



US 20100323787A1

(19) **United States**(12) **Patent Application Publication**
Omoto(10) **Pub. No.: US 2010/0323787 A1**(43) **Pub. Date: Dec. 23, 2010**(54) **DRAWING MACHINE FOR JACKPOT GAME,
AND GAME APPARATUS AND GAME
SYSTEM USING THE SAME****Publication Classification**(51) **Int. Cl.**
A63F 9/24 (2006.01)(52) **U.S. Cl.** **463/27; 463/43**(57) **ABSTRACT**

It is enabled that a player enjoys in a stepwise manner whether any one of the jackpot awards among plural types of jackpot awards is won.

The drawing machine for jackpot game is provided with a first drawing unit which performs an advance drawing for determining a winning of any one of drawing right awards individually corresponding to the plural types of jackpot awards and a second drawing unit which performs a jackpot drawing for determining a winning of a jackpot award corresponding to the drawing right award, the winning of which is determined by the first drawing unit. The first drawing unit performs the advance drawing by using as drawing targets not only each of the drawing right awards but also a special drawing right award for performing a special jackpot drawing in order to determine a winning of at least one of two or more types of jackpot awards included in the plural types of jackpot awards, and where the first drawing unit determines the winning of the special drawing right award. The second drawing unit performs the special jackpot drawing for determining the winning of at least one of the two or more types of jackpot awards corresponding to the special drawing right award.

(75) Inventor: **Toru Omoto**, Kanagawa (JP)

Correspondence Address:

DITTHAVONG MORI & STEINER, P.C.
918 Prince Street
Alexandria, VA 22314 (US)(73) Assignee: **Konami Digital Entertainment
Co, Ltd.**, Tokyo (JP)(21) Appl. No.: **12/745,268**(22) PCT Filed: **Dec. 15, 2008**(86) PCT No.: **PCT/JP2008/072780**

§ 371 (c)(1),

(2), (4) Date: **May 28, 2010**(30) **Foreign Application Priority Data**

Dec. 18, 2007 (JP) 2007-326495

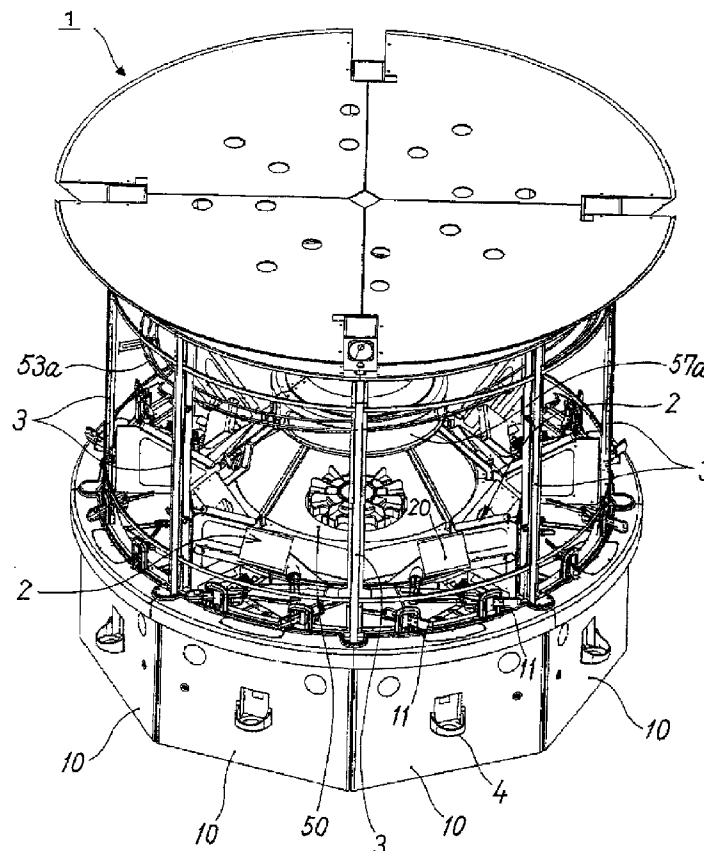


FIG. 1

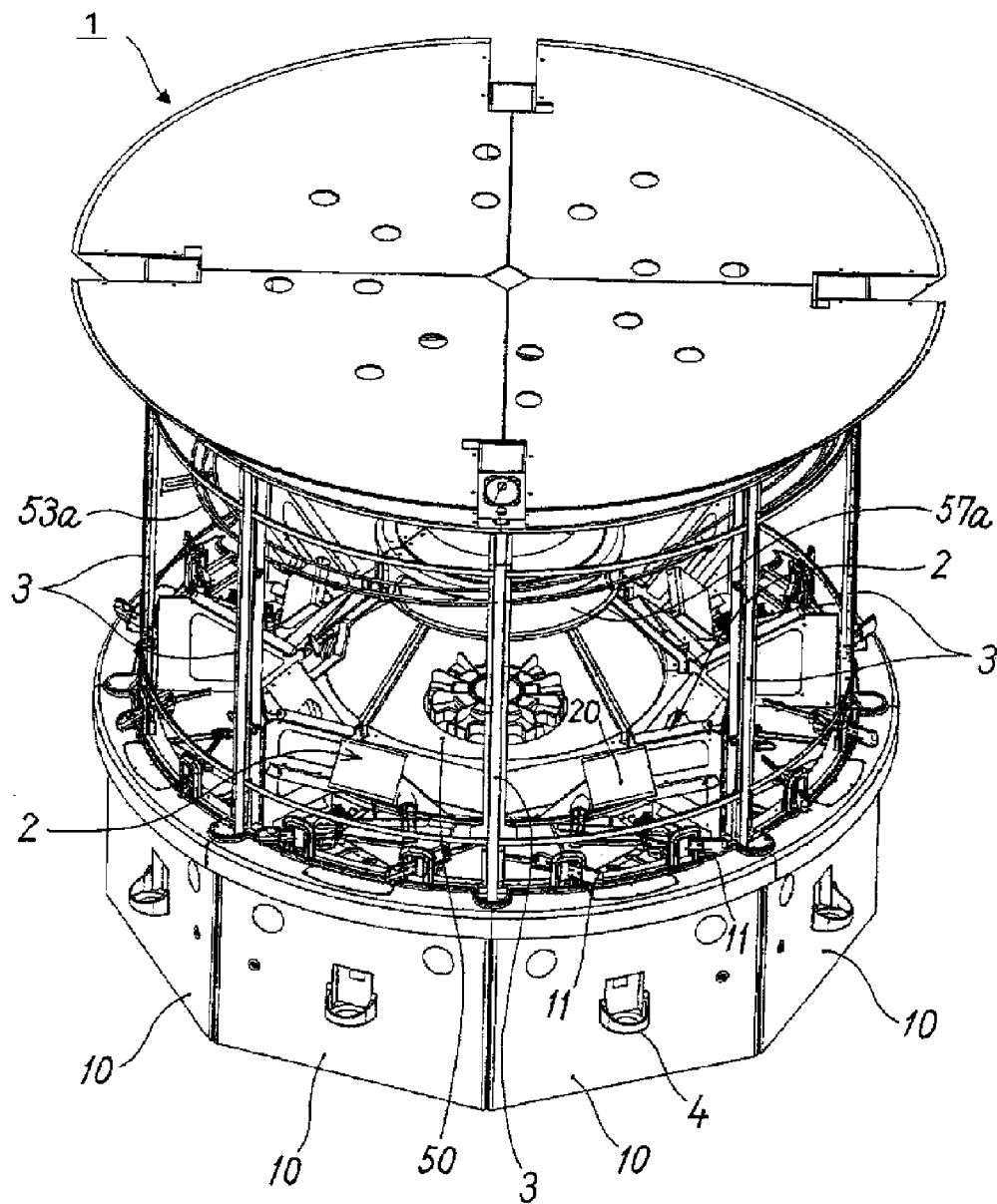


FIG. 2

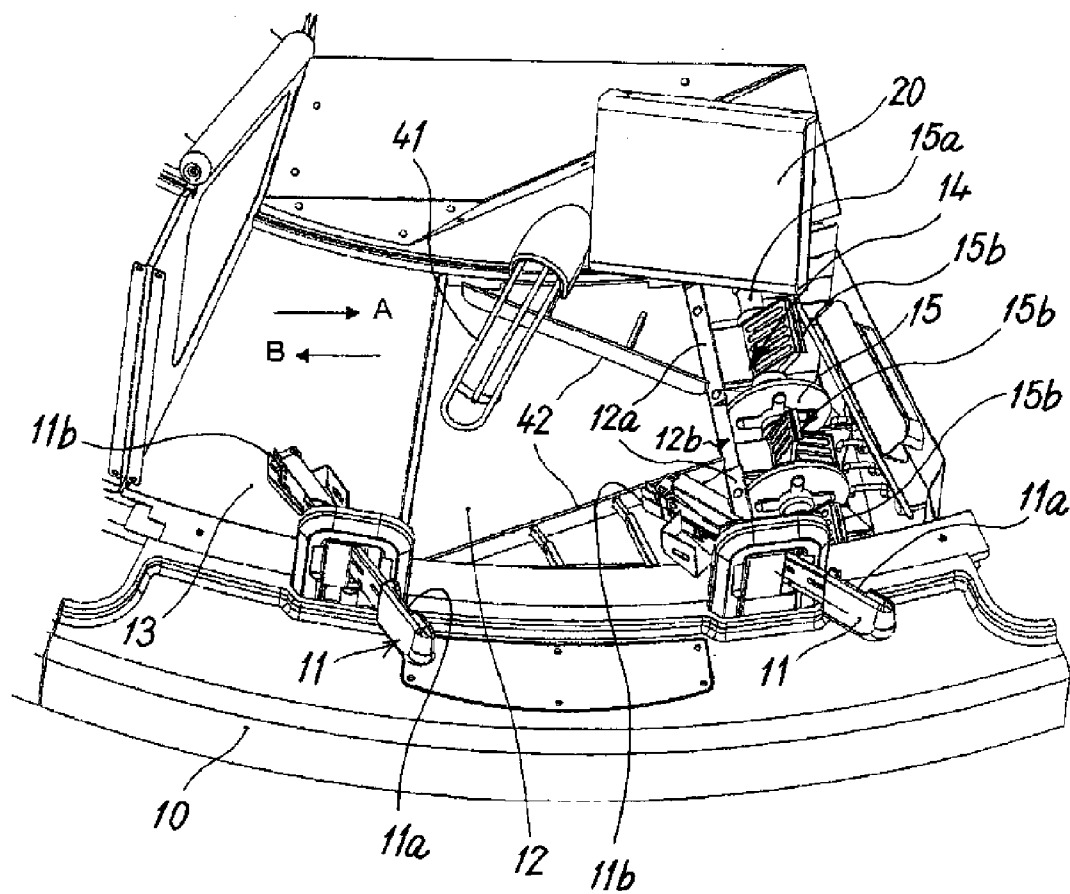


FIG. 3

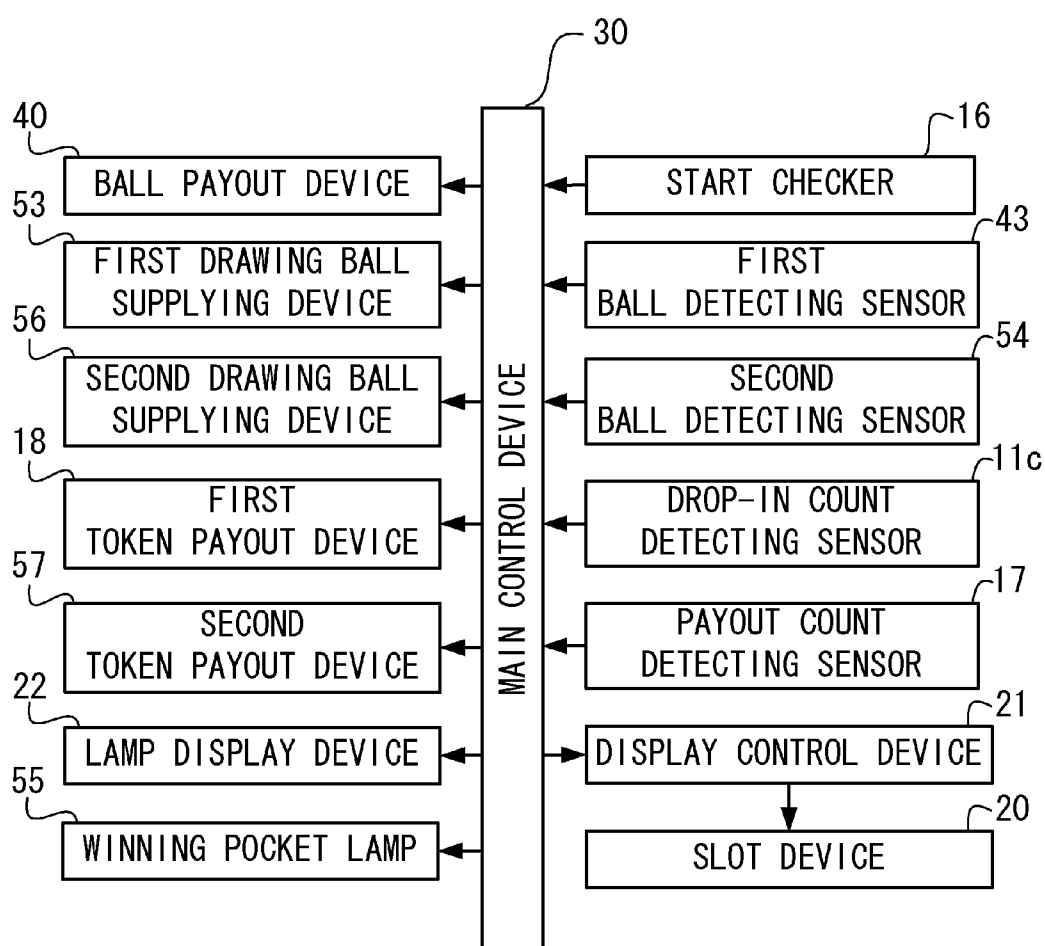


FIG. 4

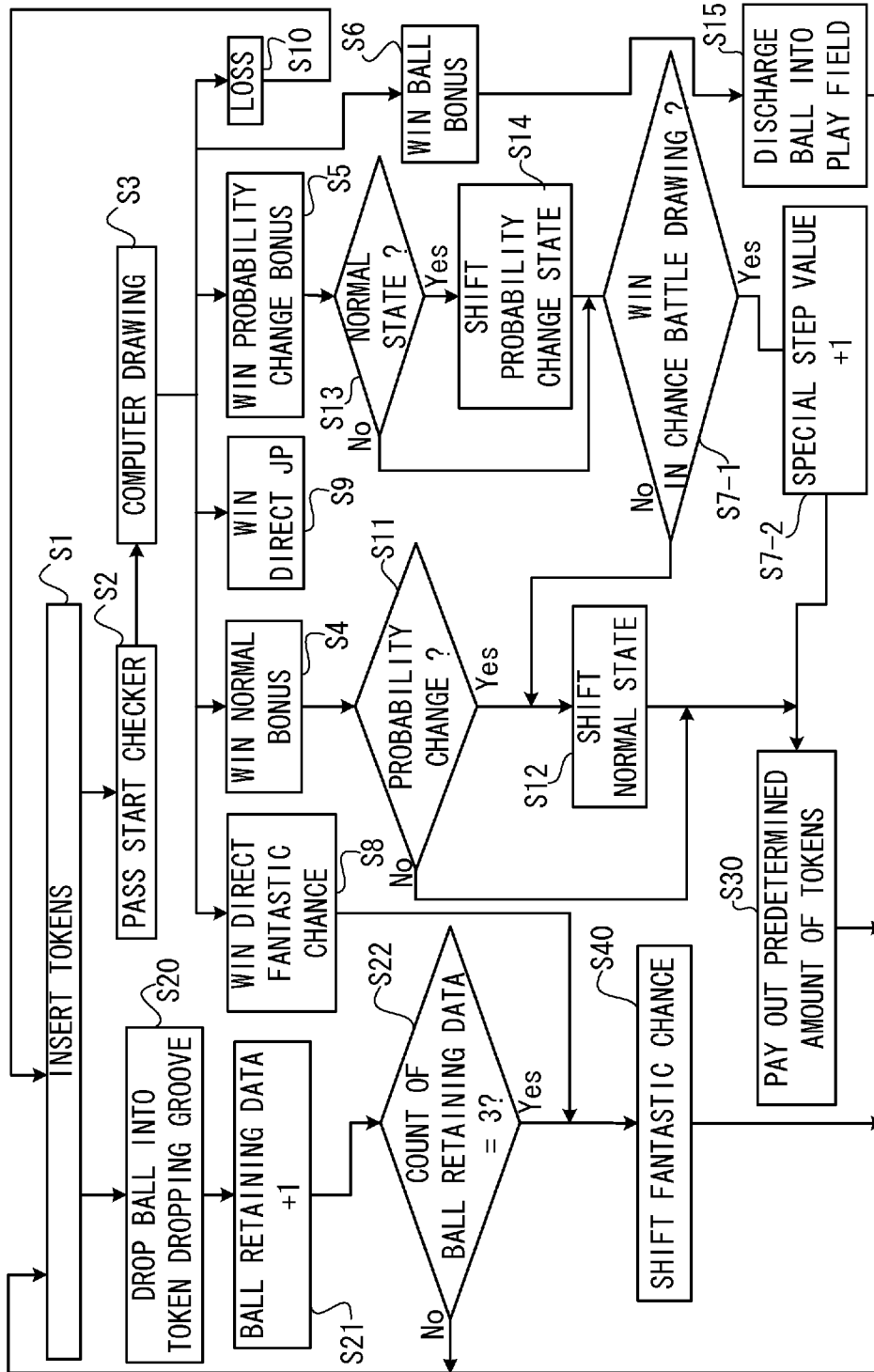


FIG. 5

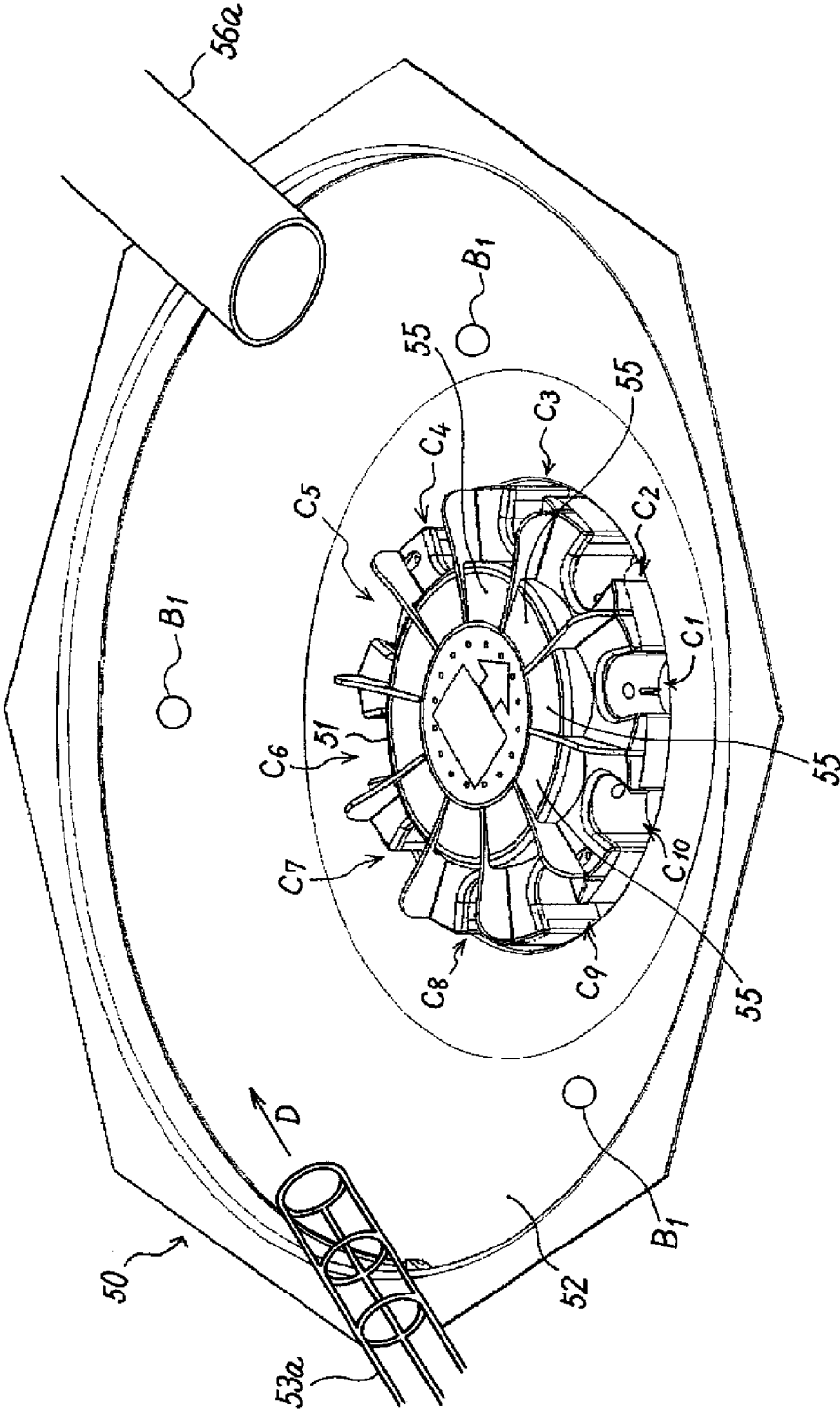


FIG. 6

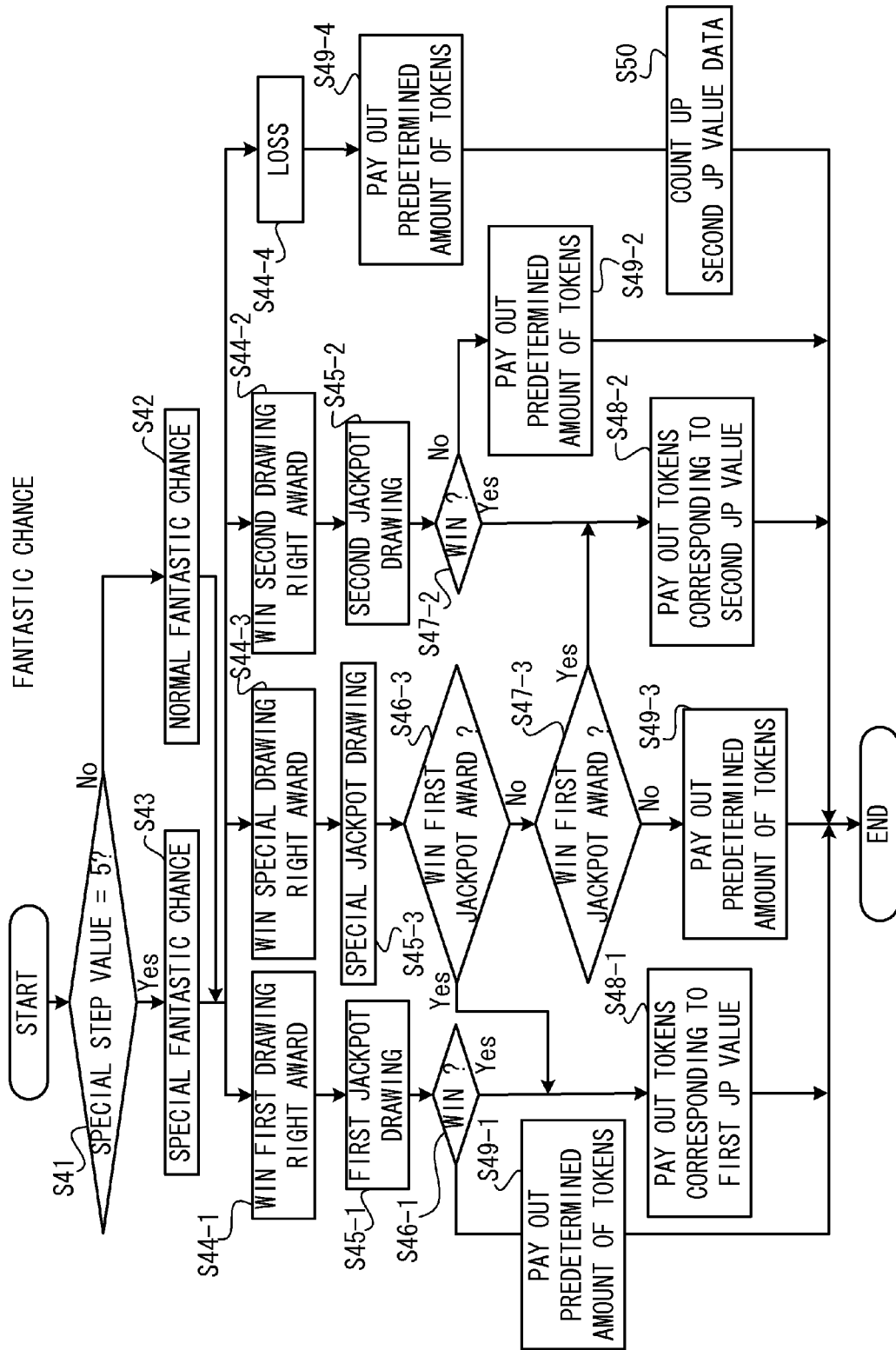
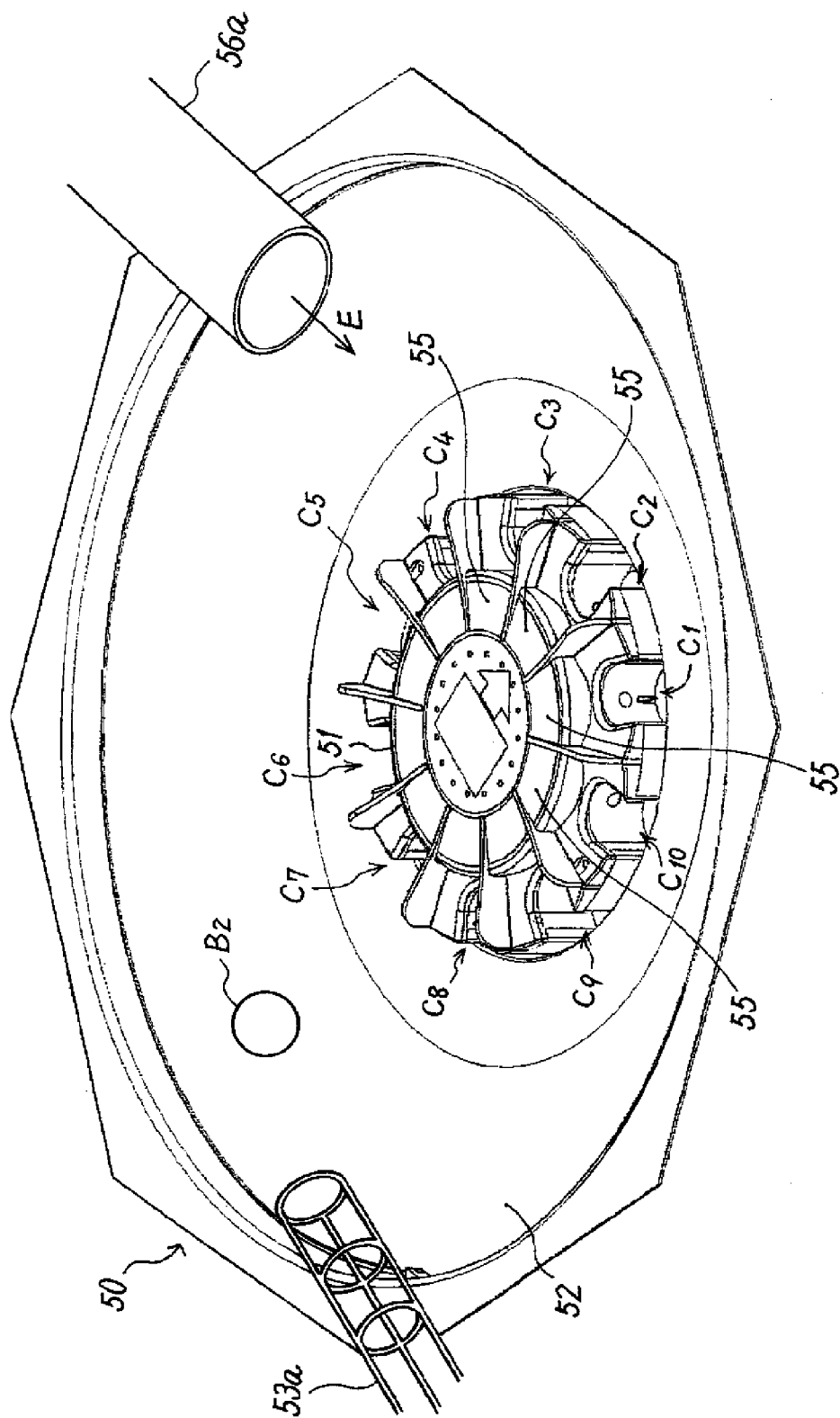


FIG. 7



DRAWING MACHINE FOR JACKPOT GAME, AND GAME APPARATUS AND GAME SYSTEM USING THE SAME

TECHNICAL FIELD

[0001] The present invention relates to a drawing machine for jackpot game which performs a jackpot award drawing in which a payout amount increases accumulatively when a predetermined payout amount increasing condition is satisfied, and also to a game apparatus and a game system using the drawing machine for jackpot game.

BACKGROUND ART

[0002] Conventionally, this type of the drawing machine for jackpot game includes, for example, that utilized in a game system constituted with a plurality of token-operated game machines (game apparatuses) installed in gaming arcades and others (for example, refer to Patent Document 1). In general, a token-operated game machine controls game progress on the condition where tokens (bet objects) are received from a player and pays out to the player a predetermined number of tokens (payout objects) according to the game result thereof. An explanation will be given for an example of a token-operated game machine utilizing a drawing machine for jackpot game. That is, the number of tokens which correspond to a part of tokens (bet objects) received from a player is added accumulatively and retained as payout amount data at a payout amount storage unit of the drawing machine for jackpot game. Then, when a predetermined drawing start condition is satisfied, a drawing is performed in the drawing machine for jackpot game to determine whether a jackpot award is won or a game is lost (loss). In this drawing, when the jackpot award is won, a process for paying out the number of tokens corresponding to at least a part of a amount of the payout amount data to a player who has satisfied the predetermined drawing start condition and also decreasing the payout amount data to a predetermined value is performed.

[0003] In general, a drawing machine for jackpot game is mainly utilized in a game system constituted with a plurality of game apparatuses, each of which is provided with a game progress control unit for controlling game progress independently. This is due to the following reasons. That is, the number of tokens which can be paid out at one time to a player by each game apparatus is limited to some extent in relation to a payout ratio set in advance for each game apparatus. Therefore, where the drawing machine for jackpot game is utilized in a single game apparatus, the number of tokens paid out at the time of winning the jackpot award concerned is largely limited to its upper limit by the payout ratio set for the game apparatus concerned. On the other hand, where the drawing machine for jackpot game is utilized in a game system made up of a plurality of game apparatuses, the number of tokens paid out at the time of winning the jackpot award concerned can be determined for its upper limit in relation to the payout ratios set for the plurality of game apparatuses. As compared with a case where the drawing machine for jackpot game is utilized in a single game apparatus, it is possible to increase the number of tokens paid out at the time of winning the jackpot award. As a result, a player can be given such an expectation that a great number of tokens would be paid out at one time by winning the jackpot award and, therefore, the player is kept interested. Due to the above-described advan-

tage, the drawing machine for jackpot game is utilized more frequently in a game system constituted with a plurality of game apparatuses than in a single game apparatus.

[0004] In particular, recently, a game system constituted with game apparatuses installed at a plurality of gaming arcades (gaming facilities) is known. A drawing machine for jackpot game can be utilized also in this type of game system.

[0005] In a drawing machine for jackpot game, an amount indicated by payout amount data corresponding to a jackpot award is accumulatively increased. Therefore, the player has a greater desire for winning the jackpot award as the amount increases, thereby game attractiveness is raised. However, in the majority of conventional drawing machines for jackpot game, a jackpot award which can be won in the drawing concerned is only one and the payout amount data corresponding to the jackpot award is also one. Therefore, there is a defect that if one player wins the jackpot award and the payout amount data is decreased to a predetermined value, other players who play at the same time as this one player or those who will play subsequently have a lower desire for winning the jackpot award, thus resulting in a drastic decrease in game attractiveness.

[0006] In order to solve the above defect, Patent Document 2 discloses a drawing machine for jackpot game in which a jackpot drawing is performed for winning one of two types of jackpot awards. In this drawing machine for jackpot game, payout amount data is stored by each of the jackpot awards and if one player wins a first jackpot award to decrease the payout amount data corresponding to the first jackpot award to a predetermined value, remaining payout amount data corresponding to a second jackpot award is not reset. Therefore, a desire for winning the second jackpot award is kept after the first jackpot award is won by the one player. In addition, the winning by the one player leads to a strong desire of other players to win a jackpot award, thus making it possible to further raise the game attractiveness of the jackpot drawing than a case where only one jackpot award is made available.

[0007] Patent Document 1: Japanese Published Unexamined Patent Application No. 2002-253842

[0008] Patent Document 2: Japanese Published Unexamined Patent Application No. 2007-215652

DISCLOSURE OF THE INVENTION

Problems to be Solved by the Invention

[0009] However, in the drawing machine for jackpot game disclosed in the Patent Document 2, a single jackpot drawing determines whether the first jackpot award or the second jackpot award is won or no jackpot award is won. Therefore, a problem arises that a player has an uplifting feeling by having a greater sense of expectation to win a jackpot award only at the time of the single jackpot drawing.

[0010] On the other hand, there may be available such a case where an advance drawing is performed in order to determine whether a drawing of one of these two types of jackpot awards is performed, and if one of drawing right awards individually corresponding to the jackpot awards is won in the advance drawing, a final jackpot drawing for determining a winning of a jackpot award corresponding to the drawing right award won in the advance drawing is performed. As described in the above case where a stepwise drawing is performed, a player expects first in the advance drawing to win the drawing right award corresponding to a jackpot award greater in payout amount data and thereafter

expect to win this time a jackpot award after winning in the advance drawing. Therefore, the player is able to have a sense of expectation in a stepwise manner, by which it is possible to further raise game attractiveness of the jackpot drawing.

[0011] However, in this case, the player has an uplifting feeling by having a sense of expectation to win the jackpot award greater in payout amount data only once at the time of the advance drawing. Thus, a problem arises that the player is unable to enjoy in a stepwise manner winning a jackpot award greater in payout amount data or that lower in payout amount data among the two types of jackpot awards.

[0012] A game system which utilizes drawing machines for jackpot game is applicable to pachinko machines and slot machines installed in pachinko parlors and others, in addition to those installed in gaming arcades and others. The above problem also arises even in this type of game system.

[0013] The present invention provides and realizes a drawing machine for jackpot game capable of raising game attractiveness in winning a jackpot award by realizing enjoyment in a stepwise manner from winning any one of the plural types of jackpot awards, and a game apparatus and a game system using the drawing machine for jackpot game.

Means for Solving the Problem

[0014] As an aspect of the present invention, it is listed that a drawing machine for jackpot game includes: a first drawing unit which performs an advance drawing for determining a winning of any one of drawing right awards individually corresponding to plural types of jackpot awards; a second drawing unit which performs a jackpot drawing for determining a winning of a jackpot award corresponding to the drawing right award, the winning of which is determined by the first drawing unit; a storage unit for storing payout amount data indicating an amount of payout objects to be paid out to a player so as to correspond to each of the plural types of jackpot awards when the second drawing unit determines the winning; a payout processing unit which performs a payout process for reading out the payout amount data corresponding to the winning jackpot award from the storage unit and paying out an amount of payout objects indicated by the read-out payout amount data, when the second drawing unit determines the winning; and a payout amount data processing unit which performs a process for increasing cumulatively an amount indicated by at least one piece of the payout amount data stored in the storage unit when a predetermined payout amount increasing condition is satisfied; wherein the first drawing unit performs the advance drawing by using as drawing targets not only each of the drawing right awards but also a special drawing right award for performing a special jackpot drawing in order to determine a winning of at least one of two or more types of jackpot awards included in the plural types of jackpot awards, and the second drawing unit performs the special jackpot drawing for determining the winning of at least one of the two or more types of jackpot awards corresponding to the special drawing right award, where the first drawing unit determines the winning of the special drawing right award.

[0015] In this drawing machine for jackpot game, it is first determined whether a drawing of any jackpot award is performed by the advance drawing performed by the first drawing unit, and if one of the drawing right awards individually corresponding to the jackpot awards is won by the advance drawing, a final jackpot drawing for determining a winning of a jackpot award corresponding to the drawing right award

won by the advance drawing is performed. Drawing targets of the advance drawing include not only the drawing right awards corresponding to individual jackpot awards but also the special drawing right award, and if the special drawing right award is won by the advance drawing, the special jackpot drawing is performed to determine at least a winning of one of the two or more types of jackpot awards. Therefore, where the special drawing right award is won by the advance drawing, no determination is made for a winning of any one of the jackpot awards until a winning result is provided in the subsequent jackpot drawing. Thus, a player is able to enjoy winning any one of the plural types of jackpot awards in a stepwise manner.

[0016] It is noted that the advance drawing and the jackpot drawing are not necessarily limited to a case where a determination is made for winning the drawing right award or the jackpot award but also include a case where no award is won to determine "loss."

[0017] In the above-described drawing machine for jackpot game, at least one of the first drawing unit and the second drawing unit may be a mechanical drawing unit for determining a winning of an award on a condition that a drawing moving object is moved so that the drawing moving object moves to a predetermined winning spot.

[0018] A computer drawing is to determine winning by calculation using a computer which executes a predetermined drawing program. This drawing is advantageous in that no large facilities are required but disadvantageous in that the winning result is less trusted by players. On the other hand, a mechanical drawing is that in which a drawing moving object is allowed to move, thereby determining a winning of an award on the condition that the drawing moving object moves to a predetermined winning spot. This drawing is disadvantageous in that it needs large facilities but advantageous in that the winning result is trusted by players more easily than the computer drawing. Therefore, the drawing result can be trusted easily by players with regard to at least one of the first drawing unit and the second drawing unit in which the mechanical drawing is performed.

[0019] In the above-described drawing machine for jackpot game, the first drawing unit may be composed of the mechanical drawing unit; this mechanical drawing unit may include a winning pocket forming member for forming three or more winning pockets individually corresponding to each of the drawing right awards, a supplying unit for supplying the drawing moving objects, whose number is greater than a total number of winning pockets corresponding to two or more types of drawing right awards, toward the three or more winning pockets, a detecting unit for detecting the drawing moving object, which enters each of the winning pockets, and a winning determination processing unit for determining a winning of a drawing right award corresponding to the winning pocket, which the drawing moving object enters, on the basis of a detection result of the detecting unit; and where there are plural drawing right awards corresponding to the winning pockets, which the drawing moving objects enter, based on the detection result of the detecting unit, the winning determination processing unit may determine a winning of a special drawing right award for performing a special jackpot drawing in order to determine at least one of the jackpot awards corresponding to the plural drawing right awards.

[0020] In this drawing machine for jackpot game, when the drawing moving object enters into a winning pocket, a winning of a drawing right award corresponding to the winning

pocket is determined. Where a plurality of winning pockets are provided for one drawing right award, the drawing right award may be set so as to be won when the drawing moving object enters into any one of the plurality of winning pockets or the drawing right award may be set so as to be won when the drawing moving object enters into all of the plurality of winning pockets.

[0021] Then, in the present drawing machine for jackpot game, the drawing moving objects supplied in the advance drawing are greater in number than the winning pockets corresponding to the two or more types of drawing right awards. Therefore, such a case may take place that a single advance drawing determines winnings of plural types of drawing right awards. In this case, a winning of the special drawing right award is determined and the special jackpot drawing is performed. Thereby, where plural types of drawing right awards is determined by the advance drawing, no determination is made for a winning of any one of the jackpot awards corresponding to the plural types of drawing right awards until a winning result is made available in the subsequent jackpot drawing. Thus, a player is able to enjoy winning any one of the jackpot awards in a stepwise manner.

[0022] The above-described drawing machine for jackpot game may include a corresponding relationship changing unit for changing a corresponding relationship between the three or more winning pockets formed by the winning pocket forming member and each of the drawing right awards, based on a predetermined change condition.

[0023] In this drawing machine for jackpot game, it is possible to change the corresponding relationship between each of the winning pockets and each of the drawing right awards. Thereby, various types of changes can be made, for example, change in winning probability of each of the drawing right awards and change in arrangement of winning pockets corresponding to each of the drawing right awards, according to a predetermined change condition.

[0024] In the above-described drawing machine for jackpot game, the corresponding relationship changing unit may change the corresponding relationship so that the number of winning pockets corresponding to at least one drawing right award is changed before and after the change.

[0025] In this drawing machine for jackpot game, it is possible to change a winning probability of at least one of the drawing right awards according to a predetermined change condition.

[0026] In the above-described drawing machine for jackpot game, the corresponding relationship changing unit may change the corresponding relationship so that a relative positional relationship of winning pockets individually corresponding to drawing right awards is changed before and after the change.

[0027] In this drawing machine for jackpot game, it is possible to change the relative positional relationship of the winning pockets individually corresponding to the drawing right awards according to a predetermined change condition. Thereby, for example, where there are a plurality of winning pockets corresponding to each of the drawing right awards, winning pockets corresponding to the same award are arranged so as to be adjacent to each other or the winning pockets corresponding to the same award are arranged so as not to be adjacent to each other. Therefore, it is possible to change an apparent easiness of winning an award for a player.

[0028] In the above-described drawing machine for jackpot game, the payout amount increasing condition may include

two or more payout amount increasing conditions which are different from each other, where one of the two or more payout amount increasing conditions is satisfied, the payout amount data processing unit cumulatively increases an amount indicated by the payout amount data corresponding to the thus satisfied payout amount increasing condition among the payout amount data stored in the storage unit.

[0029] In this drawing machine for jackpot game, where one of mutually different two or more payout amount increasing conditions is satisfied, among a plurality of payout amount data individually corresponding to plural types of jackpot awards, only a payout amount of the payout amount data corresponding to the thus satisfied payout amount increasing condition is increased accumulatively. As described above, the presence of mutually different two or more payout amount increasing conditions makes it possible to diversify conditions of increasing a payout amount of jackpot awards and realize higher game attractiveness.

[0030] As another aspect of the present invention, it is listed that a game apparatus includes: a drawing apparatus which performs a jackpot drawing for determining a winning of a jackpot award, and a game progress control unit which controls game progress, wherein the drawing machine for jackpot game according to any one of claims 1 to 12 is used as the drawing apparatus, and the first drawing unit of the drawing machine for jackpot game starts the advance drawing when a predetermined drawing start condition is satisfied by the game progress controlled by the game progress control unit.

[0031] In this game apparatus, when the predetermined drawing start condition is satisfied by game progress, the advance drawing is started in the drawing machine for jackpot game. And when a player concerned wins the drawing right award or the special drawing right award in the advance drawing and also wins any jackpot award in the subsequent jackpot drawing, the player is able to receive many payout objects. Then, as described above, where the special drawing right award is won in the advance drawing, no determination is made for a winning of any one of the jackpot awards until a winning result is made available in the subsequent jackpot drawing. Thus, the player is able to enjoy winning any one of the plural types of jackpot awards in a stepwise manner.

[0032] As another aspect of the present invention, it is listed that a game system includes: a drawing apparatus which performs a jackpot drawing for determining a winning of a jackpot award, and a plurality of game apparatuses, each of which is connected via a communication network to the drawing apparatus and provided with a game progress control unit for controlling game progress, wherein the drawing machine for jackpot game according to any one of claims 1 to 12 is used as the drawing apparatus, the first drawing unit of the drawing machine for jackpot game starts the advance drawing when a predetermined drawing start condition is satisfied by the game progress controlled by the game progress control unit of any game apparatus, and when the second drawing unit of the drawing machine for jackpot game determines a winning of any one of the plural types of jackpot awards, the payout processing unit of the drawing machine for jackpot game performs a payout process for paying out an amount of payout objects indicated by the payout amount data read out from the storage unit to a player of the game apparatus which has satisfied the predetermined drawing start condition.

[0033] According to the present game system, as described above, where the special drawing right award is won by the advance drawing, no determination is made for a winning of

any one of the jackpot awards until a winning result is made available in the subsequent jackpot drawing. Thus, a player is able to enjoy winning any one of the plural types of jackpot awards in a stepwise manner. This effect is very helpful in a game system capable of setting a jackpot award greater in payout amount.

EFFECT OF THE INVENTION

[0034] According to the present invention, where the special drawing right award is won by the advance drawing, no determination is made for a winning of any one of the jackpot awards until a winning result is made available in the subsequent jackpot drawing. Since a player is able to enjoy winning any one of the plural types of jackpot awards in a stepwise manner, it is possible to raise game attractiveness in winning a jackpot award.

BRIEF DESCRIPTION OF DRAWINGS

[0035] FIG. 1 is an external view showing a pusher game machine of the present embodiment.

[0036] FIG. 2 is a perspective view showing a configuration of a station in the pusher game machine.

[0037] FIG. 3 is a control block diagram showing major parts of a control structure which controls the pusher game machine in its entirety.

[0038] FIG. 4 is a view for explaining the flow of an overall game in the pusher game machine.

[0039] FIG. 5 is a perspective view showing an external appearance of a central drawing device in the pusher game machine at the time of fantastic chance.

[0040] FIG. 6 is a flowchart showing the flow of the fantastic chance.

[0041] FIG. 7 is a perspective view showing an external appearance of the central drawing device in the pusher game machine at the time of jackpot drawing.

DESCRIPTION OF REFERENCE NUMERALS

- [0042]** 1: Pusher game machine
- [0043]** 2: Play field
- [0044]** 10: Station
- [0045]** 11: Token insert device
- [0046]** 12: Token placing base
- [0047]** 13: Pusher base
- [0048]** 14: Token dropping groove
- [0049]** 15: Rotating transport structure
- [0050]** 20: Liquid crystal display device
- [0051]** 30: Main control device
- [0052]** 40: Ball payout device
- [0053]** 41: Ball discharge unit
- [0054]** 50: Central drawing device
- [0055]** 51: Winning pocket forming member
- [0056]** 52: Drawing ball receiving base
- [0057]** 53: First drawing ball supplying device
- [0058]** 53a: Transport rail
- [0059]** 56: Second drawing ball supplying device
- [0060]** 56a: Transport path unit
- [0061]** B₁, B₂: Drawing balls
- [0062]** C₁ to C₁₀: Ball receive pockets

BEST MODE FOR CARRYING OUT THE INVENTION

[0063] The following description will explain one embodiment where the present invention is applied to a pusher game machine.

[0064] FIG. 1 is an external view showing the pusher game machine 1 of the present embodiment.

[0065] The pusher game machine 1 is provided with eight play fields 2 which are independent from each other, and two players are able to play a game at each of these play fields 2. Therefore, up to 16 players are able to play the game at the same time. Further, a play space where a player plays the game is divided into each of the play fields 2 with poles 3 and a space between the poles 3 is covered with a transparent cover. Thereby, a structure inside the play field 2 is made so as not to be touched directly by a player. Further, a pusher game is performed by a station 10 as a game apparatus which performs an individually independent pusher game at each of the play fields 2.

[0066] FIG. 2 is a perspective view showing a configuration of the station 10.

[0067] The station 10 is provided with two token insert devices 11 for inserting tokens into the play field 2. The token insert device 11 includes a token insert opening 11a which is a token receiving unit functioning as token receiving means exposed outside the pusher game machine 1. When the token insert opening 11a receives a token from a player, the token passes through a token path unit formed inside the token insert device 11 and is inserted into the play field 2 from a leading end 11b located inside the play field 2. The token path unit is provided with an insert count detecting sensor (not shown) for detecting the passage of tokens. When detecting a token, the insert count detecting sensor outputs a detection signal thereof to a main control device to be described later. Further, the token insert device 11 is attached so as to rotate freely with respect to a main body part of the pusher game machine 1 in a manner that a player is able to select a direction at which tokens are inserted, whenever necessary. Thereby, the player is able to point the leading end 11b of the token insert device 11 laterally within a predetermined range.

[0068] Inside the play field 2 into which tokens are inserted by the token insert device 11, a token placing base 12 which is fixed and a pusher base 13 which moves in a reciprocating manner in the directions indicated by the arrows A and B in the drawing are provided. The token placing base 12 places many tokens on the upper surface thereof. When a token on the token placing base 12 is dropped into a token dropping groove 14 formed on the right side of the token placing base 12 in the drawing, the token is paid out from a receiving tray 4 provided on an outer surface of the main body of the pusher game machine 1 (refer to FIG. 1). Thereby, a player is able to obtain the token. Further, at the right end of the token placing base 12 in the drawing (hereinafter, referred to as "open end"), a stopper portion 12a in such a manner that tokens accumulated on the token placing base 12 are not easily dropped into the token dropping groove 14 is provided.

[0069] The pusher base 13 moves in a reciprocating manner along the upper surface of the token placing base 12 at a predetermined stroke in the directions indicated by the arrows A and B in the drawing by means of a driving unit (not shown). The pusher base 13 which moves in a reciprocating manner as described above pushes out to the open end tokens present at an upper surface part of the token placing base 12 over which the pusher base 13 moves in a reciprocating man-

ner. Tokens are placed also on the upper surface of the pusher base 13. When the tokens on the pusher base 13 are dropped from the right side in the drawing, they are placed on the token placing base 12. If a token is dropped from the pusher base 13 at the time when the pusher base 13 is not located at the extreme right side, the token is pushed by the pusher base 13 and pushed into a part where many tokens are accumulated on the token placing base 12. When the token is pushed thereinto as described above, a pressing force to the open end side is imparted to a part of these many tokens, and the pressing force is applied to tokens which are kept by the stopper portion 12a at the open end, by which the tokens are dropped into the token dropping groove 14.

[0070] Further, a rotating transport structure 15 is provided inside the token dropping groove 14. The rotating transport structure 15 is constituted with a rotating shaft 15a parallel to an open end of the token placing base 12, three rotating blade units 15b fixed to the rotating shaft and a driving structure (not shown) for rotating the rotating shaft. Each of the rotating blade units 15b is made up of a plurality of blades. The rotating shaft 15a is rotated by a driving force of the driving structure, by which the rotating blade unit 15b is rotated constantly at a fixed speed around the rotating shaft. A token dropped from the open end of the token placing base 12 into the token dropping groove 14 is received temporarily by a blade of the rotating blade unit 15b and transported to the right side in the drawing by rotation of the rotating blade unit 15b. Thereafter, the token falls from the blade and is dropped inside the token dropping groove 14. Perpendicularly below a site where the token transported by each of the rotating blade units 15b falls, a token detecting sensor (hereinafter, referred to as "start checker") is provided. The start checker is constituted with, for example, a photo interrupter and outputs a token detection signal when the token passes through the light path thereof. The detection signal is sent to a main control device to be described later.

[0071] All tokens dropped into the token dropping groove 14 from the open end of the token placing base 12 move finally to a token hopper which is a token payout unit functioning as token payout means (not shown) provided at the bottom of the token dropping groove 14. Then, these tokens are discharged by the token hopper onto the receiving tray 4 shown in FIG. 2. In a token discharge channel between the token hopper and the receiving tray 4, a payout count detecting sensor (not shown) for detecting passage of a token is provided. The payout count detecting sensor outputs the detection signal thereof to the main control device to be described later, upon detection of the token.

[0072] Further, a liquid crystal display device 20 is provided inside the play field 2. Three reel images are displayed on a liquid crystal screen of the liquid crystal display device 20. The liquid crystal display device 20 on each station 10 is controlled for the display centrally by the main control device via a display control device to be described later.

[0073] FIG. 3 is a control block diagram showing major parts of a control structure which controls the pusher game machine 1 in its entirety. It is noted that, in this drawing, for such components that are provided at each station 10 only one component is described and others are omitted.

[0074] The present pusher game machine 1 is controlled centrally by the main control device 30. The main control device 30 is constituted with a CPU, a RAM, a ROM, etc., and executes various computer programs stored in the ROM, thereby performing various types of control processing.

Detection signals output respectively from the start checker 16, a first ball detecting sensor 43 and a second ball detecting sensor 54 to be described later, the insert count detecting sensor 11c and the payout count detecting sensor 17 are input to the main control device 30. It is noted that only one of the second ball detecting sensors 54 is indicated in FIG. 3 but, as described later, there are actually ten second ball detecting sensors 54 and each of the second ball detecting sensors 54 is connected to the main control device 30. Further, the main control device 30 controls display contents of the liquid crystal display device 20 via a display control device 21. Still further, the main control device 30 controls a ball payout device 40 to be described later, a first drawing ball supplying device 53 for fantastic chance to be described later, a second drawing ball supplying device 56 for jackpot drawing to be described later, a first token payout device 18 provided at each station, a second token payout device 57 commonly used at each station, a lamp display device 22 and others.

[0075] FIG. 4 is a view for explaining the flow of an overall game in the pusher game machine 1.

[0076] When a player inserts a token into the token insert device 11 (51), a detection signal from the insert count detecting sensor 11c is output to the main control device 30. The main control device 30 which has received the detection signal adds one to token IN data inside the RAM and also counts first JP value data indicating the number of tokens to be paid out when a first jackpot award is won in a jackpot (which is hereinafter abbreviated as "JP" whenever necessary) drawing to be described later. An initial value of the first JP value data is 500 in the present embodiment but may be changed whenever necessary. A count value of the first JP value data corresponding to one detection signal is also set whenever necessary. In the present embodiment, the count value is set to be 0.03. Therefore, when a player inserts one token, 0.03 is added to the first JP value data. The count value of the first JP value data is displayed on a display provided at a central upper part of the present pusher game machine 1 by the main control device 30.

[0077] In the present embodiment, second JP value data indicating the number of tokens to be paid out at the time of winning the second jackpot award is also stored. A count condition (payout amount increasing condition) of the second JP value data is different from that (a condition that tokens are inserted) of the first JP value data. Concretely, where loss is determined in a fantastic chance to be described later, count is made according to the number of ball receive pockets into which balls have entered. A detailed explanation will be made later. A count value of the second JP value data is also displayed on a display provided at a central upper part of the present pusher game machine 1 by the main control device 30.

[0078] When a token is dropped into the token dropping groove 14 and detected by the start checker 16 (S2), a detection signal from the start checker 16 is output to the main control device 30. The main control device 30 which has received this detection signal executes a slot drawing program housed in the ROM and executes a computer drawing (S3). In the present embodiment, a game progress control unit is constituted with the main control device 30 for executing the slot drawing program, the liquid crystal display device 20, the display control device 21 and others. The main control device 30 for executing the slot drawing program generates drawing random numbers and determines a winning award on the basis of the thus generated random numbers in reference to a winning probability table (winning probability data) indicat-

ing a corresponding relationship between a plurality of awards and random numerical values (S4, S5, S6, S8, S9). In the computer drawing, there is a case where no winning award is determined but loss is determined (S10).

[0079] In the present embodiment, an normal winning probability table and a probability-change winning probability table, that is, two tables are stored in the ROM. The main control device 30 reads out one of the tables from the ROM and executes the computer drawing by using the read-out table. These winning probability tables are for determining a mutually different winning probability. The probability-change winning probability table corresponds to a higher winning probability than the normal winning probability table. More specifically, the probability-change winning probability table is designed so that a part of random numerical values corresponding to loss at the normal winning probability table corresponds to at least one of the plural types of awards. That is, the probability-change winning probability table is smaller for the number of corresponding random numerical values than the normal winning probability table and lower in probability at which loss is determined. The probability-change winning probability table of the present embodiment is larger for the number of random numerical values corresponding to all awards than the normal winning probability table. Hereinafter, a state in which the normal winning probability table is used to perform a computer drawing is referred to as a normal state, and a state in which the probability-change winning probability table is used to perform a computer drawing is referred to as a probability-change state.

[0080] The main control device 30 outputs an image display command to the display control device 21 on the basis of the drawing result of the computer drawing. The display control device 21 which has received the image display command allows an image of three rotating reels to be displayed on a liquid crystal screen of the liquid crystal display device 20 and finally allows a stopped image of three reels to be displayed thereon. Where a winning award has been determined by the main control device 30 at this time, a pattern of the winning award is finally stopped and displayed on the basis of the image display command. Further, where loss has been determined by the main control device 30, an appropriate pattern not corresponding to a winning award is finally stopped and displayed on the basis of the image display command. Thereby, a player looks at a screen of the liquid crystal display device 20 and is able to know the drawing result of the computer drawing. The main control device 30 executes a slot drawing program to determine a winning award and thereafter performs a process for awarding the player a benefit according to the winning award.

[0081] Table 1 given below shows a reference table covering awards and benefits corresponding to each of the awards used in the present embodiment.

[Table 1]

[0082] Where any normal bonus is won which is related to the same number made up of an even number ("2," "4," "6," or "8") on two dice (S4), first, the main control device 30 determines whether the present state is a probability-change state (S11). On determination of the probability-change state, the main control device 30 terminates the probability-change state and shifts to a normal state (S12). Concretely, the main control device 30 reads out the normal winning probability table from the ROM and executes a subsequent computer

drawing by using the table. A winning probability-change condition, which is a mode switching condition in this instance, is to win a normal bonus in the probability-change state.

[0083] Further, as described above, when any one of the normal bonuses is won, the main control device 30 controls the display control device 21, thereby allowing the same number of the even number thereof on two dice to be stopped and displayed on a screen of the liquid crystal display device 20. Then, the main control device 30 outputs a token payout command to a first token payout device 18. The first token payout device 18 is provided with a token hopper unit installed inside the present pusher game machine 1 to retain many tokens, a token payout unit for paying out tokens retained at the token hopper unit and a token path unit for guiding tokens paid out from the token payout unit into the play field 2. The first token payout device 18 which has received the token payout command controls the token payout unit, thereby executing the operation of paying out the number of tokens according to the token payout command. Tokens paid out by the token payout unit pass through the token path unit, fall on the upper surface of the pusher base 13 and are paid out inside the play field 2 (S30).

[0084] In the present embodiment, tokens to be paid out by the first token payout device 18 and the second token payout device 57 to be described later are not directly paid out to a player but paid out inside the play field 2. Therefore, in order for the player to obtain the tokens, these tokens are required to be dropped from the token placing base 12 into the token dropping groove 14. Ordinarily, tokens are paid out inside the play field 2 and pushed by the pusher base 13, by which the tokens on the token placing base 12 are pushed to the open end and dropped into the token dropping groove 14. Then, the tokens are paid out to the player.

[0085] Further, where any one of the probability-change bonuses related to the same number made up of an odd number other than "7" ("1," "3," "5," or "9") on two dice (S5), the main control device 30 determines whether the present state is a normal state (S13). On determination of the normal state, the main control device 30 terminates the normal state and shifts to the probability-change state (S14). Concretely, the main control device 30 reads out the probability-change winning probability table from the ROM and executes a subsequent computer drawing by using this table. A winning probability-change condition, which is a mode switching condition in this instance, is to win a probability-change bonus in the normal state.

[0086] Further, as described above, when any one of the probability-change bonuses is won, the main control device 30 controls the display control device 21, thereby allowing the same number of the odd number thereof on two dice to be stopped and displayed on a screen of the liquid crystal display device 20. Then, the main control device 30 outputs a token payout command to the first token payout device 18. Thereby, as with the normal bonus, tokens are paid out inside the play field 2 for the number of pieces according to the token payout command (S30).

[0087] Further, when any one of the probability-change bonuses is won, a chance battle drawing is executed. Concretely, the main control device 30 executes a chance battle drawing program, generates random numbers for drawing and determines "winning" or "non-winning" on the basis of the thus generated random numbers for drawing in reference to a winning/non-winning table (winning probability data)

indicating a corresponding relationship between “winning”/ “non-winning” and random numerical values. When “non-winning” is determined by the chance battle drawing, the main control device 30 terminates the probability-change state and shifts to the normal state (S12). On the other hand, when “winning” is determined by the chance battle drawing (S7-1), one is added to a special step value (S7-2). When the special step value is to be five, in place of a normal fantastic chance, a special fantastic chance is executed at the time of shifting to a fantastic chance to be described later. The details thereof will be described later.

[0088] Further, if any one of the ball bonuses is won (S6), the main control device 30 outputs a ball payout command to a ball payout device 40. The ball payout device 40 is provided with a ball retaining unit (not shown) arranged inside the pusher game machine 1, a ball payout control unit (not shown), a ball discharge unit 41 for discharging balls into a play field (shown in FIG. 2) and a ball transporting unit which transports balls from the ball retaining unit to the ball discharge unit 41 under the control of the ball payout control unit. When the ball payout control unit of the ball payout device 40 receives the ball payout command from the main control device 30, the ball payout control unit controls the ball transporting unit, thereby transporting one ball from the ball retaining unit to the ball discharge unit 41. The ball transported to the ball discharge unit 41 rolls over a rail of the ball discharge unit 41 and is discharged onto a token placing base 12 inside the play field (S15).

[0089] The ball paid out as described above is to be present inside the play field in a state of being put on tokens accumulated on the token placing base 12. Then, the ball moves to the token dropping groove 14 as these tokens move. Here, as shown in FIG. 2, a notch 12b is formed at a central part of the stopper portion 12a provided on the token placing base 12 in such a manner that a ball will fall down easily. Further, two ball guides 42 are provided above the token placing base 12 and constituted so that only a ball on the token placing base 12 is gathered to the center side. Thereby, the ball on the token placing base 12 is gathered to the center side by the ball guides 42 as the ball moves to the token dropping groove 14. And the ball falls down into the token dropping groove 14 via the notch 12b of the stopper portion 12a formed so that the ball will fall down easily.

[0090] When a ball falls down into the token dropping groove 14, the ball is put on a blade of the rotating blade unit 15b in the rotating transport structure 15 and transported by rotation of the rotating blade unit 15b to the right side in FIG. 2. Thereafter, the ball falls from the blade and into the token dropping groove 14. Here, an assortment member (not shown) is provided perpendicularly above the start checker 16 installed inside the token dropping groove 14. The assortment member is made up of rails spaced so as to be narrower than the diameter of a ball but wider than the diameter of a token. A token which has been dropped from a blade of the rotating blade unit 15b passes through the start checker 16 between the rails. On the other hand, the ball which has fallen from the blade of the rotating blade unit 15b is put on the rail and will not arrive at the start checker 16. Since the rail is inclined toward the ball retaining unit, the ball on the rail is transported to the ball retaining unit by the inclination of the rail. A first ball detecting sensor 43 is provided on its way to the rail. The first ball detecting sensor 43 is constituted with, for example, a photo interrupter and outputs a ball detection signal when

the ball passes over the light path thereof. This detection signal is sent to the main control device 30 as shown in FIG. 3.

[0091] As described above, the ball falls down into the token dropping groove 14 and is detected by the first ball detecting sensor 43 (S20). Upon receipt of the detection signal, the main control device 30 performs a process for adding one to ball retaining data inside the RAM (S21). Further, the main control device 30 controls a lamp display device 22 for notifying a player of a count value of the ball retaining data, thereby lighting up only the number of ball retention lamps corresponding to the count value. The lamp display device 22 is provided with three ball retention lamps and installed inside the play field of each station 10. Thereafter, the main control device 30 determines whether the ball retaining data arrives at three (S22). Then, where determining that the ball retaining data has arrived at three, the main control device 30 executes a fantastic chance (FC) drawing program stored in the ROM, controls a central drawing device 50 to be described later and shifts to a fantastic chance (S40). That is, in the present embodiment, the game progress control unit is constituted with the main control device 30 for executing the FC drawing program, the central drawing device 50 and others.

[0092] FIG. 5 is a perspective view showing an external appearance of the central drawing device 50.

[0093] The central drawing device 50 is provided with a winning pocket forming member 51 for forming a predetermined winning pocket into which a drawing ball B₁, that is, a spherical drawing moving object, can enter, a drawing ball receiving base 52 and a first drawing ball supplying device 53 which is a supplying unit functioning as supplying means for supplying the drawing ball B₁ onto a drawing ball receiving base. The first drawing ball supplying device 53 is provided with a drawing ball retaining unit (not shown), a drawing ball supply driving unit (not shown) and a transport rail 53a shown in FIG. 5 which transports the drawing ball B₁ from the drawing ball retaining unit onto the drawing ball receiving base 52. Upon receipt of a ball supplying command from the main control device 30, a retained ball supply driving unit transports the drawing ball B₁ inside the drawing ball retaining unit up to an upper part of the transport rail 53a. Thereby, the drawing ball B₁ is transported along the transport rail 53a by the inclination of the transport rail 53a and finally supplied onto the drawing ball receiving base 52 from the direction indicated by the arrow D in the drawing.

[0094] The drawing ball receiving base 52 is formed in a reverse cone shape as shown in FIG. 5, and a winning pocket forming member 51 is provided at the central part thereof. Ten ball receive pockets C₁ to C₁₀ are formed around the winning pocket forming member 51, or a disk-like member, so as to be spaced evenly on the outer circumferential surface thereof. The winning pocket forming member 51 rotates around the central shaft of the drawing ball receiving base 52 by a rotation driving device (not shown). The drawing ball B₁ supplied from the transport rail 53a onto the drawing ball receiving base 52 rolls over the drawing ball receiving base 52 and moves around the winning pocket forming member 51. Then, the ball B₁ finally enters into any one of the ball receive pockets C₁ to C₁₀ of the winning pocket forming member 51 by the inclination of the drawing ball receiving base 52. The bottom of each of these ball receive pockets C₁ to C₁₀ is opened, and the drawing ball B₁ which has entered into any one of the ball receive pockets falls from the opening thereof and is collected. A second ball detecting sensor 54 is provided

inside each of the ball receive pockets C_1 to C_{10} or below in the perpendicular direction thereof. Each second ball detecting sensor **54** is constituted with, for example, a photo interrupter. When the drawing ball B_1 passes over the light path of the photo interrupter, a ball detection signal is output. The detection signal is sent to the main control device **30** as shown in FIG. 3. The main control device **30** refers to the ball detection signal, thus making it possible to recognize by each of the ball receive pockets C_1 to C_{10} whether the drawing ball has entered.

[0095] As described above, where determining that the ball retaining data has arrived at three, the main control device **30** executes the FC drawing program to control the central drawing device **50**, thereby progressing the fantastic chance. Concretely, first, the main control device **30** allocates five ball receive pockets C_1 to C_5 , that is, half of the ball receive pockets C_1 to C_{10} as winning pockets of the first drawing right award corresponding to the first jackpot award, while allocating the remaining five ball receive pockets C_6 to C_{10} as winning pockets of the second drawing right award corresponding to the second jackpot award. As described above, in the present embodiment, all of the ball receive pockets C_1 to C_{10} are winning pockets. However, some of the ball receive pockets may not be given as winning pockets but given as loss. Then, the main control device **30** outputs a ball supplying command to the first drawing ball supplying device **53**. The first drawing ball supplying device **53** which has received the command drives the retained ball supply driving unit to supply a predetermined number of drawing balls B_1 continuously onto the drawing ball receiving base **52**, thereby performing a mechanical drawing (fantastic chance).

[0096] FIG. 6 is a flowchart showing a flow of the fantastic chance in the present embodiment.

[0097] In the fantastic chance, where no drawing ball B_1 enters into any one of the five ball receive pockets C_6 to C_{10} allocated for the second drawing right award and also the drawing ball B_1 enters into all of the five ball receive pockets C_1 to C_5 allocated for the first drawing right award, the winning of the first drawing right award is determined. Further, where no drawing ball B_1 enters into any one of the five ball receive pockets C_1 to C_5 allocated for the first drawing right award and also the drawing balls B_1 enter into all of the five ball receive pockets C_6 to C_{10} allocated for the second drawing right award, the winning of the second drawing right award is determined. Still further, where the drawing ball B_1 enters into all of the ball receive pockets C_1 to C_{10} , the winning of a special drawing right award is determined. Therefore, in the present embodiment, the number of drawing balls B_1 supplied from the first drawing ball supplying device **53** onto the drawing ball receiving base **52** is set to be at least more than a total number (10) of the ball receive pockets C_1 to C_{10} allocated for the first drawing right award and the second drawing right award. Otherwise, no winning of the special drawing right award would be determined.

[0098] In the present embodiment, ball receive pockets of the same award are arranged so as to be adjacent to each other. However, the ball receive pockets of the same award may be allocated so as to be arranged alternately for avoiding the adjacent arrangement. Arrangement of the ball receive pockets of the same award so as to be adjacent to each other as with the present embodiment desirably allows a player to feel a higher probability of winning any one of the awards. Arrangement of the ball receive pockets corresponding to each award, that is, allocation of awards to each of the ball receive pockets

may be fixed. However, the arrangement and the allocation may be changed according to a predetermined change condition. For example, in a case of shifting to a fantastic chance on the condition that a count value of ball retaining data is three (S22), a drawing right award may be allocated to each of the ball receive pockets so that the ball receive pockets of the same award are arranged to be adjacent to each other. In a case of shifting to the fantastic chance on the condition that a direct fantastic chance (direct FC) is won in the above-described computer drawing (S8), a drawing right award may be allocated to each of the ball receive pockets so that the ball receive pockets of the same award are arranged alternately so as not to be adjacent to each other.

[0099] Further, in the present embodiment, five ball receive pockets are allocated to each of the drawing right awards and each of the drawing right awards is made equal in winning probability. However, a drawing right award may be allocated to each ball receive pocket so that each of the drawing right awards is made different in winning probability. For example, the number of ball receive pockets to be allocated to the first drawing right award is to be four, while the number of ball receive pockets to be allocated to the second drawing right award is to be six. Still further, the number of ball receive pockets corresponding to each of the drawing right awards may be fixed or may be changed according to a predetermined condition. For example, in a case of shifting to the fantastic chance on the condition that a count value of the ball retaining data is to be three (S22), an award is allocated to each ball receive pocket in such a manner that the ball receive pockets of the first drawing right award outnumber the ball receive pockets of the second drawing right award. In a case of shifting to the fantastic chance on the condition that a direct fantastic chance (direct FC) is won in the above-described computer drawing (S8), an award is allocated to each ball receive pocket in such a manner that the ball receive pockets of the second drawing right award outnumber the ball receive pockets of the first drawing right award.

[0100] In the present embodiment, two types of fantastic chances are available, that is, an normal fantastic chance and a special fantastic chance. That is, the main control device **30** executes the FC drawing program to control the central drawing device **50**, thereby operating either in an normal operation mode for progressing the normal fantastic chance or in a special operation mode for progressing the special fantastic chance. In the normal fantastic chance, ten drawing balls B_1 are continuously supplied onto the drawing ball receiving base **52** by the first drawing ball supplying device **53**. In the special fantastic chance, ten drawing balls B_1 are continuously supplied onto the drawing ball receiving base **52** and thereafter another three drawing balls B_1 are continuously supplied. These fantastic chances are the same in progress content excluding a difference in the number of drawing balls B_1 to be supplied.

[0101] As shown in FIG. 5, the winning pocket forming member **51** is provided with ten winning pocket lamps **55** corresponding respectively to the ball receive pockets C_1 to C_{10} . Each of the winning pocket lamps is controlled for lighting by the main control device **30**. And the main control device **30** controls winning pocket lamps corresponding to ball receive pockets to which the first drawing right award is allocated and winning pocket lamps corresponding to ball receive pockets to which the second drawing right award is allocated so as to be lit in mutually different colors (for example, "red" and "blue"). Then, when a drawing ball enters

into a ball receive pocket corresponding to a winning pocket lamp 55 which is now lit up and this entry is detected by the second ball detecting sensor 54, the main control device 30 controls the winning pocket lamp thereof so as to be turned off.

[0102] Here, whether the main control device 30 operates in the normal operation mode or in the special operation mode is dependent on whether a special step value arrives at five. Concretely, where the special step value is less than five at the time of shifting to the fantastic chance (No in S41), the main control device 30 operates in the normal operation mode, thereby progressing the normal fantastic chance (S42). On the other hand, where the special step value arrives at five at the time of shifting to the fantastic chance (Yes in S41), the main control device 30 operates in the special operation mode, thereby progressing the special fantastic chance (S43).

[0103] In any one of the fantastic chances, the main control device 30 recognizes whether a drawing ball B₁ enters into any one of the ball receive pockets C₁ to C₁₀ on the basis of a detection signal from the second ball detecting sensor 54. Then, the main control device 30 determines any one of the first drawing right award, the second drawing right award, the special drawing right award or loss on the basis of the result thereof.

[0104] Where no drawing ball B₁ enters into any one of the ball receive pockets C₁ to C₅ allocated for the first drawing right award or no drawing ball B₁ enters into any one of the ball receive pockets C₆ to C₁₀ allocated for the second drawing right award as a result of the fantastic chance progress, loss is determined (S44-4). In this instance, the main control device 30 outputs to the second token payout device 57 a token payout command for the number of tokens corresponding to the number of the ball receive pockets C₁ to C₁₀ into which the drawing ball B₁ enters. The token payout device 18 which has received the token payout command controls a token payout unit, thereby executing the token payout operation for the number of tokens according to the token payout command. The second token payout device 57 is provided with a token hopper unit installed below inside the present pusher game machine 1 to retain many tokens, a token payout unit for paying out the tokens retained at the token hopper unit, a token transport rail for transporting the tokens paid out from the token payout unit and a token discharge unit 57a (shown in FIG. 1) which receives the tokens transported by the token transport rail to discharge the tokens into the play field of the station 10 where the tokens are to be paid out. The token discharge unit 57a is arranged above the drawing ball receiving base 52 of the central drawing device 50. The token transport rail which is not illustrated in FIG. 1 extends spirally in such a manner so as to cover the periphery of the token discharge unit 57a. A token transported by the token payout unit from the token hopper unit to an upper part of the present pusher game machine 1 is finally transported to the token discharge unit 57a at the center by way of the token transport rail. Then, the token is discharged from the token discharge unit 57a to the play field of the station 10 where the token is to be paid out. The token is dropped onto the upper surface of the pusher base 13 and paid out inside the play field 2 (S49-4).

[0105] Further, upon decision of loss, the main control device 30 counts second JP value data according to the number of counts in accordance with the number of the ball receive pockets C₁ to C₁₀ into which the drawing ball B₁ has entered (S50). An initial value of the second JP value data is 500 in the present embodiment and may be changed when-

ever necessary. A count value of the second JP value data on the number of the ball receive pockets into which the drawing ball B₁ enters may also be changed whenever necessary. In the present embodiment, the count value is set to be 0.75.

[0106] In a fantastic chance, when the drawing ball B₁ enters into all of the ball receive pockets C₁ to C₅ corresponding to the first drawing right award, the main control device 30 determines the winning of the first drawing right award (S44-1). In this instance, the main control device 30 executes the first JP drawing program stored in the ROM and controls the central drawing device 50, thereby executing the first jackpot drawing (S45-1).

[0107] The first jackpot drawing is also performed by using the central drawing device 50. However, as shown in FIG. 7, a drawing ball B₂ greater in diameter than the drawing ball B₁ used in the fantastic chance is used as a drawing ball. Concretely, the main control device 30 which has determined the winning of the first drawing right award in the fantastic chance first allocates any one of the above-described ball receive pockets C₁ to C₁₀ as a winning pocket. Then, the main control device 30 outputs a ball supplying command to the second drawing ball supplying device 56. The second drawing ball supplying device 56 is provided with a drawing ball retaining unit (not shown), a drawing ball supply driving unit (not shown) and a transport path unit 56a (shown in FIG. 7) for transporting the drawing ball B₂ from the drawing ball retaining unit to above the drawing ball receiving base 52. In the present embodiment, one of the poles 3 which divides the play field 2 acts as a drawing ball retaining unit. More specifically, the drawing balls B₂ are retained inside the pole 3 in a state of being accumulated in one column. Then, upon receipt of a ball supplying command from the main control device 30, the retained ball supply driving unit operates so as to place a new drawing ball B₂ into the bottommost part of the drawing balls B₂ accumulated inside the pole 3. Thereby, the drawing ball B₂ accumulated at the topmost part is lifted up to a drawing ball discharge port provided at an upper part of the pole 3 and falls from the drawing ball discharge port. The fallen drawing ball B₂ is received by the transport path unit 56a, transported along the transport path unit 56a by the inclination of the transport path unit 56a and finally supplied onto the drawing ball receiving base 52 from the direction indicated by the arrow E in the drawing.

[0108] In the first jackpot drawing, the main control device 30 allocates any one of the ball receive pockets C₁ to C₁₀ as a winning pocket and lights up a winning pocket lamp 55 corresponding to the ball receive pocket allocated as the winning pocket. Then, the main control device 30 outputs a ball supplying command to the second drawing ball supplying device 56. The second drawing ball supplying device 56 which has received the command drives the retained ball supply driving unit to supply one drawing ball B₂ onto the drawing ball receiving base 52. Then, whether the first jackpot award is won is determined by whether the drawing ball B₂ enters into the thus allocated winning pocket. Concretely, the main control device 30 determines whether the drawing ball B₂ enters into the winning pocket, that is, whether a game is won, on the basis of a detection signal from the second ball detecting sensor 54 (S46-1). Where determining that no drawing ball B₂ enters into the winning pocket, the main control device 30 determines that the game is lost and pays out a predetermined number of tokens from the second token payout device 57 (S49-1), thereby terminating the first jackpot drawing. On the other hand, where determining that the

drawing ball B_2 enters into the winning pocket, the main control device 30 determines the winning of the first jackpot award and reads out the first JP value data stored inside the RAM. Then, the main control device 30 outputs a token payout command for the number of tokens indicated by the first JP value data to the second token payout device 57. Thereby, many tokens are paid out inside the play field 2 of the station 10 where tokens are to be paid out (S48-1). After completion of the payout, the first JP value data is reset to an initial value. It is noted that the initial value after being reset may not always be a fixed value.

[0109] Further, in a fantastic chance, when the drawing ball B_1 enters into all of the ball receive pockets C_6 to C_{10} corresponding to the second drawing right award, the main control device 30 determines the winning of the second drawing right award (S44-2). In this instance, the main control device 30 executes the second JP drawing program housed in the ROM to control the central drawing device 50, thereby executing the second jackpot drawing (S45-2). The flow of the second jackpot drawing is substantially similar to that of the first jackpot drawing. That is, the main control device 30 allocates any one of the ball receive pockets C_1 to C_{10} as a winning pocket and lights up a winning pocket lamp 55 corresponding to the ball receive pocket allocated as the winning pocket. Then, the main control device 30 outputs a ball supplying command to the second drawing ball supplying device 56. The second drawing ball supplying device 56 which has received the command drives the retained ball supply driving unit to supply one drawing ball B_2 onto the drawing ball receiving base 52. Then, whether the second jackpot award is won is determined by whether the drawing ball B_2 enters into the thus allocated winning pocket (S47-2). Where determining that no drawing ball B_2 enters into the winning pocket, the main control device 30 determines that a game is lost and pays out a predetermined number of tokens from the second token payout device 57 (S49-2), thereby terminating the second jackpot drawing. On the other hand, where determining that the drawing ball B_2 enters into the winning pocket, the main control device 30 determines the winning of the second jackpot award and reads out the second JP value data stored inside the RAM. Then, the main control device 30 outputs a token payout command for the number of tokens indicated by the second JP value data to the second token payout device 57. Thereby, many tokens are paid out inside the play field 2 of the station 10 where tokens are to be paid out (S48-2). After completion of the payout, the second JP value data is reset to an initial value. It is noted that the initial value after being reset may not always be a fixed value.

[0110] Further, in a fantastic chance, when the drawing ball B_1 enters into all of the ball receive pockets C_1 to C_{10} , the main control device 30 determines the winning of a special drawing right award (S44-3). In this instance, the main control device 30 executes a special JP drawing program housed in the ROM to control the central drawing device 50, thereby executing a special jackpot drawing (S45-3). In the special jackpot drawing, the main control device 30 allocates three ball receive pockets of the ball receive pockets C_1 to C_{10} as winning pockets of the first jackpot award and another three ball receive pockets as winning pockets of the second jackpot award, thereby lighting up winning pocket lamps 55 corresponding to the ball receive pockets allocated to individual awards in a color different depending on each award. Then, the main control device 30 outputs a ball supplying command to the second drawing ball supplying device 56. The second

drawing ball supplying device 56 which has received the command drives the retained ball supply driving unit to supply one drawing ball B_2 onto the drawing ball receiving base 52. Then, where the drawing ball B_2 enters into a winning pocket allocated as the first jackpot award, the first jackpot award is determined to be won (S46-3), while the drawing ball B_2 enters into a winning pocket allocated as the second jackpot award, the second jackpot award is determined to be won (S47-3). Where the drawing ball B_2 enters into a ball receive pocket to which no award is allocated, the main control device 30 determines that a game is lost and pays out a predetermined number of tokens by the second token payout device 57 (S49-3), thereby terminating the special jackpot drawing. On the other hand, where determining that the drawing ball B_2 enters into a winning pocket allocated as the first jackpot award, the main control device 30 determines the winning of the first jackpot award and reads out the first JP value data stored inside the RAM. Then, the main control device 30 outputs a token payout command for the number of tokens indicated by the first JP value data to the second token payout device 57. Thereby, many tokens are paid out inside the play field 2 of the station 10 where tokens are to be paid out (S48-1). After completion of the payout, the first JP value data is reset to an initial value. On the other hand, where determining that the drawing ball B_2 enters into a winning pocket allocated as the second jackpot award, the main control device 30 determines the winning of the second jackpot award and reads out the second JP value data stored inside the RAM. Then, the main control device 30 outputs a token payout command for the number of tokens indicated by the second JP value data to the second token payout device 57. Thereby, many tokens are paid out inside the play field 2 of the station 10 where tokens are to be paid out (S48-2). After completion of the payout, the second JP value data is reset to an initial value.

[0111] As described so far, according to the present embodiment, even when a player who plays at any one of the stations 10 wins the first jackpot award, the second JP value data related to the second jackpot award is not reset. Similarly, even when a player who plays at any one of the stations 10 wins the second jackpot award, the first JP value data related to the first jackpot award is not reset. That is, after any player wins any one of the jackpot awards, a value of the other jackpot award is kept as it is. Therefore, where any player wins one of the jackpot awards, the remaining players have a lower desire for winning the jackpot award thereof but strongly desire winning the other jackpot award. As a result, such an effect is expected that even when any player wins one of the jackpot awards, game attractiveness is never reduced for other players but raised further.

[0112] Further, in the present embodiment, a decision is first made for which jackpot award is drawn in a fantastic chance (advance drawing). Then, after any one of the drawing right awards corresponding to each jackpot award in the fantastic chance is won, a final jackpot drawing is performed to determine the winning of the jackpot award corresponding to the drawing right award won in the fantastic chance. A special drawing right award is given as a drawing target of the fantastic chance, in addition to the first drawing right award and the second drawing right award corresponding to each jackpot award. When the special drawing right award is won in the fantastic chance, a special jackpot drawing for determining the winning of one of the first and the second jackpot awards is performed. Therefore, where the special drawing right

award is won in the fantastic chance, no decision is made for a winning jackpot award until the winning result is made available in a subsequent jackpot drawing. Thus, a player is able to enjoy winning one of the jackpot awards among these two types of awards in a stepwise manner.

[0113] Further, in the present embodiment, a payout amount increasing condition of the first jackpot award is, as described above, that in which a token is inserted into any one of the stations 10. And a payout amount increasing condition of the second jackpot award is, as described above, that in which a ball enters into a ball receive pocket in a loss-determined fantastic chance. Therefore, the payout amount increasing conditions of the jackpot awards are set so as to be different from each other, thus making it possible to diversify conditions for increasing a jackpot value of each jackpot award and also raise the game attractiveness. However, the payout amount increasing conditions of the jackpot awards may be the same as each other.

[0114] In the present embodiment, an explanation has been made for a case where both the fantastic chance which is an advance drawing and the jackpot drawing are mechanical drawings. However, one of them or both of them may be a computer drawing in which a drawing program using random numbers is executed to perform a drawing.

[0115] Further, in the present embodiment, an explanation has been made by referring to a pusher game machine. However, similar effects can be obtained by using other game machines.

[0116] Still further, in the present embodiment, an explanation has been made for an example in which a drawing machine for jackpot game is provided inside the pusher game machine 1 which is a game apparatus including a plurality of stations 10 for progressing a mutually independent pusher game, and when a jackpot drawing start condition is satisfied at any one of the stations 10, a jackpot drawing is started in the drawing machine for jackpot game. The present invention is not limited to the above-described constitution. The present invention is applicable not only to a plural player-type game apparatus in which a plurality of players play at the same time, for example, as with the present embodiment, but also to a single player-type game apparatus. The present invention is also applicable to a game system in which, for example, a plurality of game apparatuses are connected via a communication network to drawing machines for jackpot game and when a jackpot drawing start condition is satisfied at any one of the game apparatuses, a jackpot drawing is started in the drawing machine for the jackpot game concerned.

[0117] In the above-described embodiment, means realized by software such as a computer program may be optionally realized by hardware such as a circuit board and a chip. Moreover, means realized by hardware such as a circuit board and a chip may be optionally realized by software such as a computer program.

1. A drawing machine for jackpot game comprising:
 - a first drawing unit which performs an advance drawing for determining a winning of any one of drawing right awards individually corresponding to plural types of jackpot awards;
 - a second drawing unit which performs a jackpot drawing for determining a winning of a jackpot award corresponding to the drawing right award, the winning of which is determined by the first drawing unit;
 - a storage unit for storing payout amount data indicating an amount of payout objects to be paid out to a player so as

to correspond to each of the plural types of jackpot awards when the second drawing unit determines the winning;

- a payout processing unit which performs a payout process for reading out the payout amount data corresponding to the winning jackpot award from the storage unit and paying out an amount of payout objects indicated by the read-out payout amount data, when the second drawing unit determines the winning; and

- a payout amount data processing unit which performs a process for increasing cumulatively an amount indicated by at least one piece of the payout amount data stored in the storage unit when a predetermined payout amount increasing condition is satisfied; wherein

the first drawing unit performs the advance drawing by using as drawing targets not only each of the drawing right awards but also a special drawing right award for performing a special jackpot drawing in order to determine a winning of at least one of two or more types of jackpot awards included in the plural types of jackpot awards, and

the second drawing unit performs the special jackpot drawing for determining the winning of at least one of the two or more types of jackpot awards corresponding to the special drawing right award, where the first drawing unit determines the winning of the special drawing right award.

2. The drawing machine for jackpot game according to claim 1, wherein at least one of the first drawing unit and the second drawing unit is a mechanical drawing unit for determining a winning of an award on a condition that a drawing moving object is moved so that the drawing moving object moves to a predetermined winning spot.

3. The drawing machine for jackpot game according to claim 2,

wherein the first drawing unit is composed of the mechanical drawing unit;

this mechanical drawing unit comprises a winning pocket forming member for forming three or more winning pockets individually corresponding to each of the drawing right awards, a supplying unit for supplying the drawing moving objects, whose number is greater than a total number of winning pockets corresponding to two or more types of drawing right awards, toward the three or more winning pockets, a detecting unit for detecting the drawing moving object, which enters each of the winning pockets, and a winning determination processing unit for determining a winning of a drawing right award corresponding to the winning pocket, which the drawing moving object enters, on the basis of a detection result of the detecting unit; and

where there are plural drawing right awards corresponding to the winning pockets, which the drawing moving objects enter, based on the detection result of the detecting unit, the winning determination processing unit determines a winning of a special drawing right award for performing a special jackpot drawing in order to determine at least one of the jackpot awards corresponding to the plural drawing right awards.

4. The drawing machine for jackpot game according to claim 3, further comprising a corresponding relationship changing unit for changing a corresponding relationship between the three or more winning pockets formed by the

winning pocket forming member and each of the drawing right awards, based on a predetermined change condition.

5. The drawing machine for jackpot game according to claim 4, wherein the corresponding relationship changing unit changes the corresponding relationship so that the number of winning pockets corresponding to at least one drawing right award is changed before and after the change.

6. The drawing machine for jackpot game according to claim 4, wherein the corresponding relationship changing unit changes the corresponding relationship so that a relative positional relationship of winning pockets individually corresponding to drawing right awards is changed before and after the change.

7. The drawing machine for jackpot game according to claim 1, wherein the payout amount increasing condition includes two or more payout amount increasing conditions which are different from each other, where one of the two or more payout amount increasing conditions is satisfied, the payout amount data processing unit cumulatively increases an amount indicated by the payout amount data corresponding to the thus satisfied payout amount increasing condition among the payout amount data stored in the storage unit.

8. The drawing machine for jackpot game according to claim 2, wherein the payout amount increasing condition includes two or more payout amount increasing conditions which are different from each other, where one of the two or more payout amount increasing conditions is satisfied, the payout amount data processing unit cumulatively increases an amount indicated by the payout amount data corresponding to the thus satisfied payout amount increasing condition among the payout amount data stored in the storage unit.

9. The drawing machine for jackpot game according to claim 3, wherein the payout amount increasing condition includes two or more payout amount increasing conditions which are different from each other, where one of the two or more payout amount increasing conditions is satisfied, the payout amount data processing unit cumulatively increases an amount indicated by the payout amount data corresponding to the thus satisfied payout amount increasing condition among the payout amount data stored in the storage unit.

10. The drawing machine for jackpot game according to claim 4, wherein the payout amount increasing condition includes two or more payout amount increasing conditions which are different from each other, where one of the two or more payout amount increasing conditions is satisfied, the payout amount data processing unit cumulatively increases an amount indicated by the payout amount data corresponding to the thus satisfied payout amount increasing condition among the payout amount data stored in the storage unit.

11. The drawing machine for jackpot game according to claim 5, wherein the payout amount increasing condition includes two or more payout amount increasing conditions

which are different from each other, where one of the two or more payout amount increasing conditions is satisfied, the payout amount data processing unit cumulatively increases an amount indicated by the payout amount data corresponding to the thus satisfied payout amount increasing condition among the payout amount data stored in the storage unit.

12. The drawing machine for jackpot game according to claim 6, wherein the payout amount increasing condition includes two or more payout amount increasing conditions which are different from each other, where one of the two or more payout amount increasing conditions is satisfied, the payout amount data processing unit cumulatively increases an amount indicated by the payout amount data corresponding to the thus satisfied payout amount increasing condition among the payout amount data stored in the storage unit.

13. A game apparatus comprising:

a drawing apparatus which performs a jackpot drawing for determining a winning of a jackpot award, and
a game progress control unit which controls game progress, wherein

the drawing machine for jackpot game according to any one of claims 1 to 12 is used as the drawing apparatus, and

the first drawing unit of the drawing machine for jackpot game starts the advance drawing when a predetermined drawing start condition is satisfied by the game progress controlled by the game progress control unit.

14. A game system comprising:

a drawing apparatus which performs a jackpot drawing for determining a winning of a jackpot award, and
a plurality of game apparatuses, each of which is connected via a communication network to the drawing apparatus and provided with a game progress control unit for controlling game progress,

wherein the drawing machine for jackpot game according to any one of claims 1 to 12 is used as the drawing apparatus,

the first drawing unit of the drawing machine for jackpot game starts the advance drawing when a predetermined drawing start condition is satisfied by the game progress controlled by the game progress control unit of any game apparatus, and

when the second drawing unit of the drawing machine for jackpot game determines a winning of any one of the plural types of jackpot awards, the payout processing unit of the drawing machine for jackpot game performs a payout process for paying out an amount of payout objects indicated by the payout amount data read out from the storage unit to a player of the game apparatus which has satisfied the predetermined drawing start condition.

* * * * *