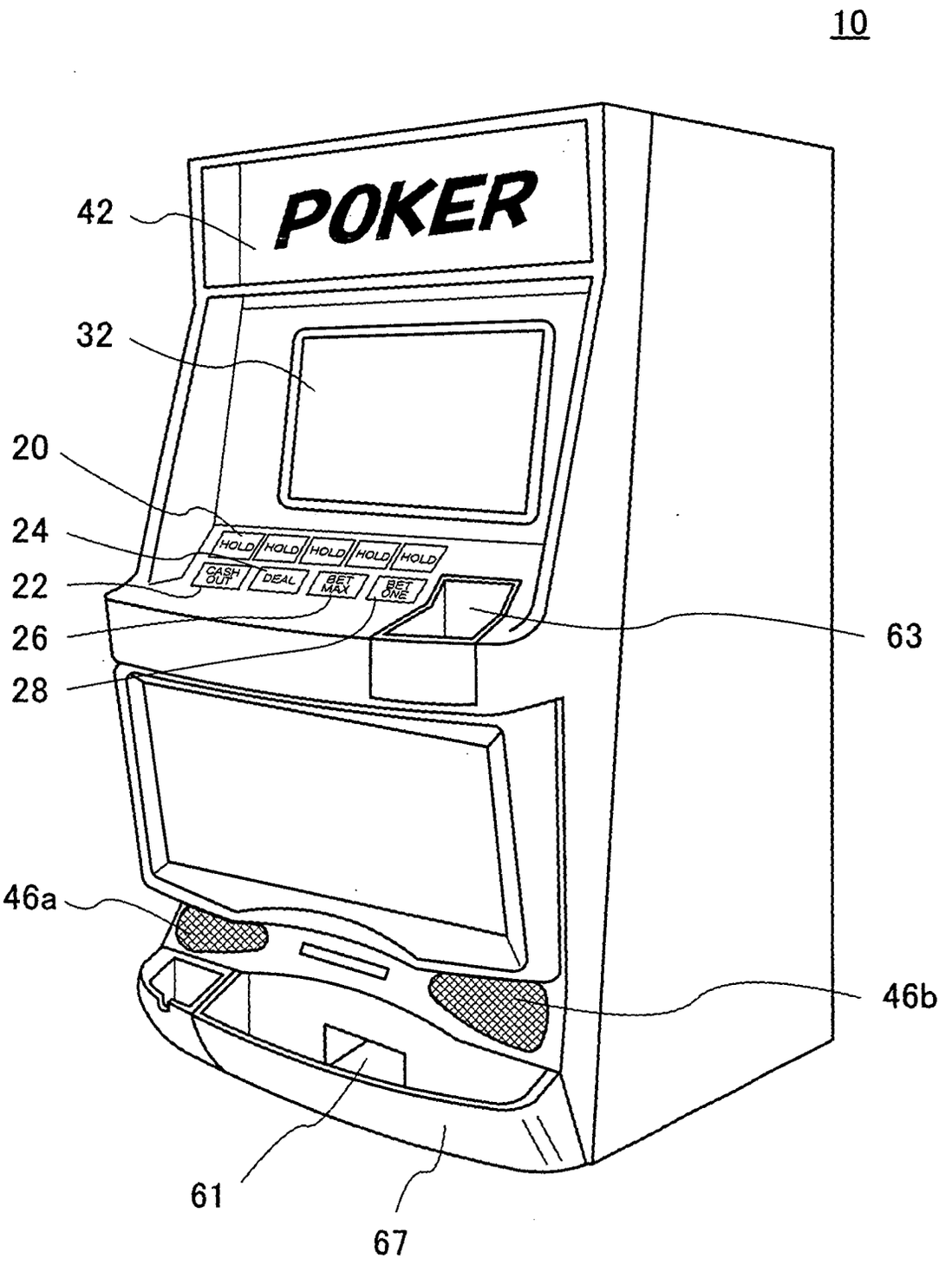

10
POKER
42
32
20
24
22
26
28
63
HOLD
HOLD
HOLD
HOLD
HOLD
CASH OUT
DEAL
BET MAX
BET ONE
46a
46b
61
67

Fig. 2

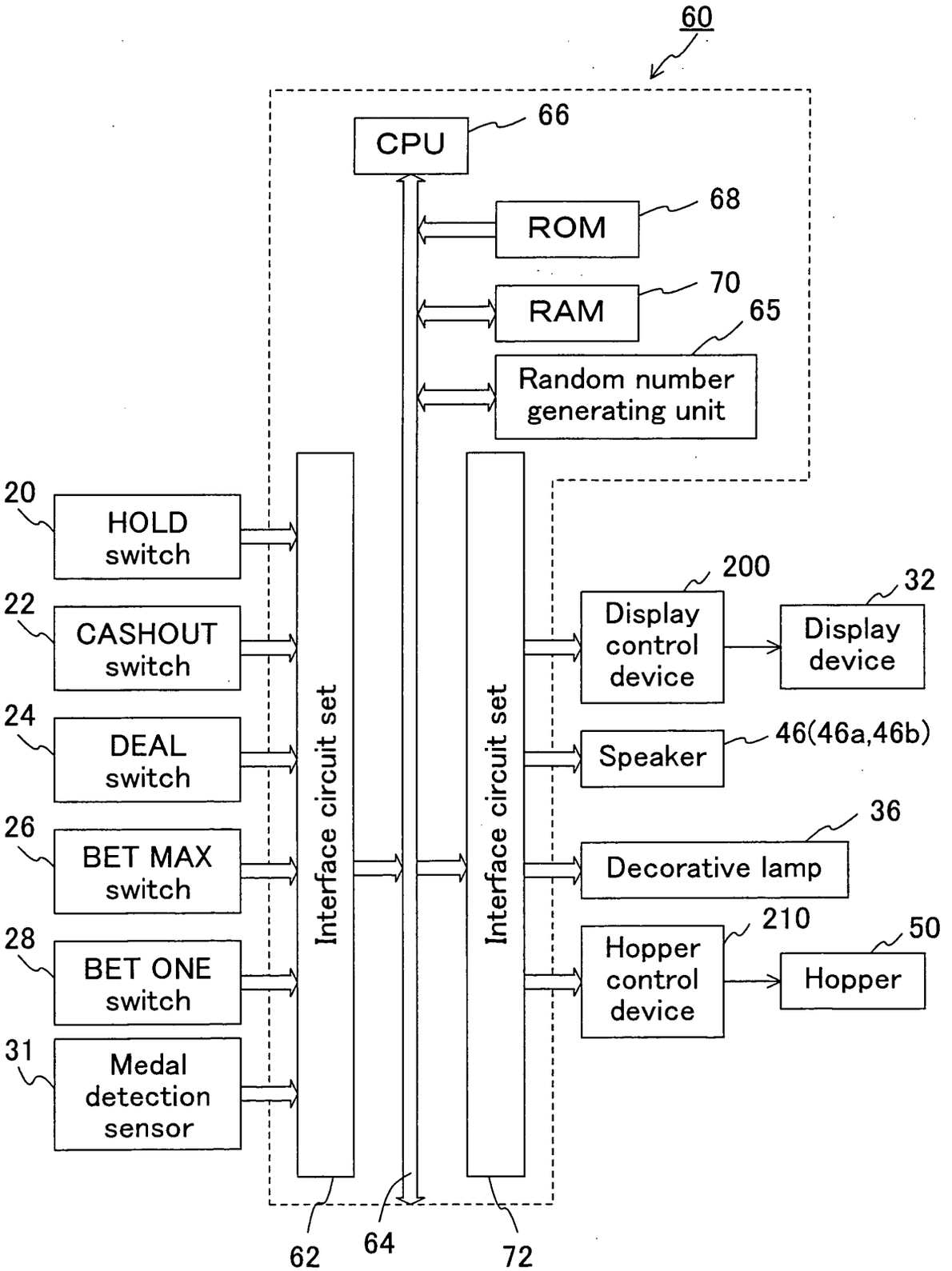

60
CPU
66
ROM
68
RAM
70
Random number generating unit
65
20
HOLD switch
22
CASHOUT switch
24
DEAL switch
26
BET MAX switch
28
BET ONE switch
31
Medal detection sensor
Interface circuit set
Interface circuit set
62
64
72
200
Display control device
32
Display device
Speaker
46(46a,46b)
36
Decorative lamp
210
Hopper control device
50
Hopper

Fig. 3

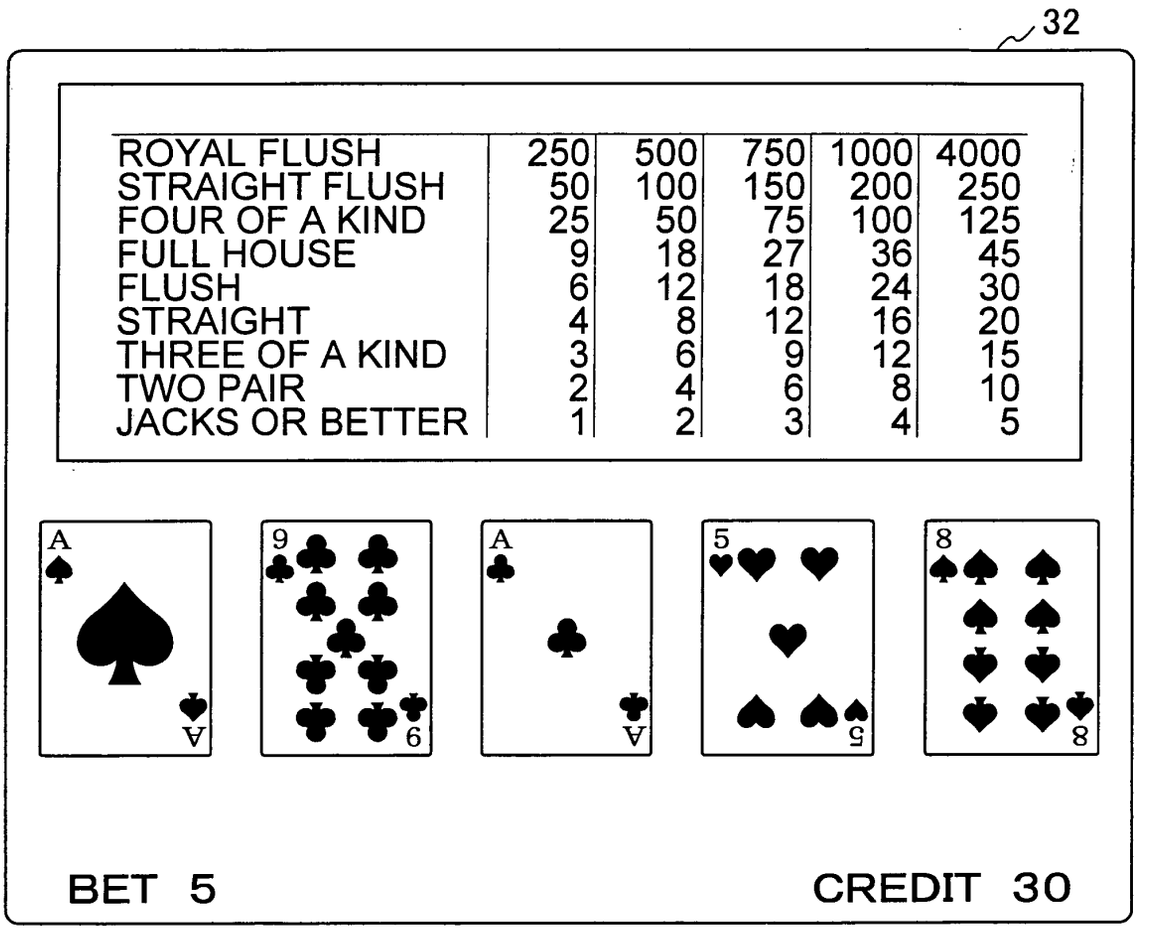

32
ROYAL FLUSH 250 500 750 1000 4000
STRAIGHT FLUSH 50 100 150 200 250
FOUR OF A KIND 25 50 75 100 125
FULL HOUSE 9 18 27 36 45
FLUSH 6 12 18 24 30
STRAIGHT 4 8 12 16 20
THREE OF A KIND 3 6 9 12 15
TWO PAIR 2 4 6 8 10
JACKS OR BETTER 1 2 3 4 5
BET 5
CREDIT 30

Fig. 4

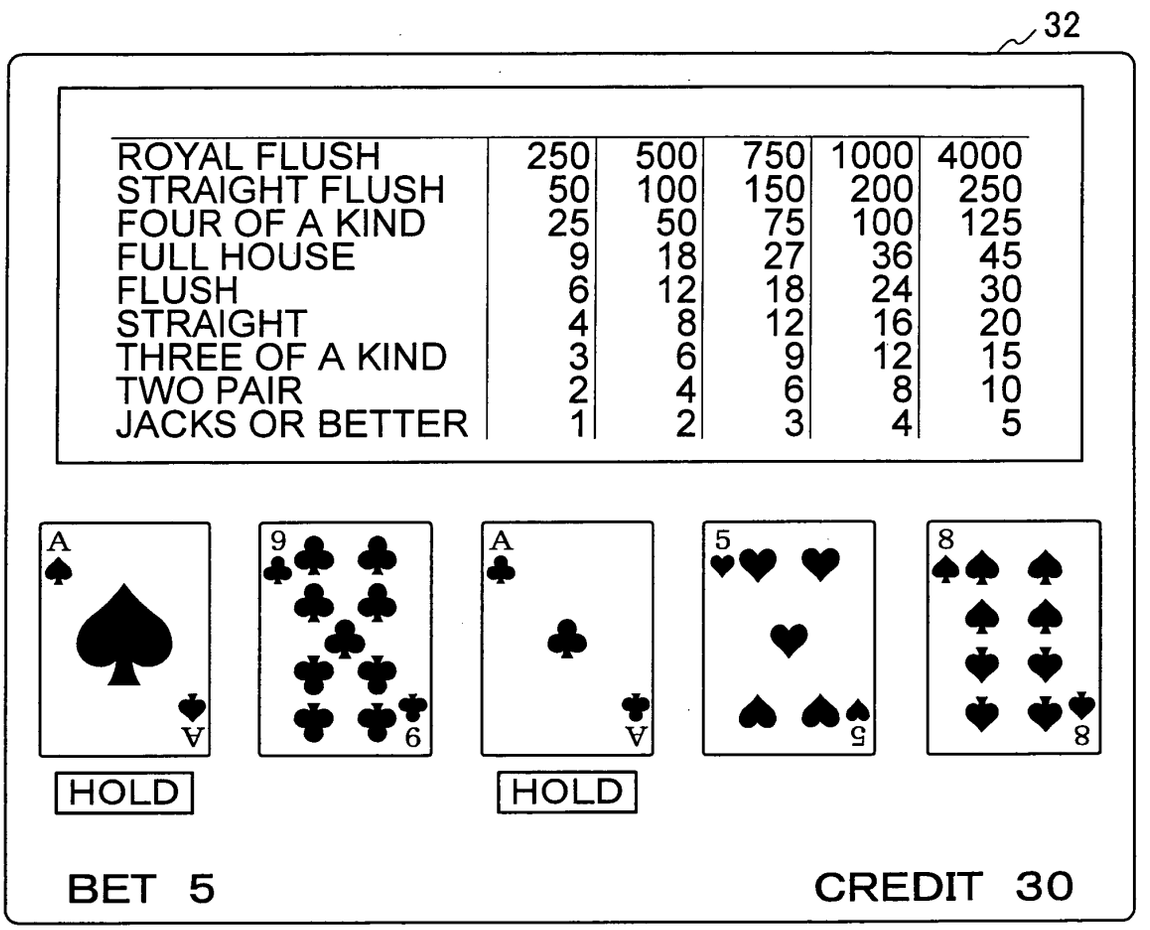

32
ROYAL FLUSH 250 500 750 1000 4000
STRAIGHT FLUSH 50 100 150 200 250
FOUR OF A KIND 25 50 75 100 125
FULL HOUSE 9 18 27 36 45
FLUSH 6 12 18 24 30
STRAIGHT 4 8 12 16 20
THREE OF A KIND 3 6 9 12 15
TWO PAIR 2 4 6 8 10
JACKS OR BETTER 1 2 3 4 5
HOLD
HOLD
BET 5
CREDIT 30

Fig. 5

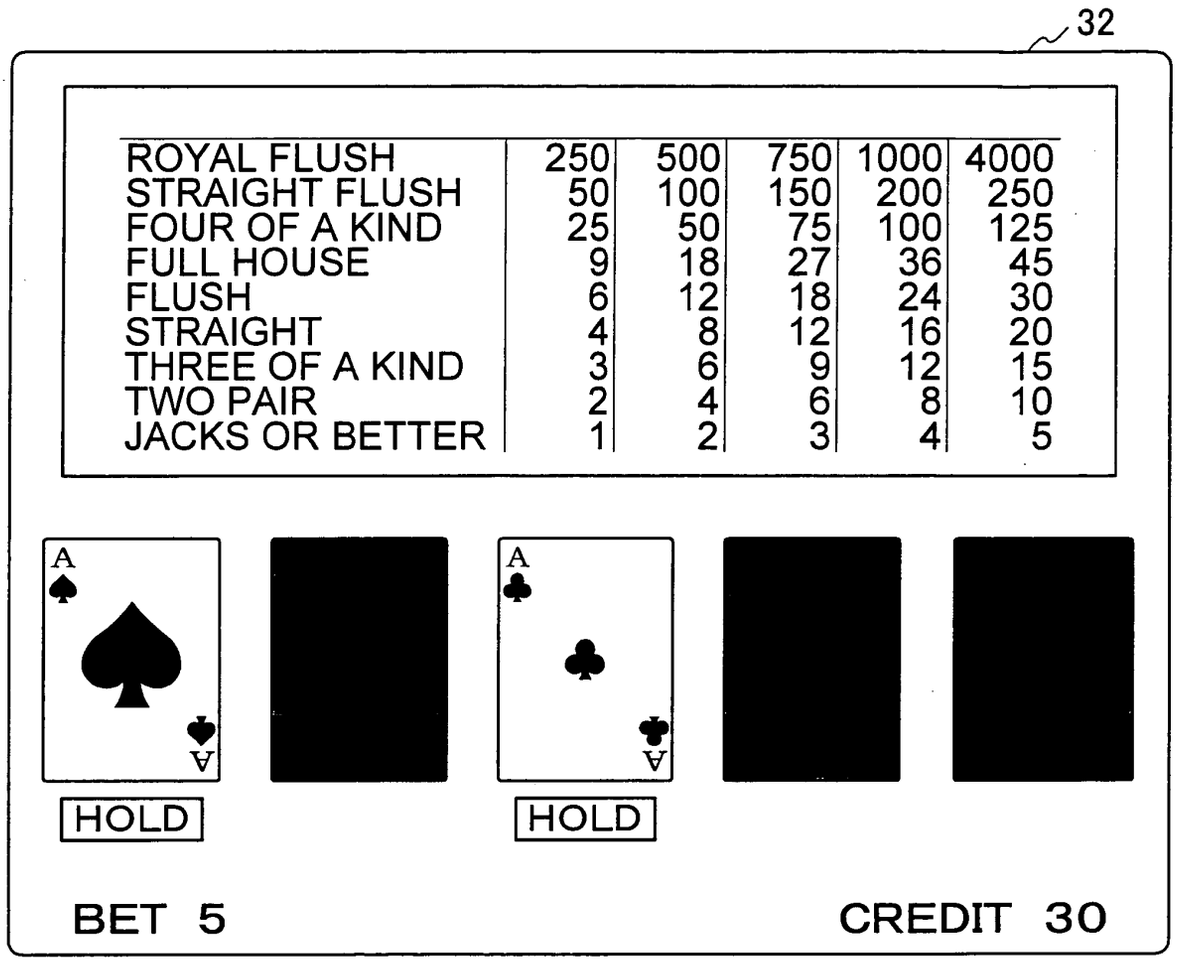

32
ROYAL FLUSH 250 500 750 1000 4000
STRAIGHT FLUSH 50 100 150 200 250
FOUR OF A KIND 25 50 75 100 125
FULL HOUSE 9 18 27 36 45
FLUSH 6 12 18 24 30
STRAIGHT 4 8 12 16 20
THREE OF A KIND 3 6 9 12 15
TWO PAIR 2 4 6 8 10
JACKS OR BETTER 1 2 3 4 5
HOLD
HOLD
BET 5
CREDIT 30

Fig. 6

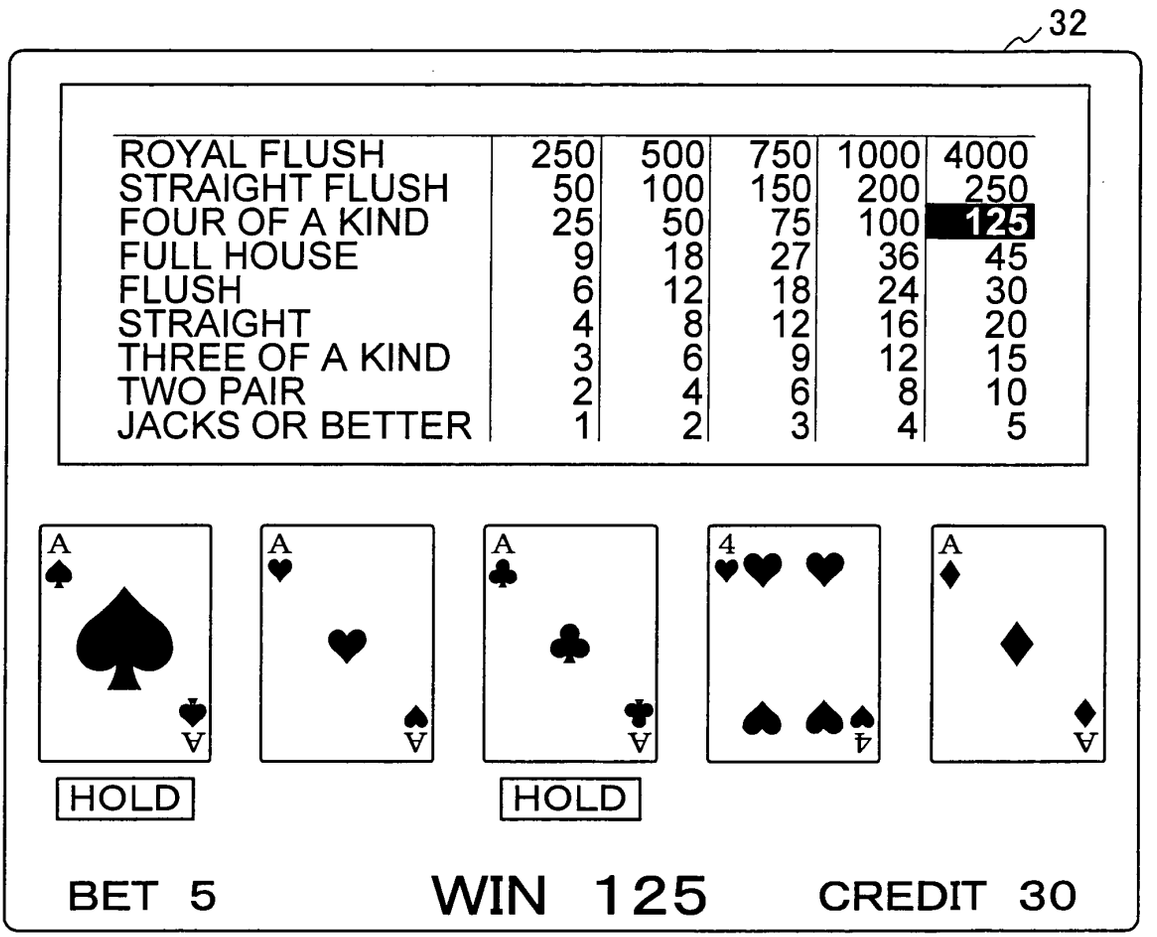

32
ROYAL FLUSH 250 500 750 1000 4000
STRAIGHT FLUSH 50 100 150 200 250
FOUR OF A KIND 25 50 75 100 125
FULL HOUSE 9 18 27 36 45
FLUSH 6 12 18 24 30
STRAIGHT 4 8 12 16 20
THREE OF A KIND 3 6 9 12 15
TWO PAIR 2 4 6 8 10
JACKS OR BETTER 1 2 3 4 5
HOLD
HOLD
BET 5
WIN 125
CREDIT 30

Fig. 7

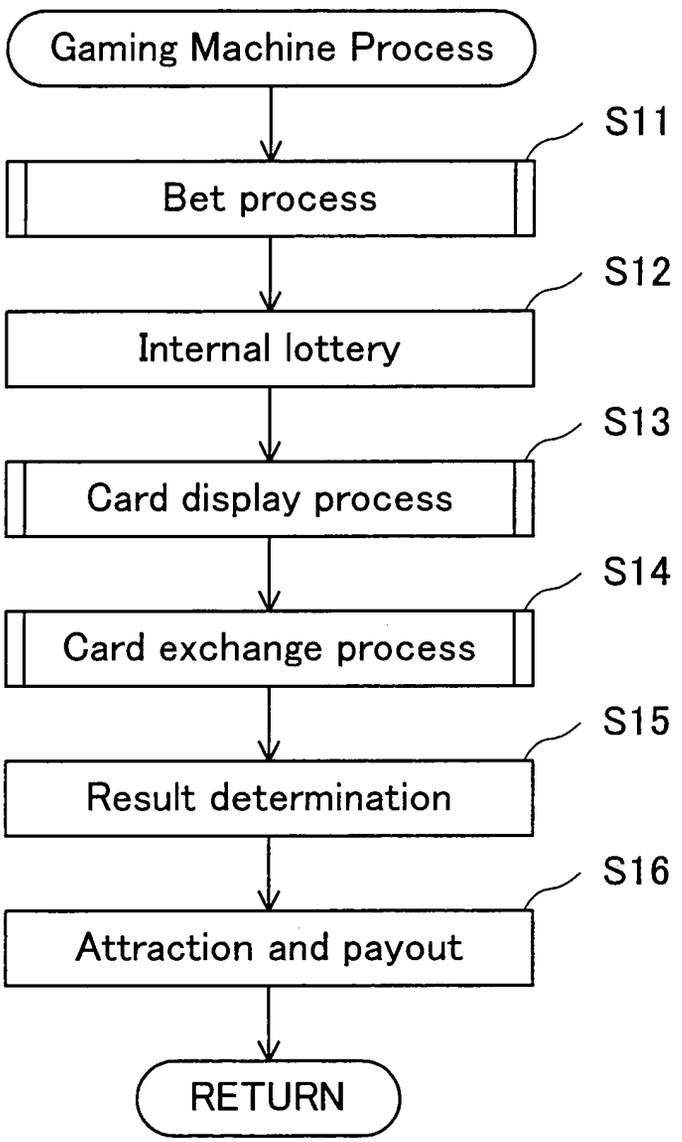

Gaming Machine Process
S11
Bet process
S12
Internal lottery
S13
Card display process
S14
Card exchange process
S15
Result determination
S16
Attraction and payout
RETURN

Fig. 8

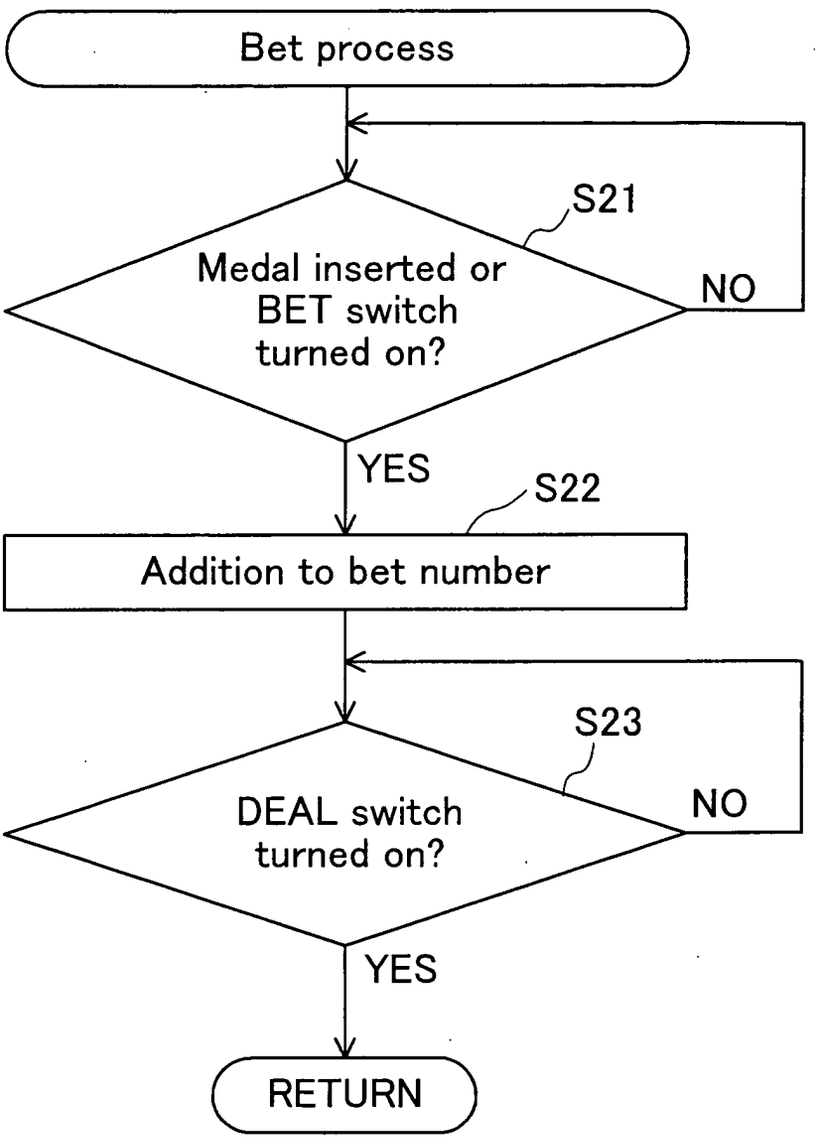

Bet process
S21
Medal inserted or BET switch turned on?
NO
YES
S22
Addition to bet number
S23
DEAL switch turned on?
NO
YES
RETURN

Fig. 9

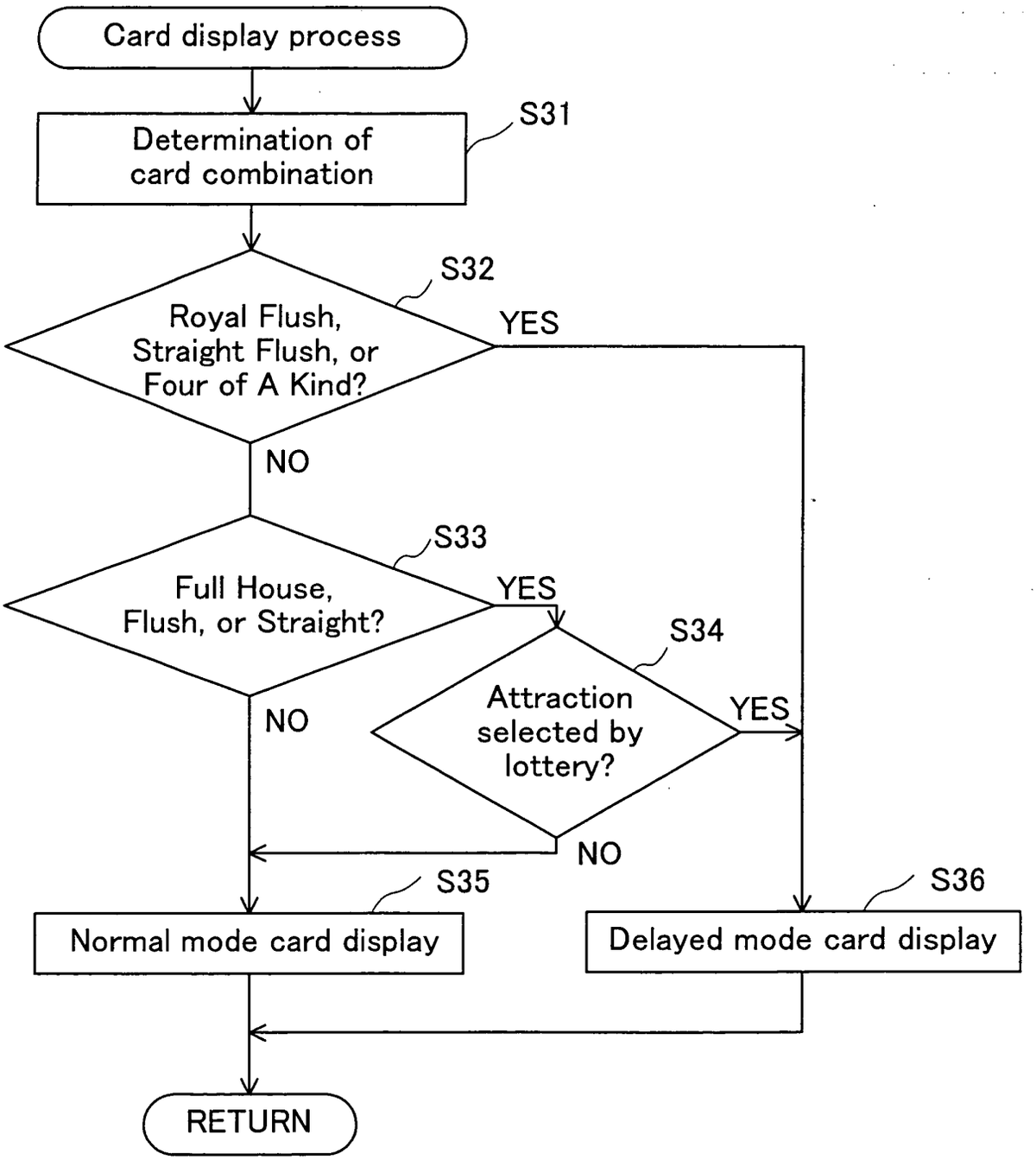

Card display process
Determination of card combination
S31
Royal Flush, Straight Flush, or Four of A Kind?
S32
YES
NO
Full House, Flush, or Straight?
S33
YES
NO
Attraction selected by lottery?
S34
YES
NO
Normal mode card display
S35
Delayed mode card display
S36
RETURN

Fig. 10

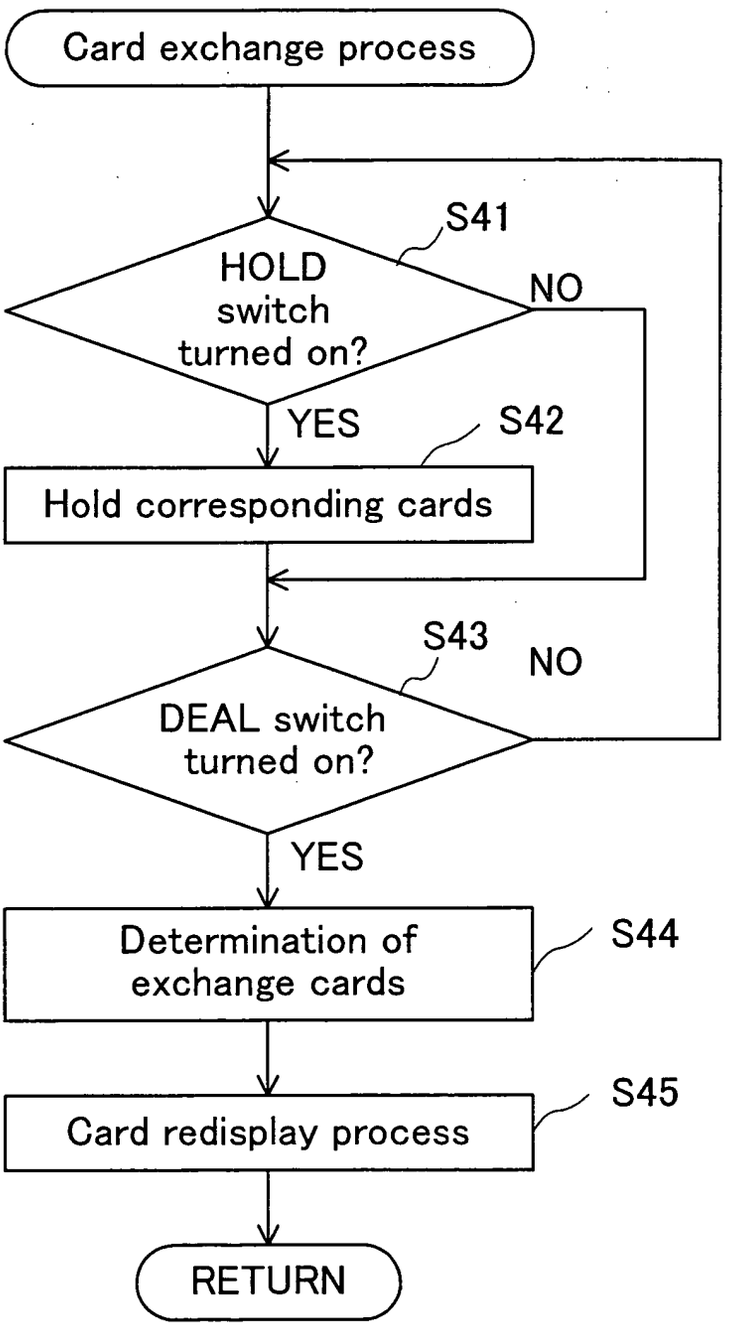

Card exchange process
S41
HOLD switch turned on?
NO
YES
S42
Hold corresponding cards
S43
NO
DEAL switch turned on?
YES
Determination of exchange cards
S44
Card redisplay process
S45
RETURN

Fig. 11

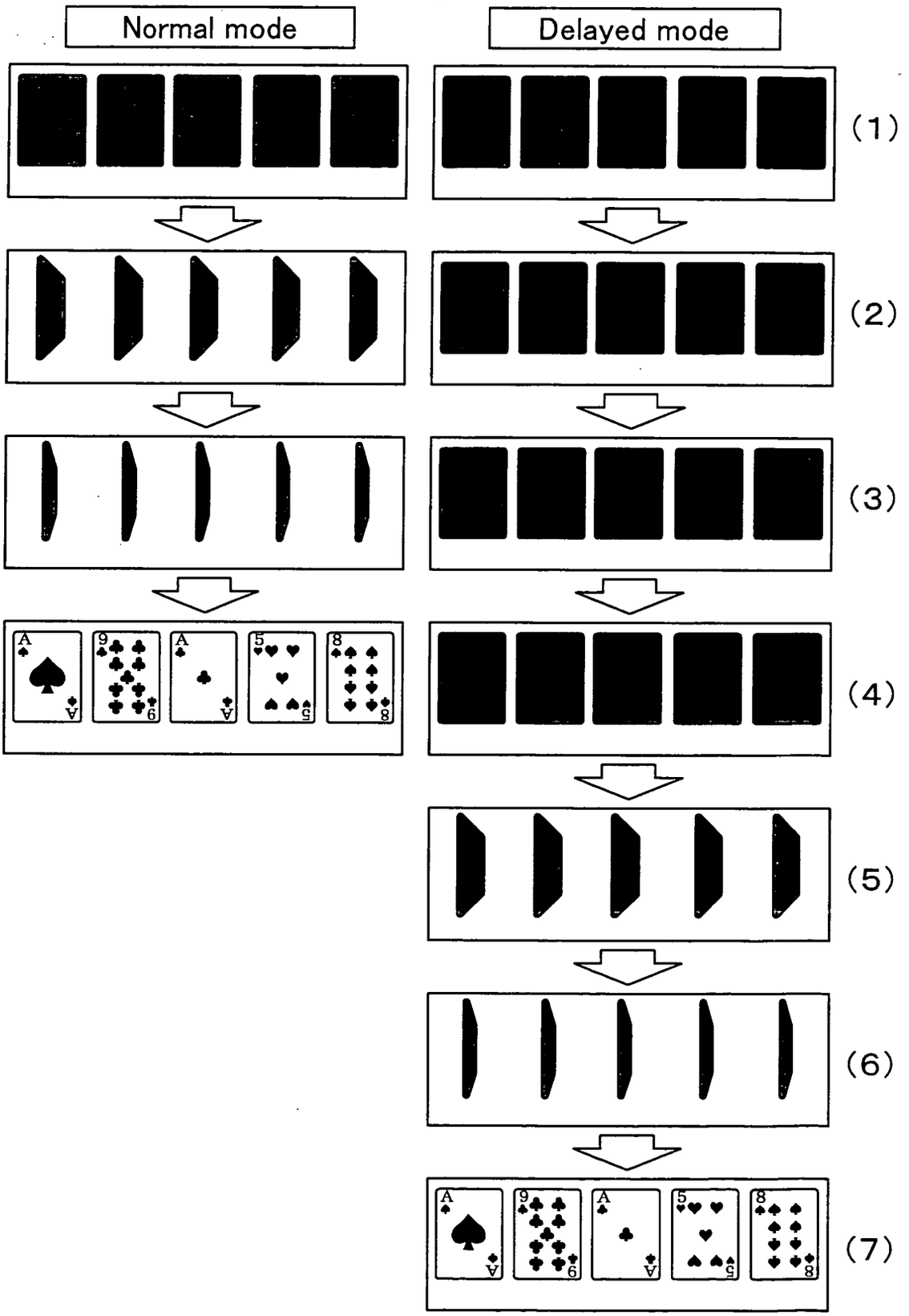


Fig. 12

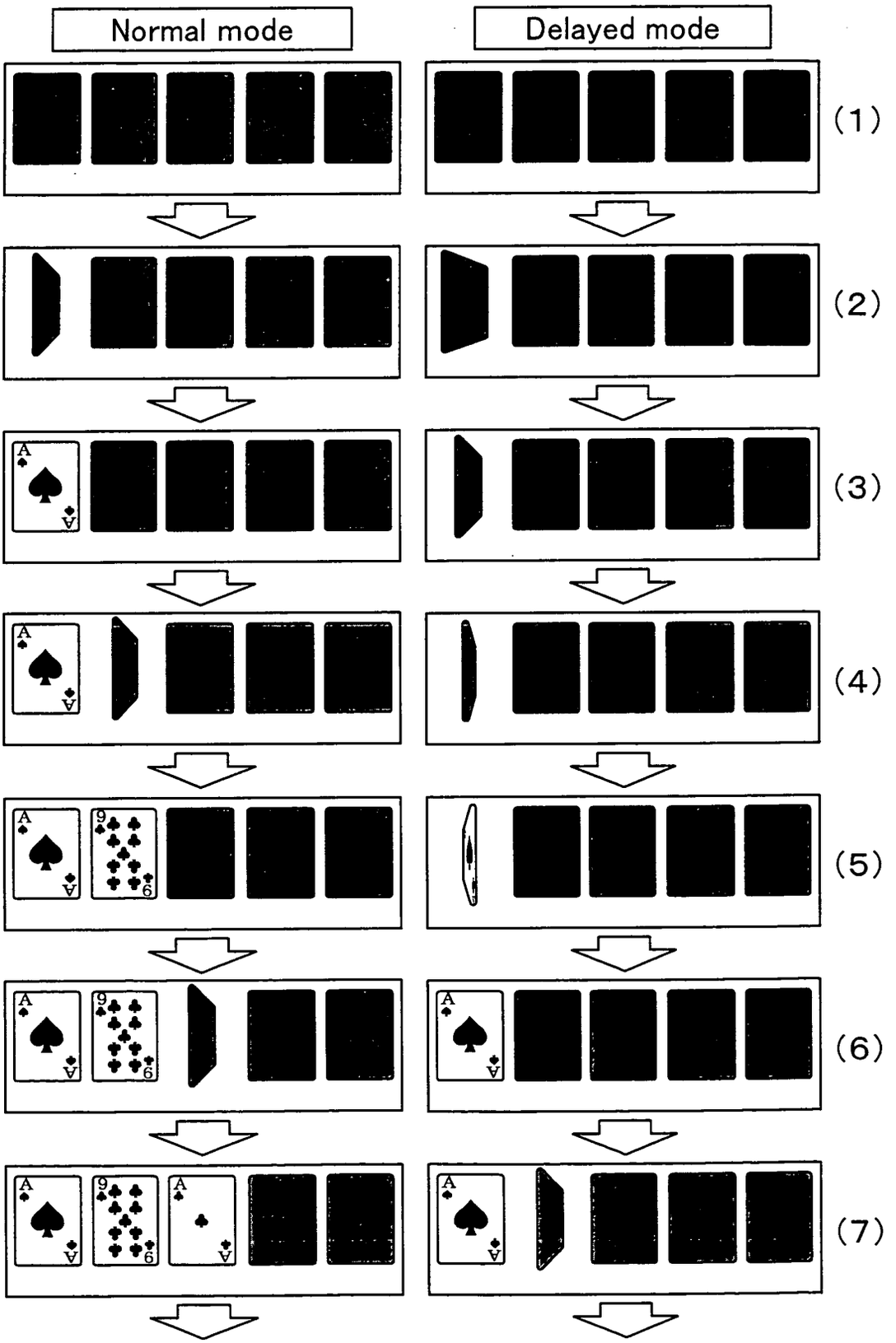


Fig. 13

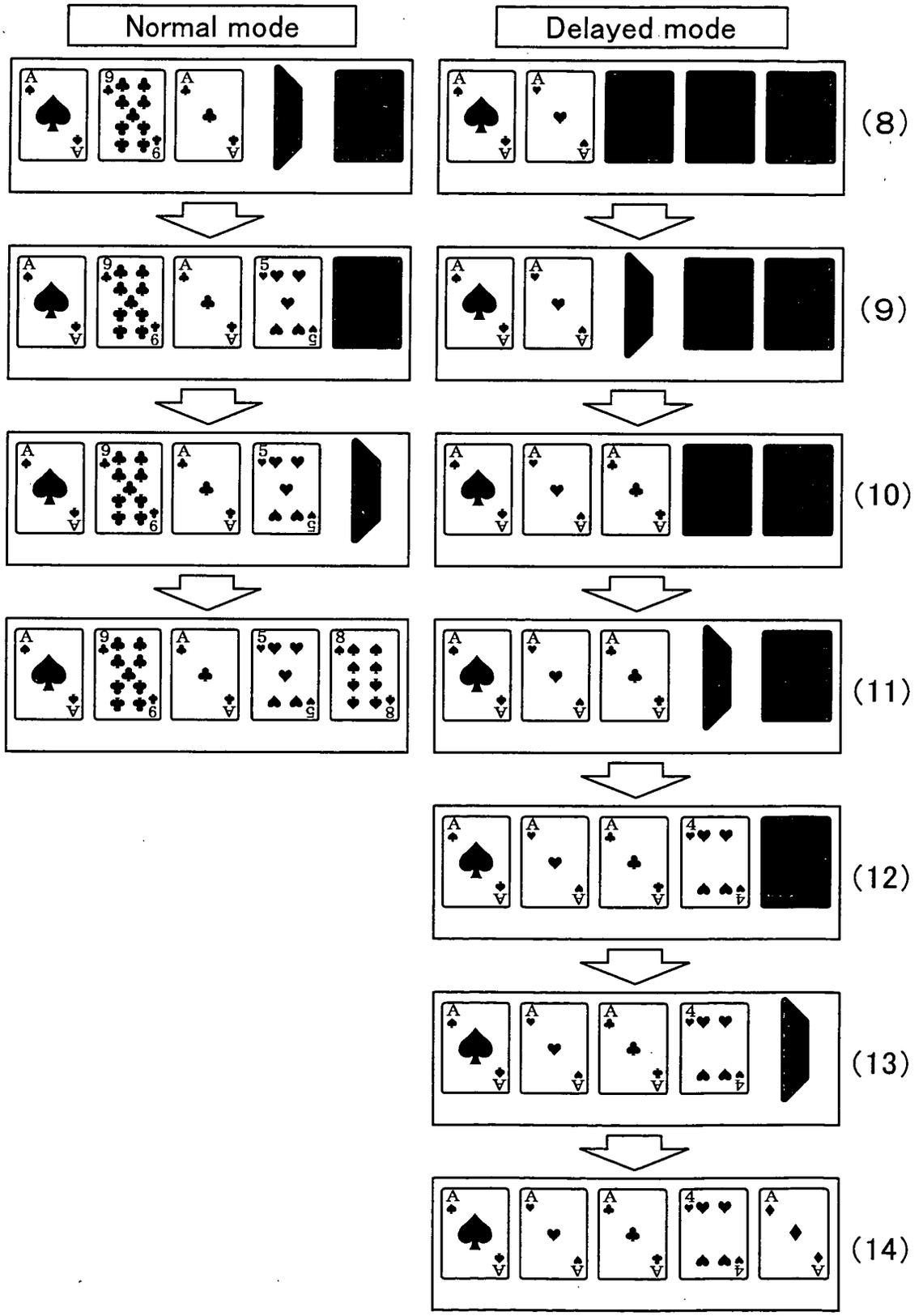


Fig. 14

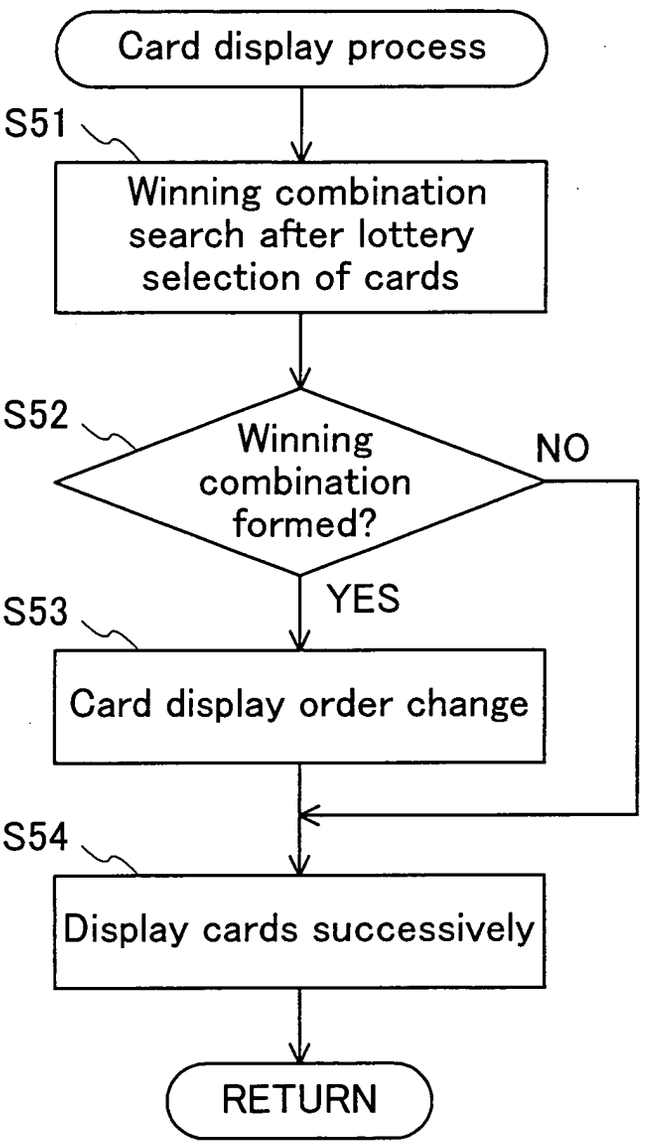

Card display process
S51
Winning combination search after lottery selection of cards
S52
Winning combination formed?
NO
YES
S53
Card display order change
S54
Display cards successively
RETURN

Fig. 15

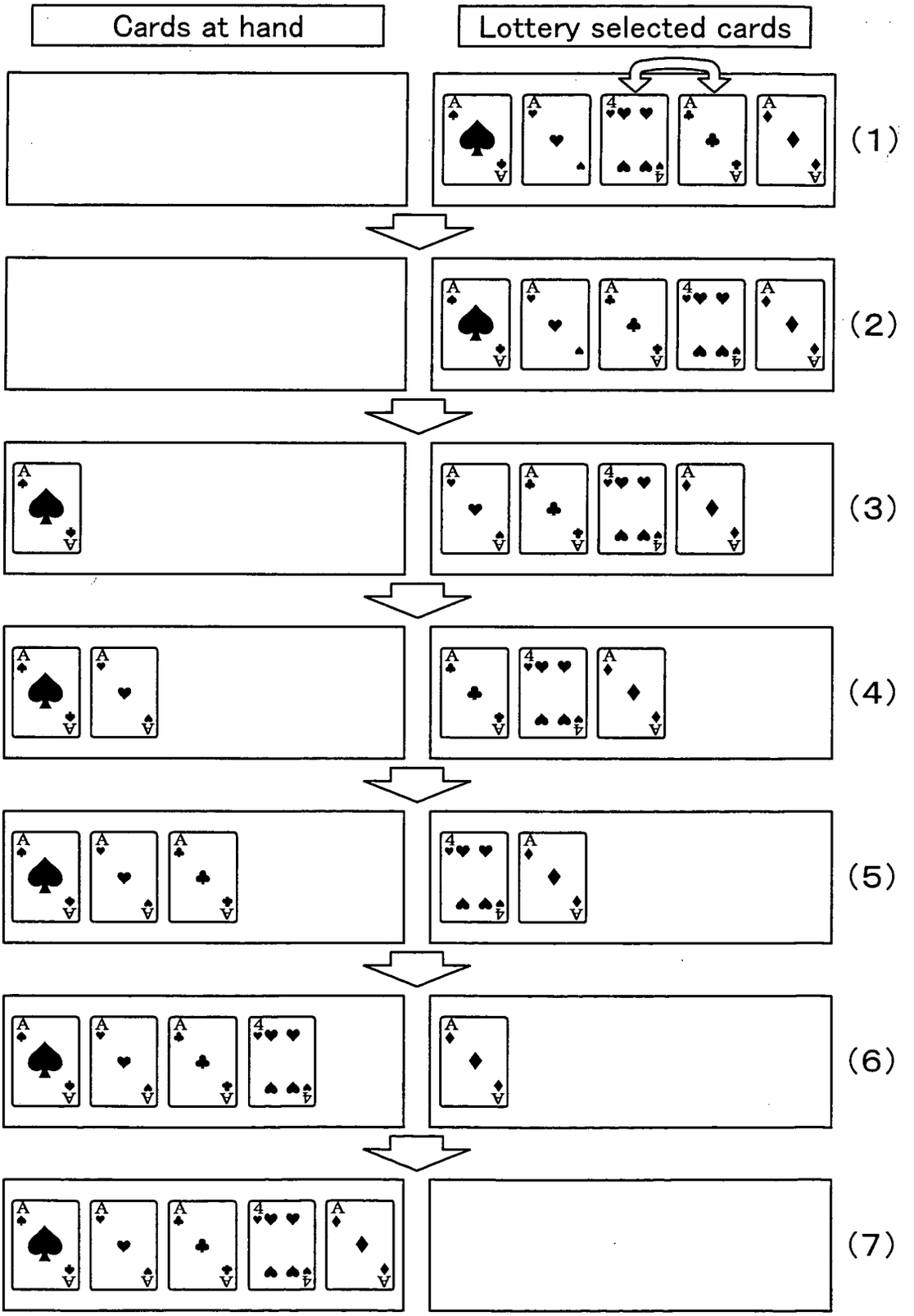


Fig. 16

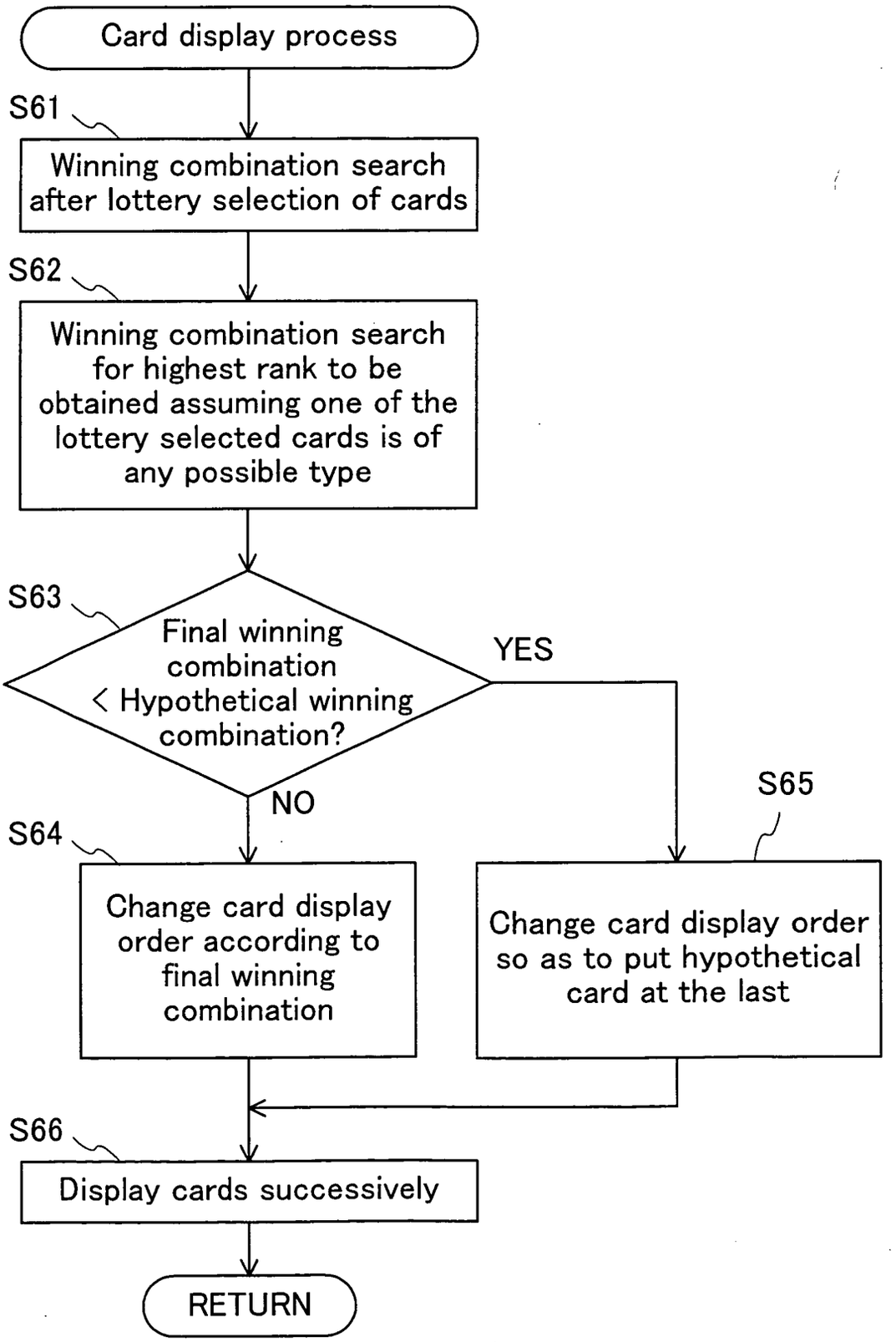

Card display process
S61
Winning combination search after lottery selection of cards
S62
Winning combination search for highest rank to be obtained assuming one of the lottery selected cards is of any possible type
S63
Final winning combination < Hypothetical winning combination?
YES
NO
S64
Change card display order according to final winning combination
S65
Change card display order so as to put hypothetical card at the last
S66
Display cards successively
RETURN

Fig. 17

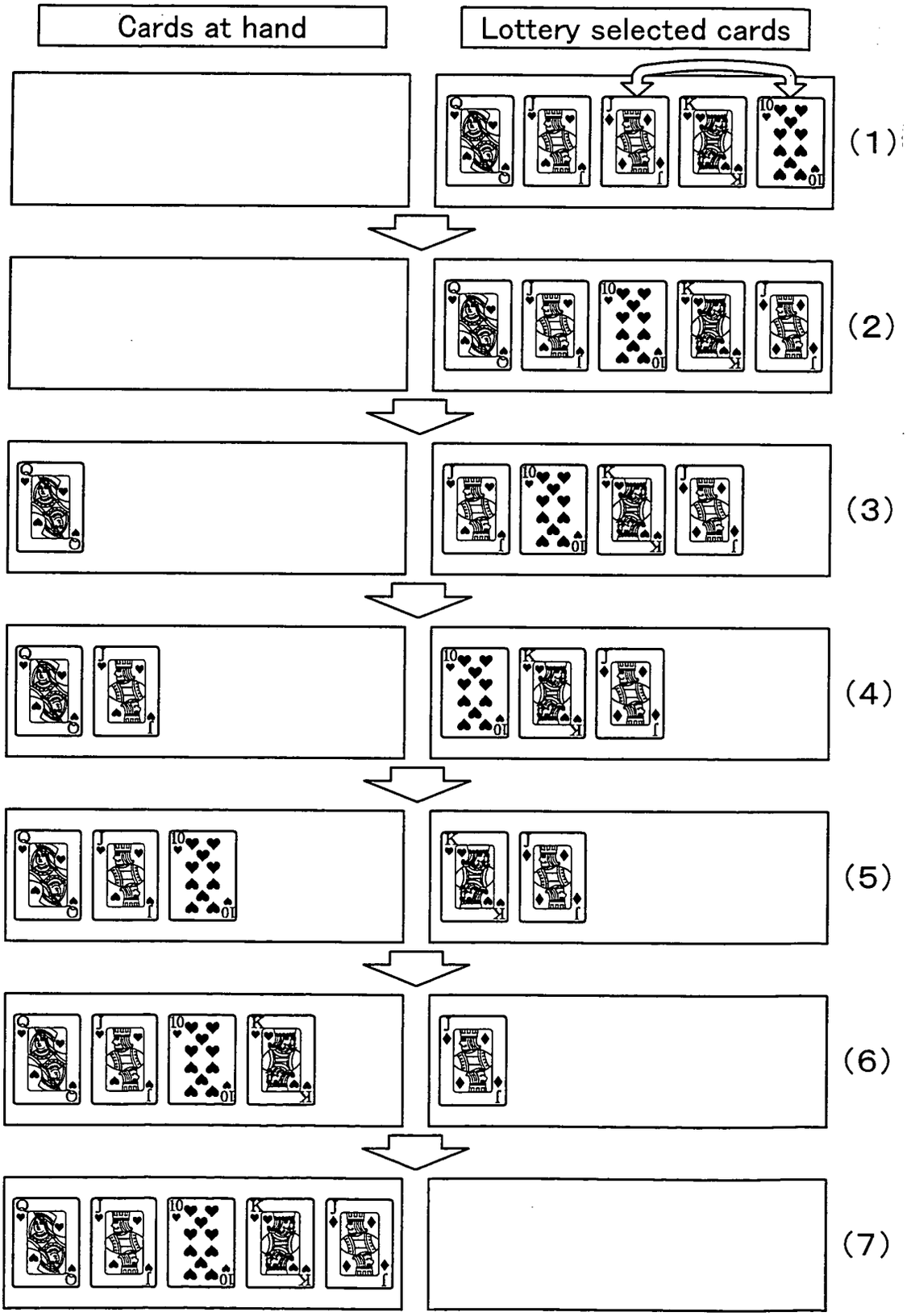


Fig. 18

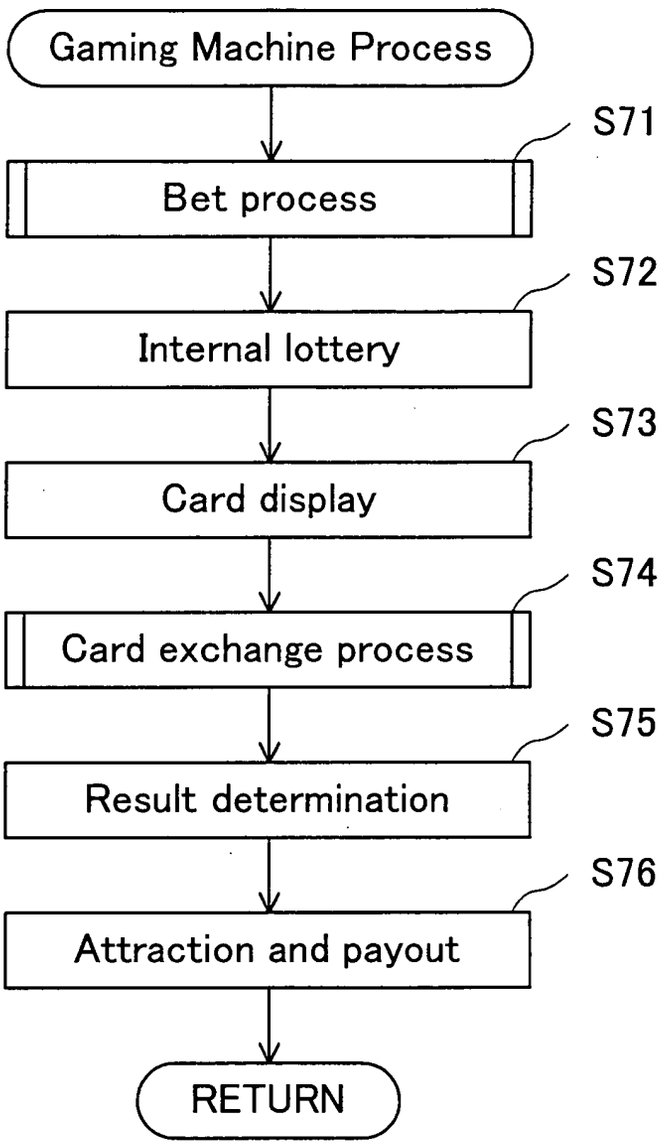

Gaming Machine Process
S71
Bet process
S72
Internal lottery
S73
Card display
S74
Card exchange process
S75
Result determination
S76
Attraction and payout
RETURN

Fig. 19

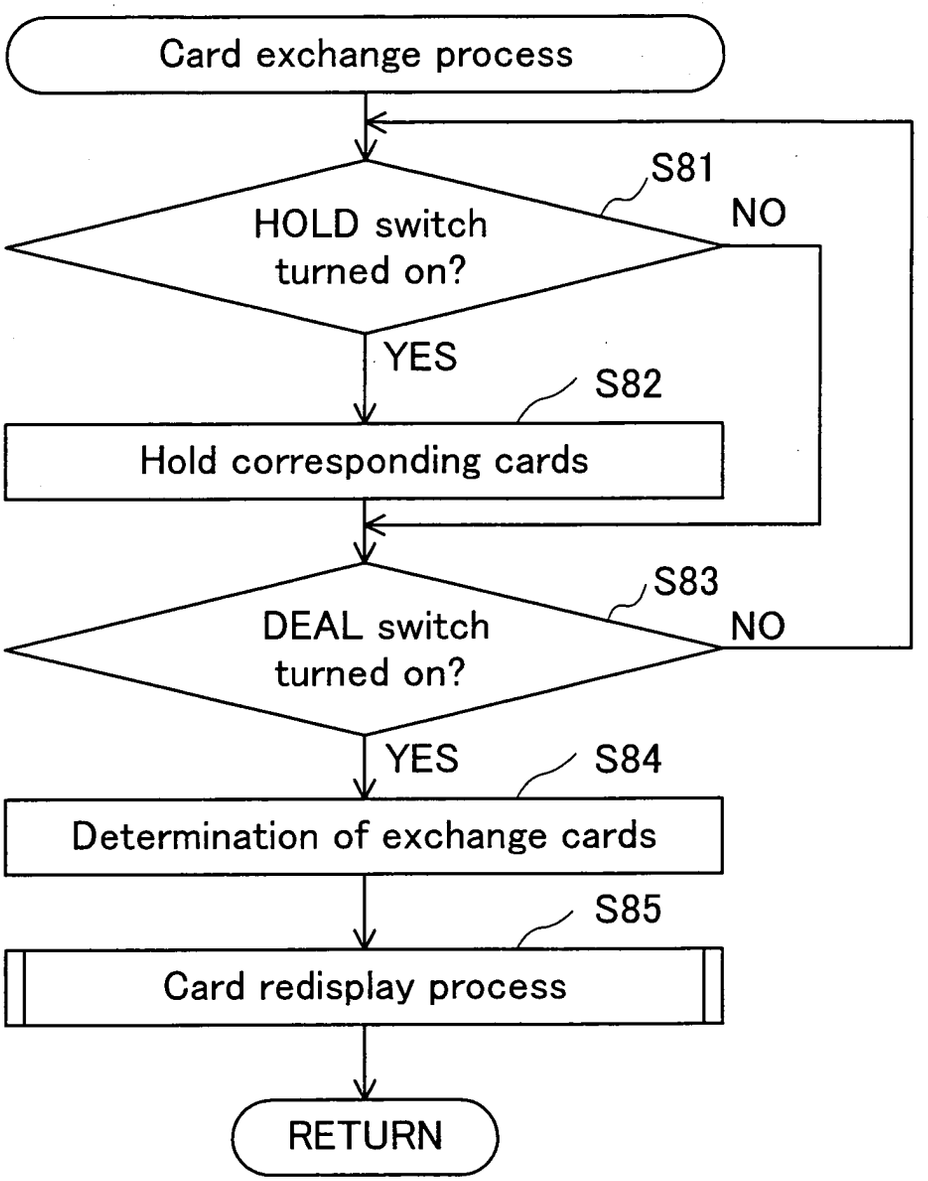

Card exchange process
S81
HOLD switch turned on?
NO
YES
S82
Hold corresponding cards
S83
DEAL switch turned on?
NO
YES
S84
Determination of exchange cards
S85
Card redisplay process
RETURN

Fig. 20

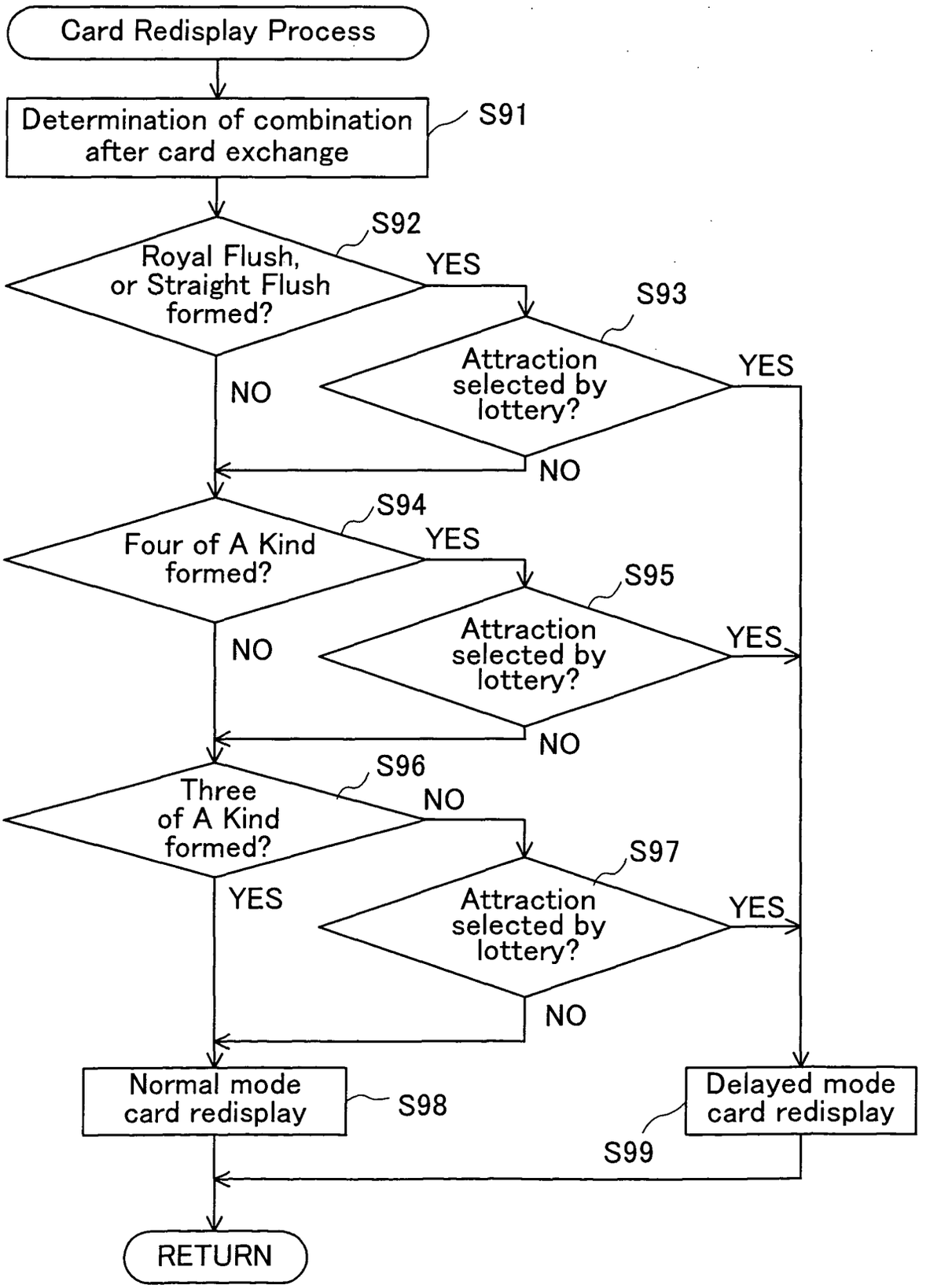

Card Redisplay Process
Determination of combination after card exchange
S91
Royal Flush, or Straight Flush formed?
S92
YES
NO
Attraction selected by lottery?
S93
YES
NO
Four of A Kind formed?
S94
YES
NO
Attraction selected by lottery?
S95
YES
NO
Three of A Kind formed?
S96
NO
YES
Attraction selected by lottery?
S97
YES
NO
Normal mode card redisplay
S98
Delayed mode card redisplay
S99
RETURN

Fig. 21

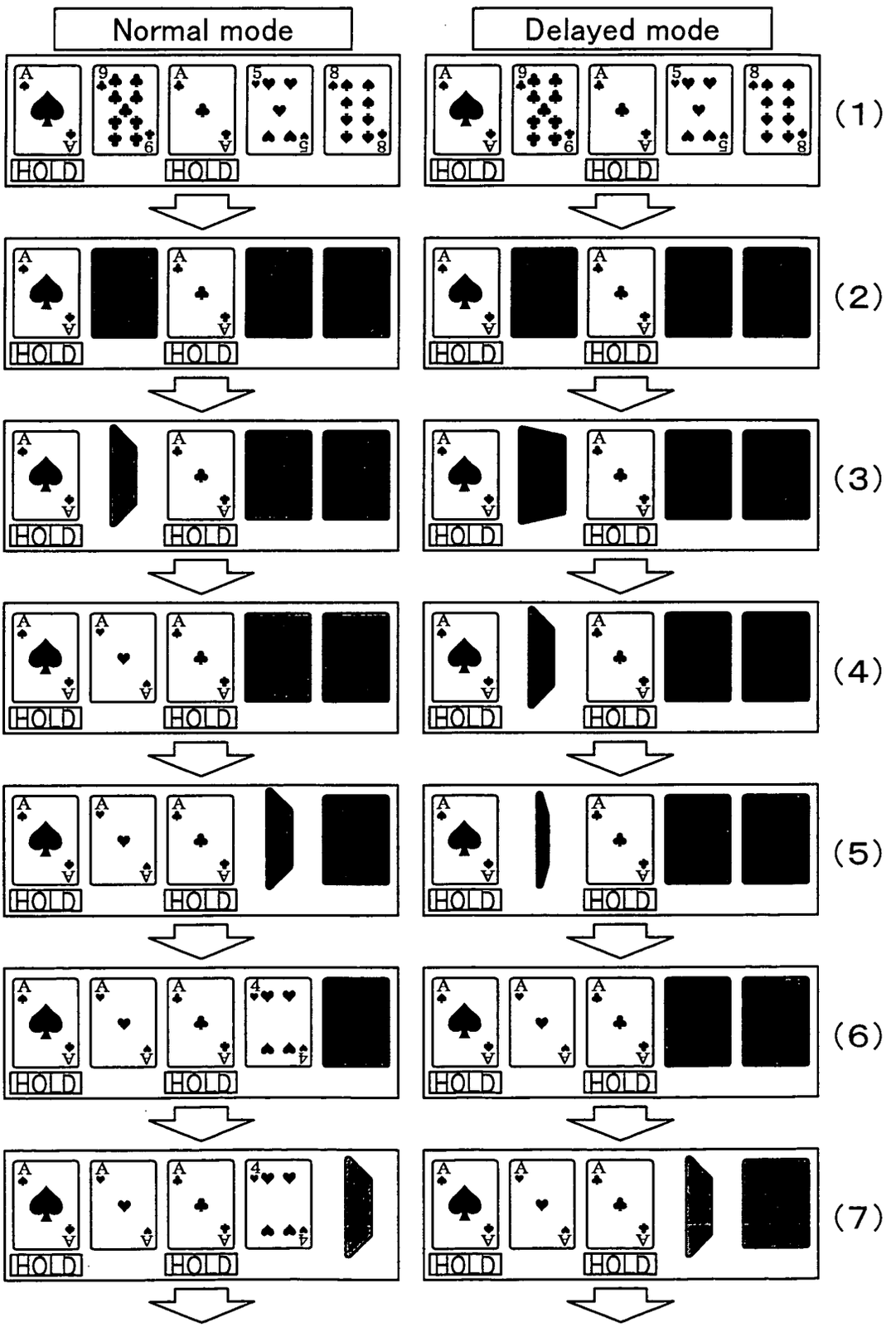


Fig. 22

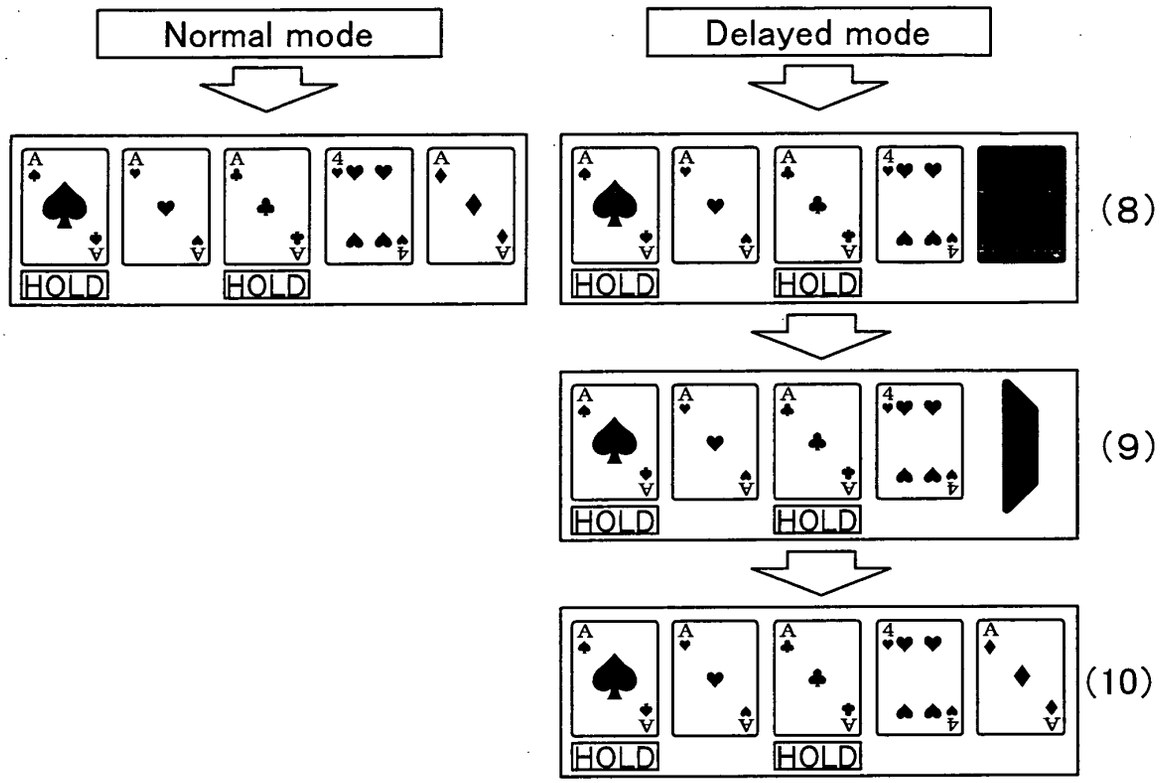


Fig. 23

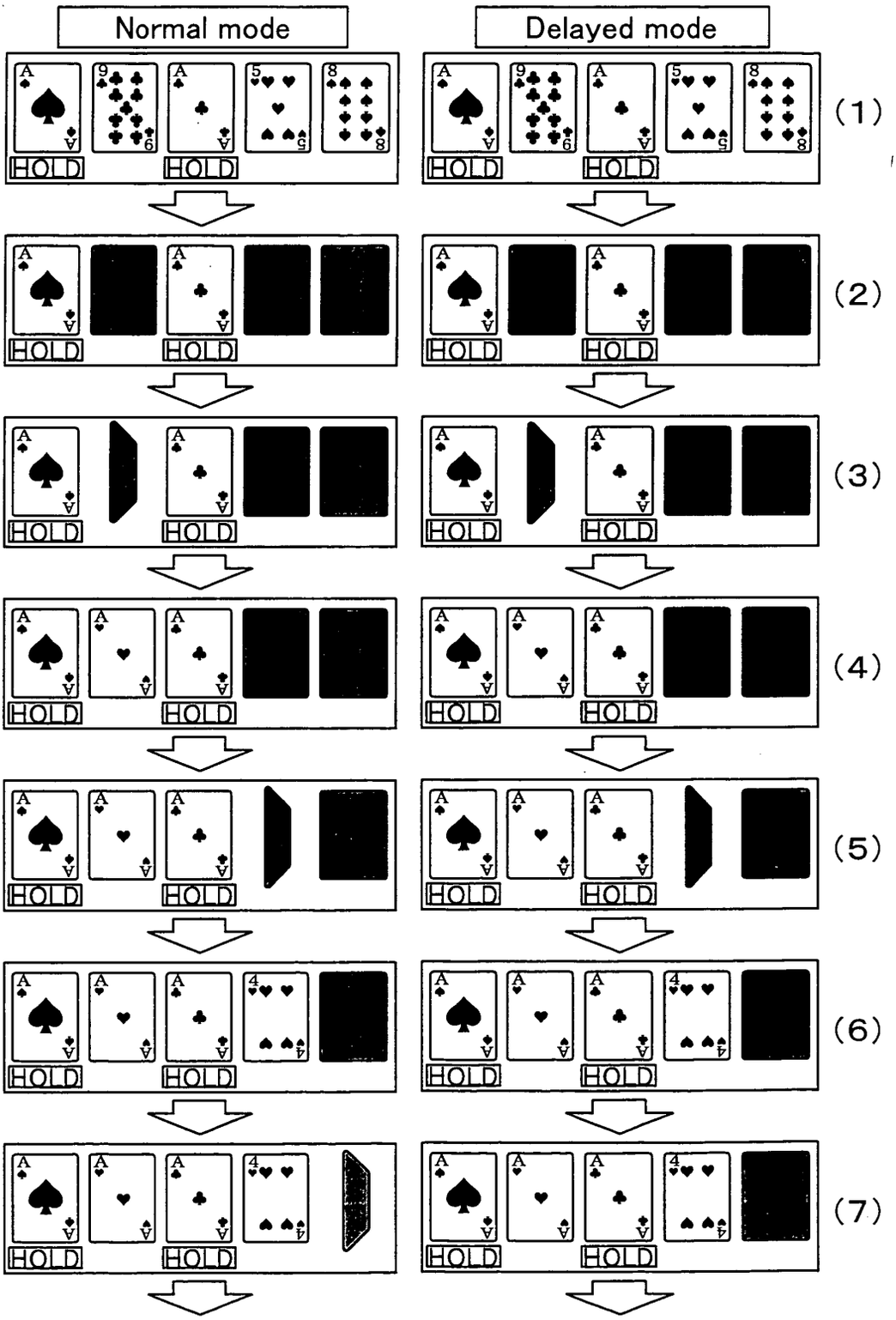


Fig. 24

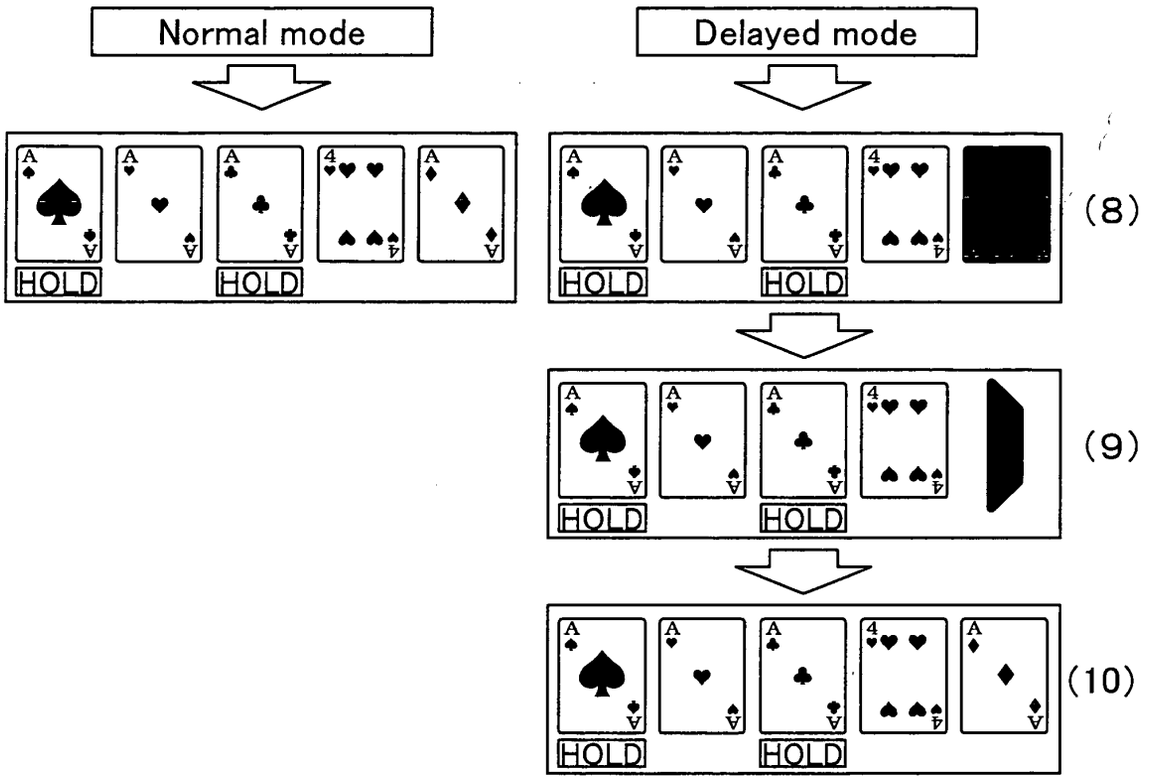


Fig. 25

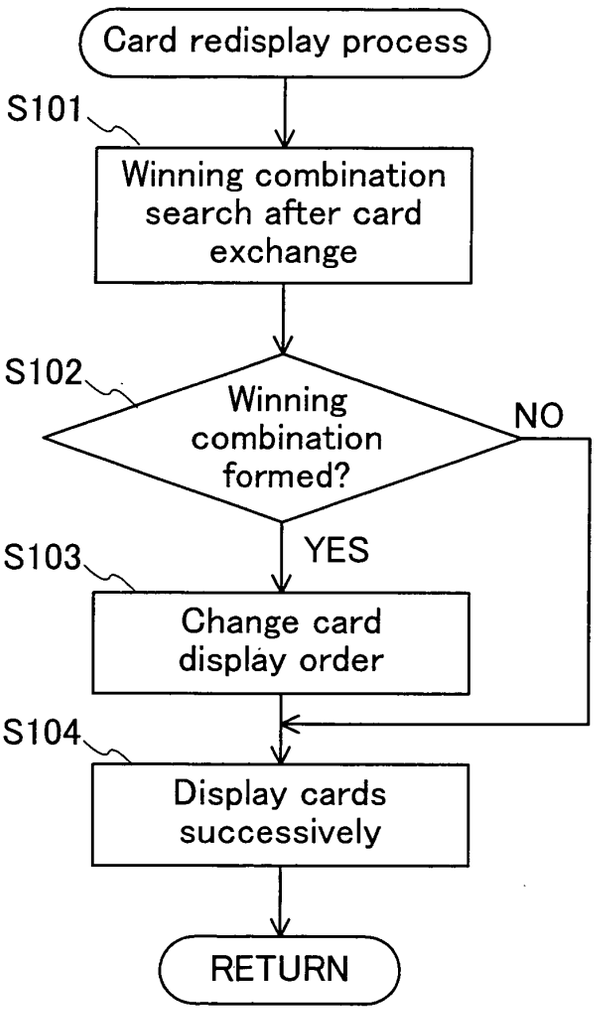

Card redisplay process
S101
Winning combination search after card exchange
S102
Winning combination formed?
NO
YES
S103
Change card display order
S104
Display cards successively
RETURN

Fig. 26

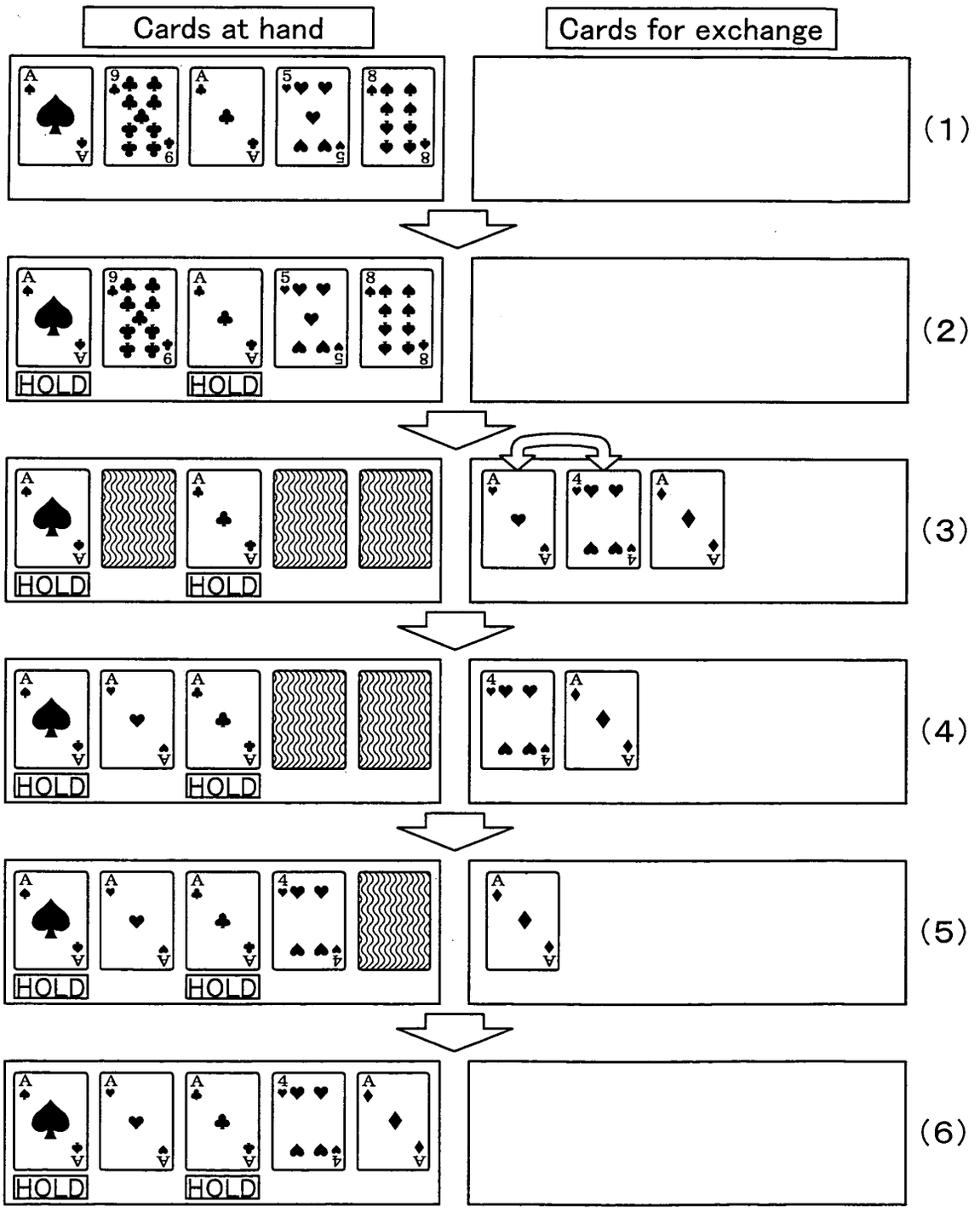


Fig. 27

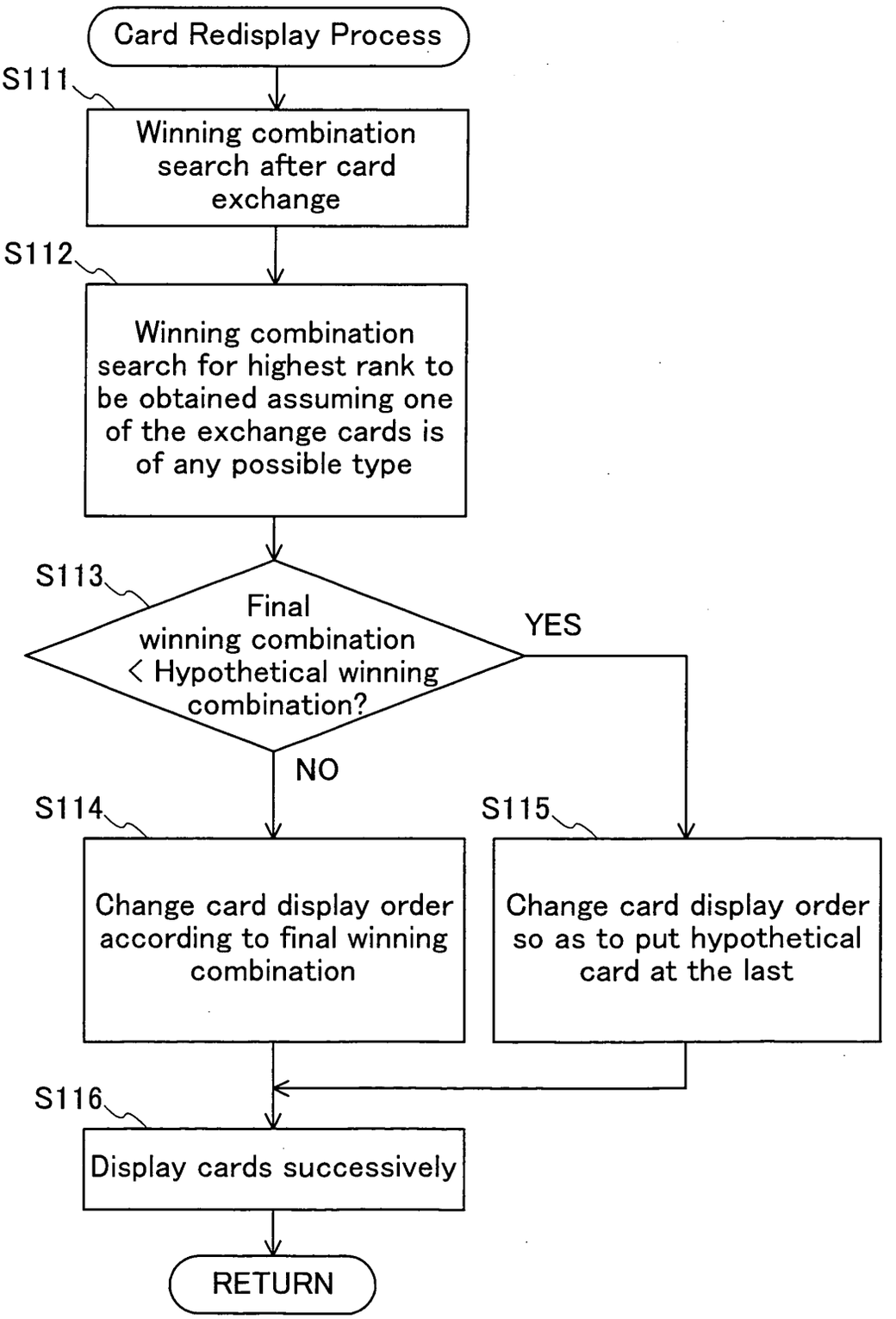

Card Redisplay Process
S111
Winning combination search after card exchange
S112
Winning combination search for highest rank to be obtained assuming one of the exchange cards is of any possible type
S113
Final winning combination < Hypothetical winning combination?
YES
NO
S114
Change card display order according to final winning combination
S115
Change card display order so as to put hypothetical card at the last
S116
Display cards successively
RETURN

Fig. 28

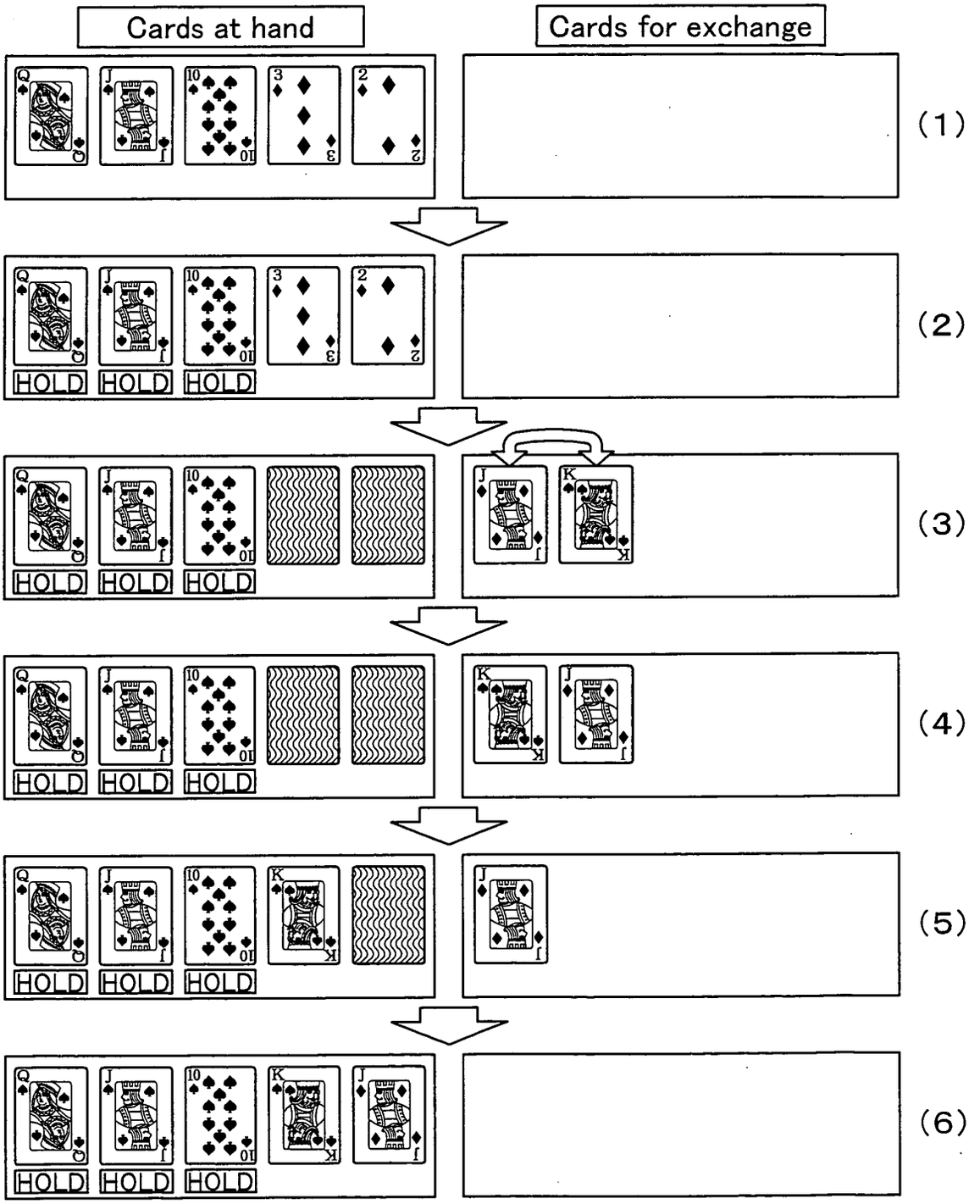


Fig. 29

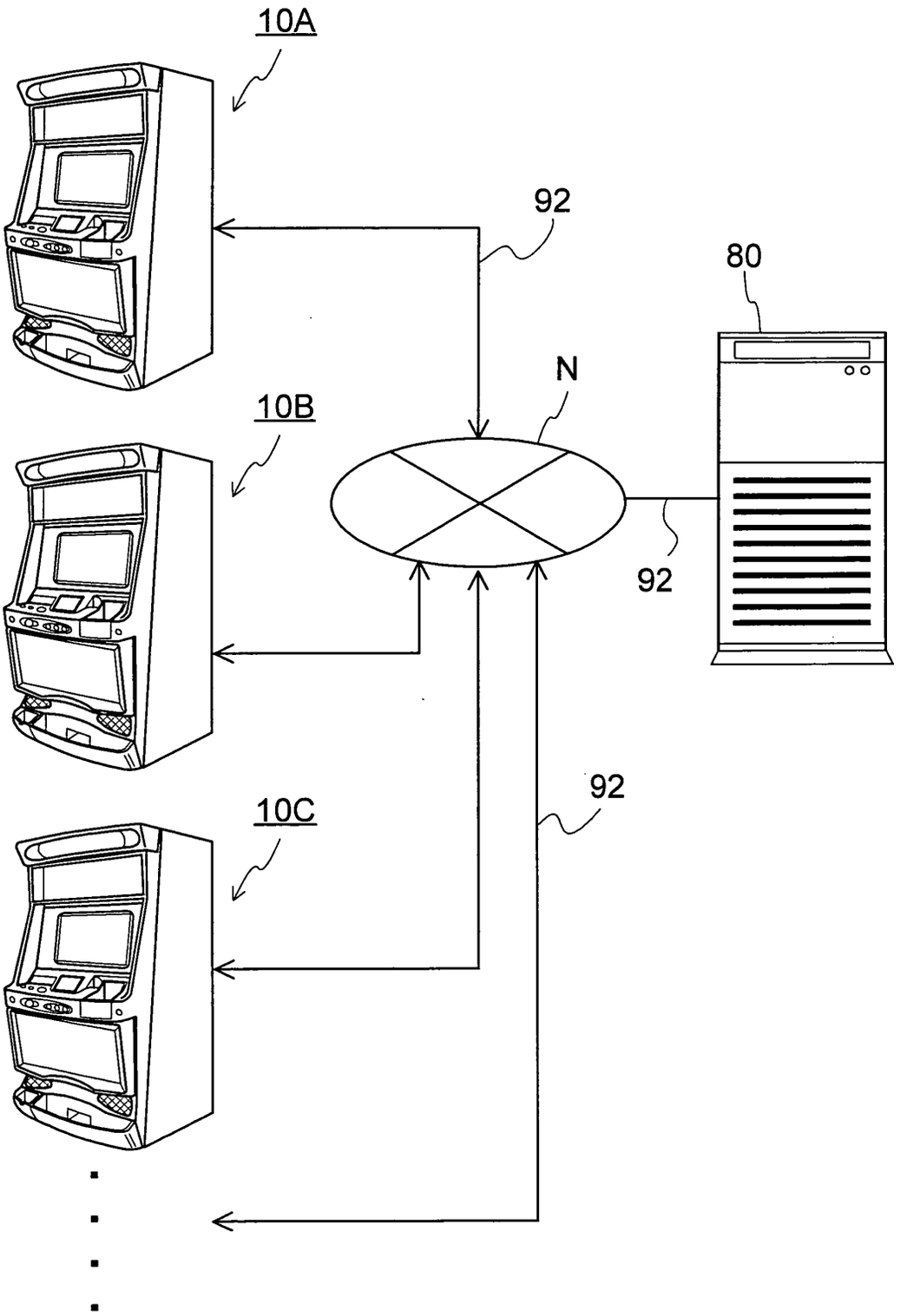
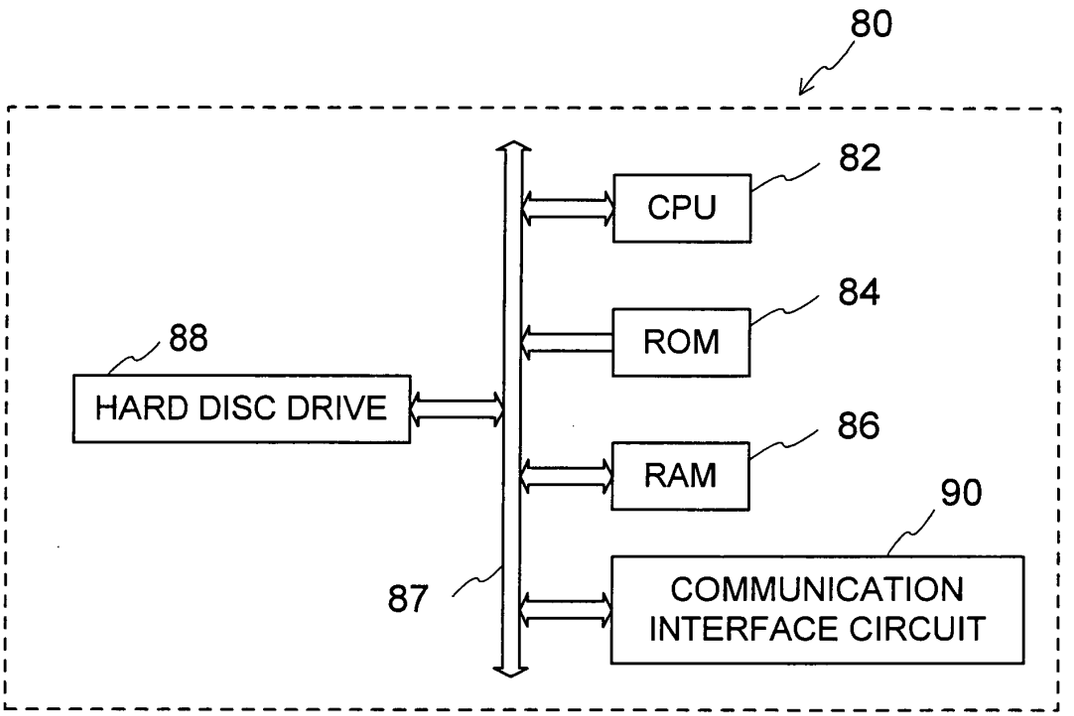


Fig. 30


80
82
CPU
84
ROM
88
HARD DISC DRIVE
86
RAM
90
87
COMMUNICATION
INTERFACE CIRCUIT