



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
**24.10.2001 Bulletin 2001/43**

(51) Int Cl.7: **A63F 13/00**, A63F 13/10,  
A63F 9/04

(21) Application number: **01109791.2**

(22) Date of filing: **20.04.2001**

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU**  
**MC NL PT SE TR**  
Designated Extension States:  
**AL LT LV MK RO SI**

(72) Inventor: **Watanabe, Tsutomu**,  
c/o KCE Japan, Inc.  
Tokyo (JP)

(74) Representative: **VOSSIUS & PARTNER**  
**Siebertstrasse 4**  
**81675 München (DE)**

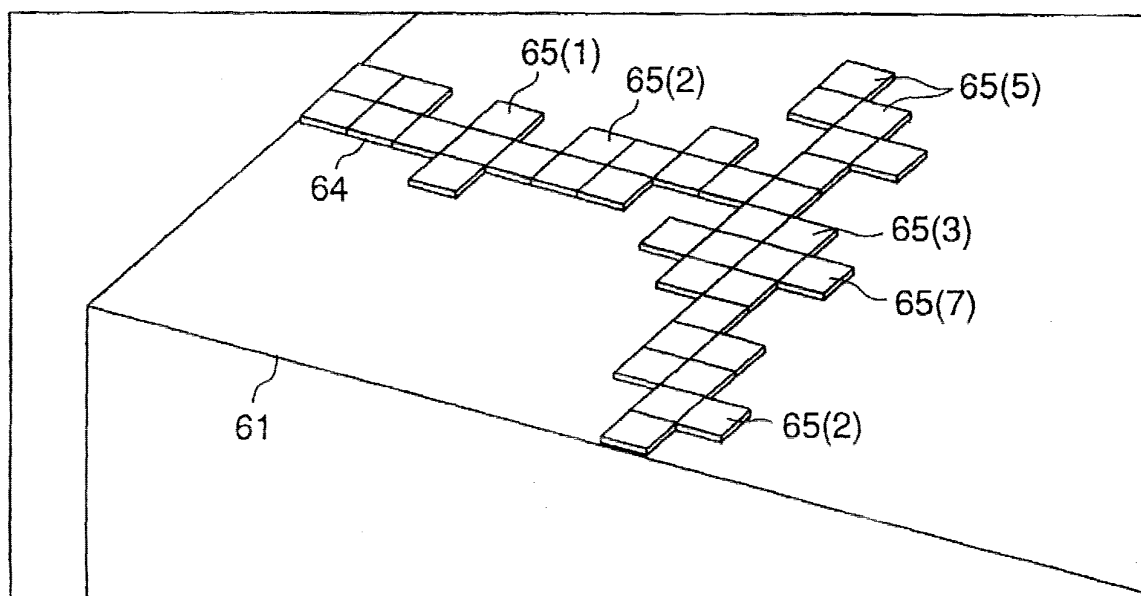
(30) Priority: **21.04.2000 JP 2000121516**

(71) Applicant: **Konami Corporation**  
**Minato-ku, Tokyo (JP)**

(54) **Game device, image display device, and computer-readable recording medium using an openable dice**

(57) In a game device for use in extending each region formed on a board by a combination of partial paths, from a player to an opponent, a plurality of the partial paths are prepared to be selected one by one

and are arranged on the board without any overlap with any other partial paths. In this event, each partial path is located on the board and does not exceed a board boundary. Such partial paths may be formed by opening dice (Fig. 9).



**FIG. 9**

## Description

### Background of the Invention:

[0001] This invention relates to a game device for use in playing a game, looking at a board displayed on a display monitor, and also to an image display device and a game method for displaying the game on the display monitor.

[0002] In general, a wide variety of board games, such as chess, Japanese chess, go, mah-jongg, have been proposed and sold in the world. In addition, various sorts of computer games or video games have been also proposed so as to enjoy or play the above-mentioned board games on a display device. Such computer games have been very often realized with game rules of the board games kept unchanged and have been played in compliance with computer game rules similar to the board rules of the board games.

[0003] On the contrary, attention would be turned to comics that draw imagination worlds remote from a realistic world. In an interesting and popular comic published in Japan, a very specific board game has been illustrated and battled between comic characters. Specifically, a large number of special and unique dice are prepared as a dice group in the specific board game, together with a board, like a chess board, divided into ranks and files. Therefore, the specific board game will be simply called a dice game hereinafter for simplicity of description.

[0004] Each of the dice has signs and symbols which are drawn on six planes of each die and which symbolize special effects during the dice game. At the start of the dice game, each character prepares a deck composed of a predetermined number of the dice selected from the dice group and selects three dice from the dice deck. Thereafter, three dice are rolled or thrown on the board by each character and show three signs or symbols on the board. When the three signs or symbols satisfy predetermined conditions, for example, when the two or three dice show the same signs or symbols, either one of the rolled dice can be opened or spread on the board by each character. Such an opened dice is spread on the board to form a partial path of one of selected shapes and extended towards an opponent character site during the dice game. From the opened dice, a monster determined for the opened dice jumps out and appears on the board. The monster can move along the partial path formed by the opened or spread dice. Inasmuch as each monster has an attack ability and a defense ability, it battles with an opponent's monster on the board to cause any damage to the opponent's monster in accordance with the attack and defense ability assigned to the monster. As mentioned before, six planes of the opened or spread dice serve to form the partial path composed of six tiles. Thus, battles are repeated between the monsters on the board to determine win or loss each time when the monster encounters the opponent's monster.

In this event, a loser's life point is reduced after each battle. Finally, the board game is ended when a life point of either one of the characters becomes zero.

[0005] The dice game drawn in the comic has very interesting features in that a plurality of dice are rolled or cast to be opened or spread on the board to form the partial path (namely, dungeon) by the spread dice and to extend the partial path towards the opponent site. In addition, the dice game is also different from any other board games in that a monster appears from each opened dice.

[0006] Herein, consideration would be made about rendering the above-mentioned dice game into a computer or video game. However, it is actually very difficult to render the dice game played in the unrealistic and fantastic world into a realistic computer game.

[0007] In the comic, description is certainly made about spreading each dice into various shapes to form each partial path extended towards an opponent's site and about reaching a combination of the partial paths to the opponent's site.

[0008] However, no description is made in the comic about a way of automatically determining a combination of the signs or symbols of the three dice placed on the board.

[0009] Moreover, no mention is also made in the comic about deciding what kind of shapes each opened dice takes to form the partial path on the board. Namely, the comic does not disclose about how to select the shape of each opened dice. In addition, no disclosure is done about a position where each monster is located within the tiles of the opened dice.

[0010] At any rate, a lot of technical modifications and considerations should be done in order to realize the dice game in the form of a computer or video game.

### Summary of the Invention:

[0011] It is an object of this invention to provide a game device or system which is capable of actually realizing a dice/board game, such as the above-mentioned game, such that a zone of each player is successively determined by selecting a partial path from a plurality of patterns.

[0012] It is another object of this invention to provide a game device of the type described, which can enjoy the board game by forming the zone of each player by opening each dice rolled on the board.

[0013] It is still another object of this invention to provide a game device of the type described, which can automatically and electronically determine a combination of signs or symbols which are called crests.

[0014] According to an aspect of this invention, a game device is for executing a game by the use of a board displayed on a display monitor. The game device comprises storage means for storing a plurality of partial paths to be placed on the board, means for displaying, on the display monitor, the partial paths to be selected,

and arranging means for arranging the selected partial paths on the board displayed on the display monitor. In this event, each partial path on the board determines a play area for each player.

**[0015]** In addition, the arranging means comprises judging means for judging whether or not each partial path exceeds the displayed board, and means for placing each partial path on the board so that each partial path does not overlap with each other on the board when each partial path does not exceed the board.

**[0016]** Herein, each partial path is formed by spreading a dice on the displayed board.

**[0017]** According to another aspect of this invention, an image display device is for use in displaying a board on a display monitor so as to perform a board game. The image display device comprises storage means for storing a plurality of partial paths displayed on the display monitor and processing means for processing the partial paths read out of the storage means to make the display monitor display the partial paths to be selected and to successively arrange, on the displayed board, each partial path selected. The image display device may further comprise means for storing a plurality of dice that have different attributes and that are to be displayed on the display monitor and means for spreading a selected one of the dice to form the partial paths.

**[0018]** According to still another aspect of this invention, a computer-readable recording medium stores a program of executing a game by using a board displayed on a display monitor. The program comprises the steps of storing a plurality of partial paths which are to be arranged on the board and which are different in shape from one another, selecting either one of the partial paths displayed on the display monitor, and successively arranging the selected partial path on the board displayed on the display monitor.

**[0019]** The program may further comprise the steps of preparing a dice deck composed of a plurality of dice with crests, selecting a predetermined number of the dice from the dice deck, casting the predetermined number of the dice over the board displayed on the display monitor, and judging whether or not the dice cast on the board satisfies a predetermined condition, to allow a selected one of the cast dice to be spread on the board and to make the selected one of the cast dice correspond to the partial paths stored at the storing step.

**[0020]** In this event, the judging step comprises the steps of monitoring a combination of the crests on the cast dice and detecting whether or not the combination of the crests satisfies the predetermined condition.

**[0021]** Herein, the predetermined condition is satisfied when specific ones of the crests appear on the cast dice as the combination of crests.

**[0022]** The predetermined number of the dice cast over the board may be equal to three.

**[0023]** The program may further comprise the steps of generating a series of random numbers determined for each dice and determining occurrence of the specific

crests by the random number series. In addition, the programs may comprise the steps of detecting whether or not the selected partial path exceeds a boundary of the board displayed on the display monitor and rejecting the arrangement of the selected partial path on the board when the arrangement exceeds the boundary.

#### Brief Description of the Drawing:

#### 10 **[0024]**

Figs. 1A and B show schematic diagrams for use in describing play modes of a portable game machine or machines usable as a game device according to this invention;

Fig. 2 shows a block diagram of a CPU main body included in each game machine of Figs. 1A and 1B; Fig. 3 shows a perspective view of a dice which is used in a dice game according to this invention;

Fig. 4 shows a view for use in describing an opened state of the dice illustrated in Fig. 3;

Figs. 5A to 5F show various partial paths formed by opening dice like in Fig. 4;

Fig. 6 shows an image for use in describing the dice game according to this invention;

Fig. 7 shows an example of a monster which might appear from a dice when the dice is opened;

Fig. 8 shows a view for use in describing an image which is displayed when partial paths are selected;

Fig. 9 shows a view for use in describing a game image according to this invention;

Fig. 10 shows a flow chart for use in describing a dice or a board game according to an embodiment of this invention; and

Fig. 11 shows a block diagram of a game device which can carry out the operation illustrated in Fig. 10.

#### Description of the Preferred Embodiments:

**[0025]** Referring to Figs. 1A and 1B, description will be made about a game device to which this invention is applicable and which is exemplified by a portable game machine well-known in the art. However, it is to be noted that this invention is not restricted to the portable game machine but is applicable to any other game device, such as an arcade machine, a family game machine, a personal computer, or the like.

**[0026]** In Fig. 1A, a player (not shown) alone plays a board or dice game related to this invention by attaching or mounting a cassette 12 in his/her own portable game machine 11, which may be referred to as a single mode. It is needless to say that the illustrated cassette 12 stores a program of the dice game and serves as a computer-readable recording medium. In this single mode, the player confronts a computer which is included in the portable game machine 11 and which plays as an opponent.

**[0027]** In Fig. 1 B, a communication mode of the dice game is illustrated wherein two players are possessed of their own portable game machines connected to each other through a communication cable 13. Instead of the communication cable 13, an infrared ray may be used to couple both the portable game machines 11. In the communication mode, each player acts as an opponent in the dice game, as readily understood.

**[0028]** Each portable game machine 11 illustrated in Figs. 1A and 1B has a liquid crystal display (LCD) panel 14 and a control or manipulation panel 15 which is located downwards of the LCD panel 14 in this machine. The manipulation panel 15 has a manipulation button 111 of a crisscross shape and a selection button 112. As mentioned before, the cassette 12 is attached to each portable game machine 11 as a computer-readable recording medium and stores the program for playing the dice game according to this invention.

**[0029]** Referring to Fig. 2, description will be made about an internal structure of the portable game machine 11. Specifically, the portable game machine 11 can attach or mount the cassette 12 related to this invention and has a CPU main body 23, together with the LCD panel 14 and the manipulation panel 15 shown in Figs. 1A and 1B.

**[0030]** As shown in Fig. 2, the CPU main body 23 has a CPU core 26, a port 27 between the manipulation panel 15 and the CPU core 26, and a RAM 28 and a ROM 30 both of which are connected to the CPU core 26. Furthermore, the illustrated CPU core 26 is connected to a buffer 31 for receiving/sending timing, address, and data and also to a communication control portion 50. In addition, the CPU core 26 is coupled to the LCD panel 14 through a display drive circuit 35 connected through a RAM interface 40 to a display RAM 42 for storing characters and the like to be displayed on the LCD panel 14. The illustrated portable game machine 11 has a plurality of connectors, such as 24 and 51. In the example shown in Fig. 2, the connector 24 serves to mount the cassette 12 onto the CPU main body 23 while the connector 51 serves to connect this portable game machine to another portable game machine (not shown). Herein, it is to be noted that the ROM 23 stores an OS for entirely controlling the LCD panel 14, the display drive circuit 35, the communication control portion 50, and the like.

**[0031]** Herein, let the portable game machine 11 illustrated in Fig. 2 be loaded with the cassette 12 which stores a board game program according to this invention. Specifically, the cassette 12 is connected to the CPU main body 23 through the connector 24. Under the circumstances, when the portable game machine is powered on by pushing a power key or a reset key, the CPU core 26 energizes the OS stored in the ROM 30. Consequently, a whole of the portable game machine is initialized and at least a part of the board game program and data both of which are stored in the cassette 12 is moved and memorized in the RAM 28 and the display RAM 42. Thus, the RAM 28 is operable as a main mem-

ory in the illustrated portable game machine. In this state, the CPU core 26 executes the board game in accordance with manipulation of the player, with data displayed on the LCD panel 14. Such displaying the data is carried out by accessing the display RAM 42 through the display RAM interface, by reading the data, such as character data or the like, out of the display RAM 42, and by sending the readout data to the LCD panel 14 through the display drive circuit 35.

**[0032]** Now, description will be directed to a dice game mentioned before as an example of the board game according to this invention. In the dice game, provision is at first made of a great number of dice that exceed than 500 in number and that have various abilities and levels. These dice are classified into five groups or species. To begin with, a deck is formed which is composed of thirteen or fifteen dice before playing the dice game.

**[0033]** Herein, it is to be noted that each of the dice has six planes with crests as marks and that different levels and abilities are specified by the crests and their colors drawn on the dice.

**[0034]** Referring to Figs. 3 and 4, an example of a dice will be described below. As shown in Fig. 3, the dice used in the dice game has a cubic shape and crests which are drawn on the six planes and that are different from usual pips or dots of a normal dice. As to the illustrated dice, six different crests are drawn on the respective planes. This shows that each crest of the illustrated dice appears upwards at a probability of one-sixth. However, the number of each crest may be different at every dice.

**[0035]** The dice illustrated in Fig. 3 is spread or opened in the manner shown in Fig. 4 to form a partial path of six tiles which is laid on a board (not shown). When such an opened dice or a partial path is laid on the board, a surface with the crests contacts with the board and will be therefore called a front surface. Therefore, the crests on the front surface becomes directly invisible when the dice is opened on the board. As shown in Fig. 4, when the dice is opened or spread as the partial path, a monster determined for the dice spring out of the dice on the partial path and stands up at a predetermined tile of the partial path. In Fig. 4, the opened dice or partial path is shown as an example but may be opened or spread in various other configurations, as will become clear.

**[0036]** Herein, description will be made about each crest drawn on each plane of the dice with reference to Figs. 3 and 4. Among the six planes of the illustrated dice, a first one S11 of the planes has a magic crest representative of using or practicing magic while a second plane S12 has a summons crest indicative of summoning a monster from the dice on the board when the dice is opened.

**[0037]** Furthermore, the third plane S13 has a trap crest representative of trapping any other monsters while the fourth plane S14 has a progress or movement

crest representative of moving or progressing a monster along an arrow head drawn on the fourth plane S14. In addition, the fifth plane S15 has a defense crest representative of a defense ability while the sixth plane S16 has an attack crest representative of an attack ability. The illustrated dice can move the monster by two tiles along the arrow head because the number "2" is attached to the fourth plane S14.

**[0038]** In the illustrated crests, the magic, the trap, the progress, the defense, and the attack crests except the summons crest can be stored in a crest pool each time when each crest appears upwards. Such pooled crests can be used for influencing own or opponent's monster.

**[0039]** For example, when the dice is rolled or cast on the board, it is assumed that the fourth plane S14 appears upwards. Inasmuch as the number "2" is attached to the progress crest, two progress crests are stored in the crest pool of the player. The player can move a monster by two tiles on the board at the cost of the two progress crests.

**[0040]** In the dice illustrated in Figs. 3 and 4, the summons crest is drawn on only one of the six planes. This shows that a probability of summoning a monster by casting the illustrated dice is equal to one-sixth. In other words, it is difficult to summon the monster by the use of the illustrated dice. Taking this into consideration, the dice are classified into four groups by the numbers of the summons crests drawn on each dice and the monsters are also classified into first through fourth levels corresponding to the numbers of the summons crests, respectively. Specifically, a monster which appears from the dice of a single summons crest is classified into the fourth level while monsters from the dice of two, three, and four summons crests are classified into the third, the second, and the first levels. In this case, the monsters of the fourth level have attack and defense abilities higher than those of the remaining levels while the monsters of the third level may have the attack and the defense abilities higher than those of the second and the first levels.

**[0041]** From this fact, it is readily understood that the dice illustrated in Figs. 4 and 5 has the monster of the fourth level, as being impressed by the number "4" in the summons crest on the second plane S12.

**[0042]** During the above-mentioned dice game, each player takes three dice out of the player's deck prepared by each player and simultaneously casts the three dice over the board. If the summons crests of at least two dice are directed upwards in the three dice, either one of at least two dice is selected by the player and opened or spread on the board to form the partial path (namely, dungeon) composed of six tiles. The partial path is placed on the board and is successively extended from the player's site towards the opponent's site. In this case, each tile or plan of the opened dice or partial path provides a unit path. Thus, when each dice is opened to form a partial path on the board, a monster determined for the dice appears from the opened dice and

stands up on the partial path to wait for arrival of the opponent's monster.

**[0043]** On the other hand, when the remaining crests except the summons crest appear upwards on the rolled dice, each crest is successively stored in the crest pool. Such pooled crests can be used during the dice game and bring about the determined effects, such as progress, attack, defense, magic, and trap at their cost.

**[0044]** When a route is formed from the player's site to the opponent's site by combining the partial paths of the spread dice, a player's monster crosses the route and marches into the opponent's site to reduce the opponent's life points. Finally, when the life points of either one of the players become equal to zero, the game is over.

**[0045]** The above-mentioned dice game is played in an imaginary world and can not be simply realized as a computer game, as mentioned before. Specifically, consideration should be made about the way of determining the crests directed upwards, selecting configurations of the opened dice, determining positions and moving directions of each monster appearing from the opened dice, and the like.

**[0046]** Now, description will be made about the board game according to an embodiment of this invention as an example of the dice game, so as to solve the above-mentioned problems.

**[0047]** Referring to Figs. 5A to 5F, together with Figs. 3 and 4, partial paths (namely, dungeons) are exemplified which can be formed by opening each dice. In the dice game of opening each dice, the partial path should be placed on the board so that each partial path does not overlap with another partial path previously arranged on the board. In addition, when at least two dice face the summons crests upwards among three dice rolled on the board, each player should select one dice from them in consideration of the attack and the defense abilities of the monster appearing from the selected dice. After the dice is selected, an image of the monster in the selected dice must be displayed on a screen together with its attributes, for example, the attack abilities and the defense abilities.

**[0048]** Referring to Fig. 6, three dice depicted by 60a, 60b, and 60c are cast or rolled over a board 61. In the illustrated example, two of the dice 60a and 60b stop on the board 61 and, as a result, determine the crests faced upwards while the remaining one of the dice 60c does not determine its crest. In order to determine each crest of the dice appearing upwards, the embodiment of this invention uses a random number. More specifically, a seed of the random number is determined at each dice selected by the player to generate a series of the random numbers from the seed and each number of the random number series is made to correspond to the crests of each dice. Under the circumstances, a number of the random number series is selected at manipulation timing by the player and is picked up as a determined number. The determined number is made to correspond

to the crest faced upwards.

**[0049]** In this event, three dice may be simultaneously cast over the board 61 and the crests of the three dice appearing upwards can be determined by using the random number series. Alternatively, each crest of the dice appearing upwards may individually be determined one by one. The manipulation timing may be replaced by timing determined by a timer or the like.

**[0050]** Referring to Fig. 7, it is assumed that two summons crests of the two dice illustrated in Fig. 6 appear upwards on the image shown in Fig. 6 and that a selected one of the dice is opened by the player. As a result, an image as shown in Fig. 7 is assumed to be displayed on a screen. On the illustrated screen, an image of a flame armor dragon is displayed together with its name and attributes. As readily understood from Fig. 7, the flame armor dragon has, as its attributes, a hit point H. P. (namely, life point) of 40, attack abilities (specified by "swords") of 30, defense abilities (specified by "shield") of 10, and the level of 1. Moreover, the flame armor dragon has a trap ability called "absorption" and a magic ability called "dragon cut".

**[0051]** When the flame armor dragon illustrated in Fig. 7 is summoned as the monster by opening the dice, the flame armor dragon which has the attack abilities of 30 can overwhelm any other monsters that have the defense abilities lower than 30. In addition, when the flame armor dragon which has the defense abilities of 10 is attacked by the other monsters having the attack abilities higher than 10, it loses the other monsters and is erased from the screen.

**[0052]** After a monster as shown in Fig. 7 is selected by selecting the dice by a player, a plurality of partial paths (shown in Fig. 8) are displayed on the LCD panel 14 (Figs. 1A and 1B) to be selected by the player. In other words, the monster image shown in Fig. 7 is switched to an partial path selection image as illustrated in Fig. 8. As the partial path selection image, the partial paths illustrated in Figs. 4 and 5 appear in the form of first through seventh path patterns numbered from (1) to (7) on the LCD panel 14 to be selected by the player. The player selects one of the path patterns (1) to (7) by moving a cursor depicted by a triangle in Fig. 8. In the illustrated example, although all the partial paths are displayed on a single screen, each partial path can be selected by successively scrolling each of the partial paths by the player. In addition, each of the first through the seventh partial paths numbered from (1) to (7) has a monster position or tile which is depicted by a crisscross in each pattern and at which a monster is positioned.

**[0053]** Now, when either one of the partial paths is selected by the player as a selected partial path, the player manipulates the manipulation button 111 on the manipulation panel 15 of the portable game machine 11 (Figs. 1A and 1B) so as to adjust an angle of the selected partial path and to guide it to a desired position on the board 61 (Fig. 6). Thus, the selected partial path is located in place on the board 61 so that it is attached to the player's

site or contiguous to a previously arranged partial path or paths.

**[0054]** Referring to Fig. 9, description will be made about arranging each of the partial paths (shown in Fig. 8) on the board 61. As illustrated in Fig. 9, a player's site 64 formed by four tiles is placed along one side of the board while an opponent's site (not shown) is also placed along an opposite side of the board. Let the player roll three dice and summons crests appear upwards on at least two dice. The player selects one of the dice from the dice which have the summons crests faced upwards and further selects either one of the partial paths on the partial path image illustrated in Fig. 8. The selected partial path is located on the board 61 shown in Fig. 9. In this event, it is to be noted that a first one of the partial paths should be contacted with the player's site 64, as illustrated in Fig. 9.

**[0055]** In the example illustrated in Fig. 9, the first partial path (1) shown in Fig. 8 is selected and arranged as 65(1) in contact with the player's site 64 on the board 61 when the summons crests appear upwards on at least two dice rolled by the player. Practically, although a monster image also appear on the predetermined tile of the selected partial path 65(1), such a monster is omitted from Fig. 9 for brevity of illustration.

**[0056]** In the example illustrated in Fig. 9, the player again selects the second partial path 65(2) and arranges it in contact with the first partial path 65(1) after the opponent's turn. Moreover, the partial paths 65(3), 65(7), 65(2) and 65(5) are successively selected and arranged on the board 61 in Fig. 9 to form a route extended towards the opponent's site. Like in the partial path 65(1), a monster appears on each of the partial paths 65(2), 65(3), and so on, although no illustration is made in Fig. 9.

**[0057]** Each monster can not only battle with any other monster or monsters but also can carry out any other action, such as trap, magic, move, and so on at the cost of the crests pooled in the crest pool.

**[0058]** In addition, each partial path should be arranged or placed on the board 61 so that it does not exceed a boundary of the board 61, as is apparent from the partial path 65(2) arranged along the boundary of the board 61. If arrangement of any partial path exceeds the boundary of the board 61, such arrangement is rejected.

**[0059]** As readily understood from the above-mentioned description, the dice game according to this invention may be also defined as a board game that two-dimensionally extends own partial paths towards the opponent's site. Herein, each partial path may preferably have a pattern different from one another, as illustrated in Figs. 8 and 9.

**[0060]** Referring to Figs. 10 and 11, a game device according to the embodiment of this invention will be described and may be, for example, a portable game machine as shown in Figs. 1A, 1B, and 2, an arcade machine, a computer, or the like. At any rate, the game de-

vice executes the dice game or the board game in accordance with a game program shown in Fig. 10. Herein, description will be made on the assumption that the cassette 12 (Fig. 2) which stores the game program of the board game according to this invention is prepared as a recording medium and is attached to the portable game machine 11 operable as the game device according to this invention. Under the circumstances, the game program is assumed to be partially transferred or moved from the cassette 12 to the RAM 28. Let a player or a possessor of the portable game machine select a single player mode and play the board game to compete with a computer included in the portable game machine. When the board game is started, setup operation is executed within the CPU main body 23 at a step S1 to form a dice deck by selecting the dice. Forming the deck is followed by a step S2 at which three dice are selected by the player from the dice deck.

**[0061]** The above-operation is carried out in the CPU main body 23 in the following manner. In Fig. 11, the program is read out of the RAM 28 under control of a command processor 71 included in the CPU core 26 and processed by the command processor 71. An image display portion 72 is driven on the basis of a result of processing in the command processor 71. The image display portion 72 controls the display drive circuit 35, the RAM interface 40, and the display RAM 42 illustrated in Fig. 2, to display, on the LCD panel 14, setup images, dice images, deck images, and the like.

**[0062]** Referring back to Fig. 10, the player casts or rolls the three dice over the board (step S3) by manipulating the manipulation button 111. Such rolling the three dice is performed by watching the LCD panel 14. In this event, the command processor 71 illustrated in Fig. 11 make the LCD panel 14 display the board 61 and each player's site, such as 64, through the image display portion 72 and gives dice data to a dice judgement portion 73. In the illustrated example, the dice data include a species of the selected dice, the crests of each selected dice, each monster appearing from each dice, attributes of each monster, and the like and are read out of the RAM 28 to be sent to the dice judgement portion 73. From this fact, it is readily understood that the RAM 28 includes a dice data storage portion which stores the above-mentioned dice data.

**[0063]** In Fig. 10, the dice judgement portion 73 judges at a step S4 to determine the number of the summons crests of the three dice directed upwards. Judgement at the step S4 is made about whether or not two or more summons crests appear upwards in relation to the three dice cast on the board 61.

**[0064]** To this end, the dice judgement portion 73 performs judgement operation by using a random number series given from a random number generator 74 and a timing signal given by manipulating the manipulation panel 15. As a result, each crest appearing upwards is determined at each of the three dice by the dice judgement portion 73 and is displayed on the LCD panel 14

through the image display portion 72 and the display drive circuit 35. Subsequently, the dice judgement portion 73 judges at the step S4 in Fig. 10 whether or not the number of the summons crests is not smaller than two. When the crests except the summons crests appear upwards (step S4: No), the number of the crests is sent to a crest pool 75 to be stored therein (step S5).

**[0065]** Now, it is surmised that a partial path storage 76 is loaded with partial path data from the RAM 28 in advance. In this state, when the dice judgement portion 73 judges that two or more dice exhibit the summons crests (step S4: Yes), the step S4 succeeds to a step S6.

**[0066]** At the step S6, the player selects the dice to be opened and a monster corresponding to the dice, watching the LCD panel 14. During the selection of the dice and the monster, the dice to be opened and the corresponding monster are displayed through the image display portion 72 on the LCD panel 14 under control of a monster image readout control portion 80 (Fig. 11) operated by the command processor 71.

**[0067]** In Fig. 10, the step S6 follows a step S7 at which either one of the partial paths is decided after the opened dice is selected. At the step S7, the partial path storage 76 is put into an active state under control of the command processor 71 to display path candidates of the partial paths (shown in Fig. 8) on the LCD panel 14. Thus, the partial path storage 76 serves as a storage portion for storing a plurality of partial paths.

**[0068]** When either one of the partial paths is selected at step S7, a step S8 is executed to drive a path arrangement control portion 78 (Fig. 11) and to arrange the selected partial path on the board 61. At this time, the command processor 71 accesses the monster image readout control portion 80 to read corresponding monster data out of the RAM 28. Such readout monster data are displayed as a monster image on the LCD panel 14 through the image display portion 72 and the display drive circuit 35.

**[0069]** In addition, the path arrangement control portion 78 judges whether or not the selected partial path exceeds a board boundary of the board 61 and thereafter arranges the selected partial path on the condition that the selected partial path does not exceed the board boundary.

**[0070]** At a step S9 following the step S8 in Fig. 10, judgement is made about whether or not a battle is fought between monsters arranged on the board 61. When the battle is fought between the monsters (step S9: Yes), processing is carried out to determine wins or losses at a step S10. Such win and loss processing is performed in Fig. 11 by the use of the monster image readout control portion 80, the image display portion 72, the crest pool 75, and an operation control portion 77 operated under control of the command processor 71.

**[0071]** When any battle is not fought at the step S9 or after the win and loss processing is finished at the step S10, step S11 is executed so as to judge whether or not the player's life point (LP) is reduced to zero. If the life

point (LP) becomes equal to zero, the board game becomes over.

**[0072]** As mentioned above, the partial path storage 76 and the path arrangement control portion 78 are operated to arrange, on the board displayed on the LCD panel 14, the selected partial path selected by the player towards the opponent's site in accordance with player's indications. In this case, the path arrangement control portion 78 determines whether or not each partial path can be located on the board and also judges whether or not the partial path overlaps with any other partial paths already arranged on the board 61.

**[0073]** Thus, the board game according to this invention enjoys a game such that each player widens a player's region by successively arranging each partial path. In addition, the game according to this invention can provide a more interesting game by combining a dice game with a board game.

**[0074]** While this invention has thus far been described in conjunction with a single embodiment thereof, it will be readily possible for those skilled in the art to put this invention into practice in various other manners. For example, this invention is applicable to a board game which does not use any dice and which arranges various partial paths on a board.

## Claims

1. A game device for executing a game by the use of a board displayed on a display monitor, comprising:

storage means for storing a plurality of partial paths to be placed on the board;  
means for displaying, on the display monitor, the partial paths to be selected; and  
arranging means for arranging the selected partial paths on the board displayed on the display monitor.

2. A game device as claimed in claim 1, wherein each partial path on the board determines a play area for each player.

3. A game device as claimed in claim 1, wherein the arranging means comprises:

judging means for judging whether or not each partial path exceeds the displayed board; and  
means for placing each partial path on the board so that each partial path does not overlap with each other on the board when each partial path does not exceed the board.

4. A game device as claimed in claim 1, further comprising:

means for forming each partial path by spreading a dice on the displayed board.

5. An image display device for use in displaying a board on a display monitor so as to perform a board game, comprising:

storage means for storing a plurality of partial paths displayed on the display monitor; and  
processing means for processing the partial paths read out of the storage means to make the display monitor display the partial paths to be selected and to successively arrange, on the displayed board, each partial path selected.

6. An image display device as claimed in claim 5, further comprising:

means for storing a plurality of dice that have different attributes and that are to be displayed on the display monitor; and  
means for spreading a selected one of the dice to form the partial paths.

7. A computer-readable recording medium which stores a program of executing a game by using a board displayed on a display monitor, the program comprising the steps of:

storing a plurality of partial paths which are to be arranged on the board and which are different in shape from one another;  
selecting either one of the partial paths displayed on the display monitor; and  
successively arranging the selected partial path on the board displayed on the display monitor.

8. A computer-readable recording medium as claimed in claim 7, further comprising the steps of:

preparing a dice deck composed of a plurality of dice with crests;  
selecting a predetermined number of the dice from the dice deck;  
casting the predetermined number of the dice over the board displayed on the display monitor;  
judging whether or not the dice cast on the board satisfies a predetermined condition, to allow a selected one of the cast dice to be spread on the board and to make the selected one of the cast dice correspond to the partial paths stored at the storing step.

9. A computer-readable recording medium as claimed in claim 8, wherein the judging step comprises the steps of:

monitoring a combination of the crests on the cast dice; and



detecting whether or not the combination of the crests satisfies the predetermined condition.

10. A computer-readable recording medium as claimed in claim 9, wherein the predetermined condition is satisfied when specific ones of the crests appear on the cast dice as the combination of crests. 5
11. A computer-readable recording medium as claimed in claim 10, wherein the specific crests are summons crests determined for the dice. 10
12. A computer-readable recording medium as claimed in claim 8, wherein the predetermined number of the dice cast over the board is equal to three. 15
13. A computer-readable recording medium as claimed in claim 10, comprising the steps of:
  - generating a series of random numbers determined for each dice; and 20
  - determining occurrence of the specific crests by the random number series.
14. computer-readable recording medium as claimed in claim 7, further comprising the steps of: 25
  - detecting whether or not the selected partial path exceeds a boundary of the board displayed on the display monitor; and 30
  - rejecting the arrangement of the selected partial path on the board when the arrangement exceeds the boundary.

35

40

45

50

55

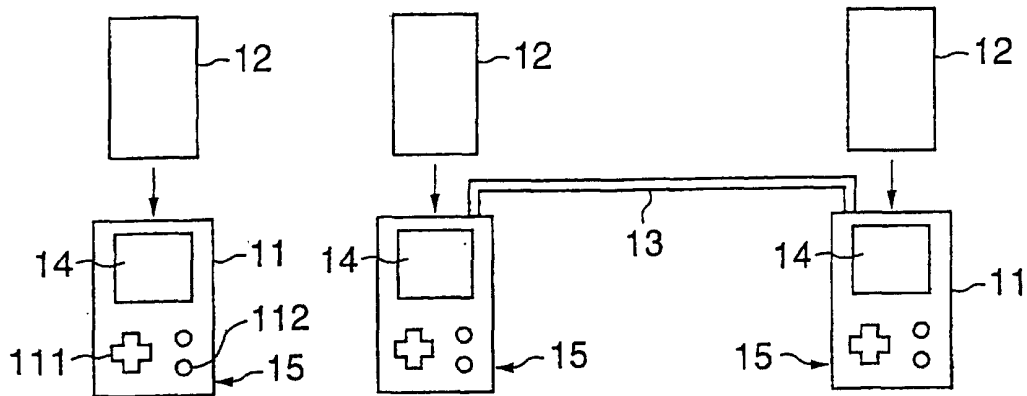


FIG. 1A

FIG. 1B

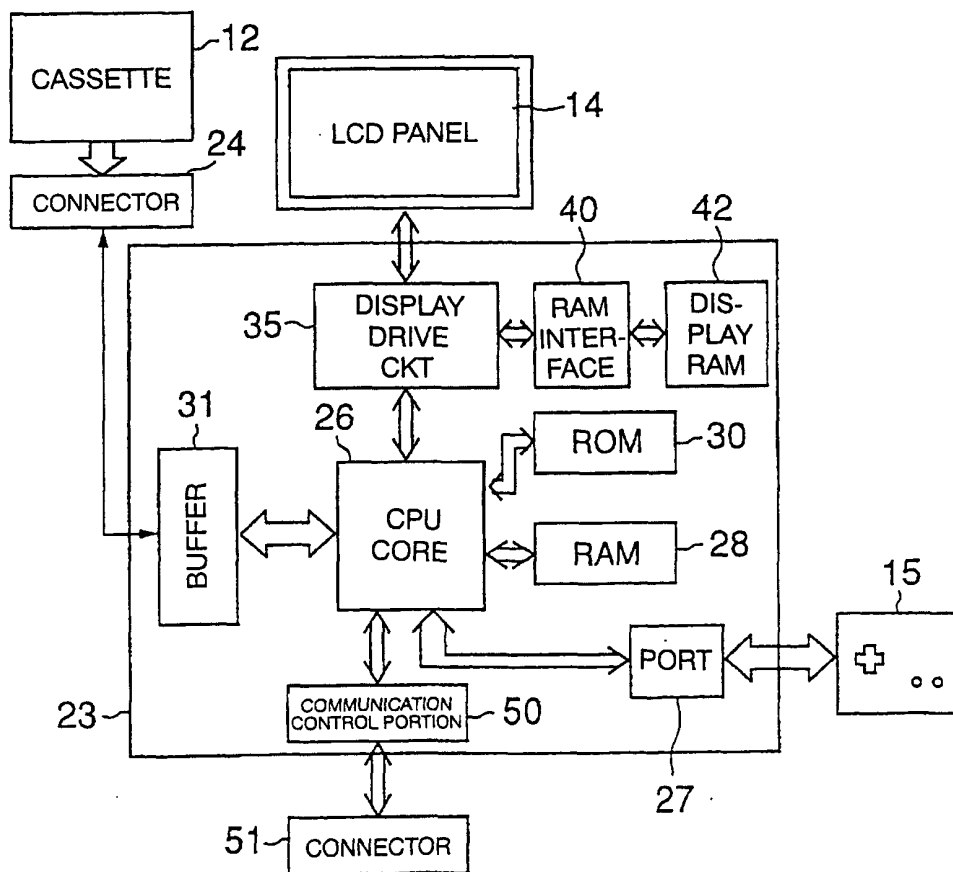


FIG. 2

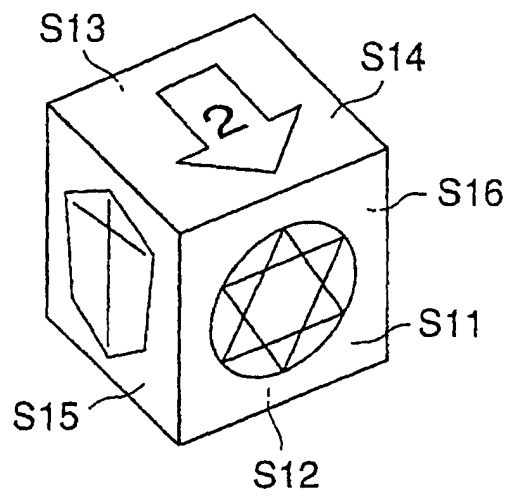


FIG. 3

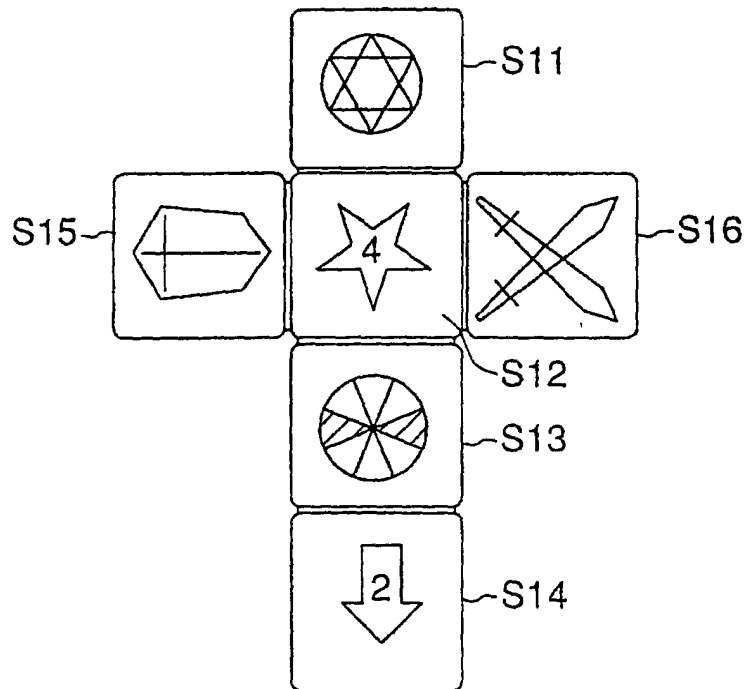


FIG. 4

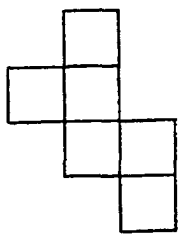


FIG. 5A

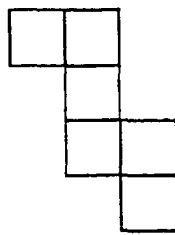


FIG. 5B

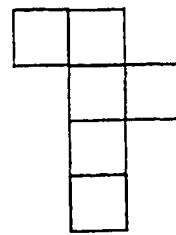


FIG. 5C

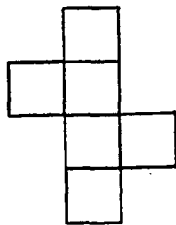


FIG. 5D

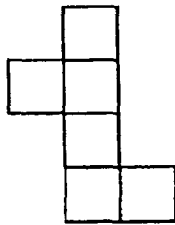


FIG. 5E

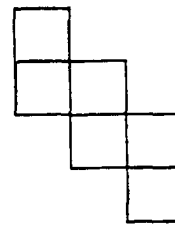


FIG. 5F

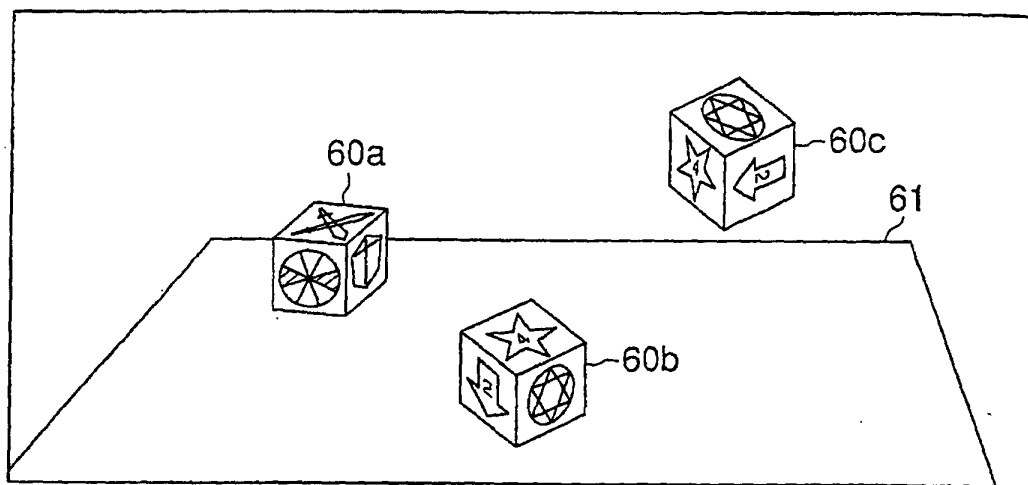


FIG. 6

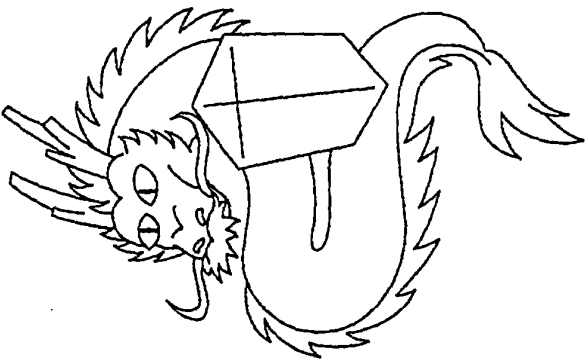
| LEVEL 1                                                                             |                                                                                        |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
|  | DRAGON                                                                                 |
|                                                                                     | H.P. 40                                                                                |
|                                                                                     |  30 |
|                                                                                     |  10 |
| <div>ABSORPTION</div> <div>DRAGON CUT</div>                                         |                                                                                        |
| FLAME ARMOR DRAGON                                                                  |                                                                                        |

FIG. 7

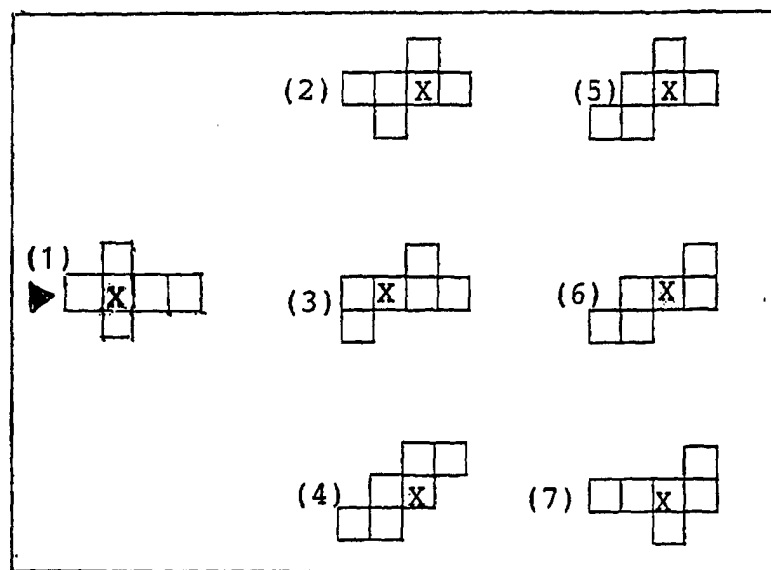


FIG. 8

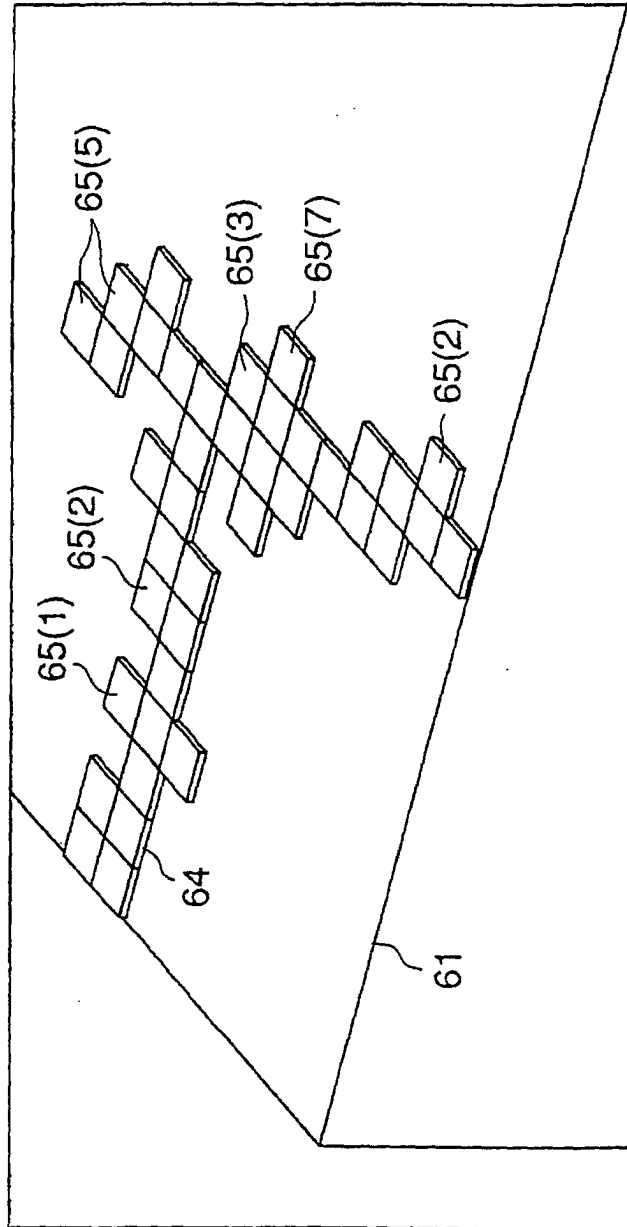


FIG. 9



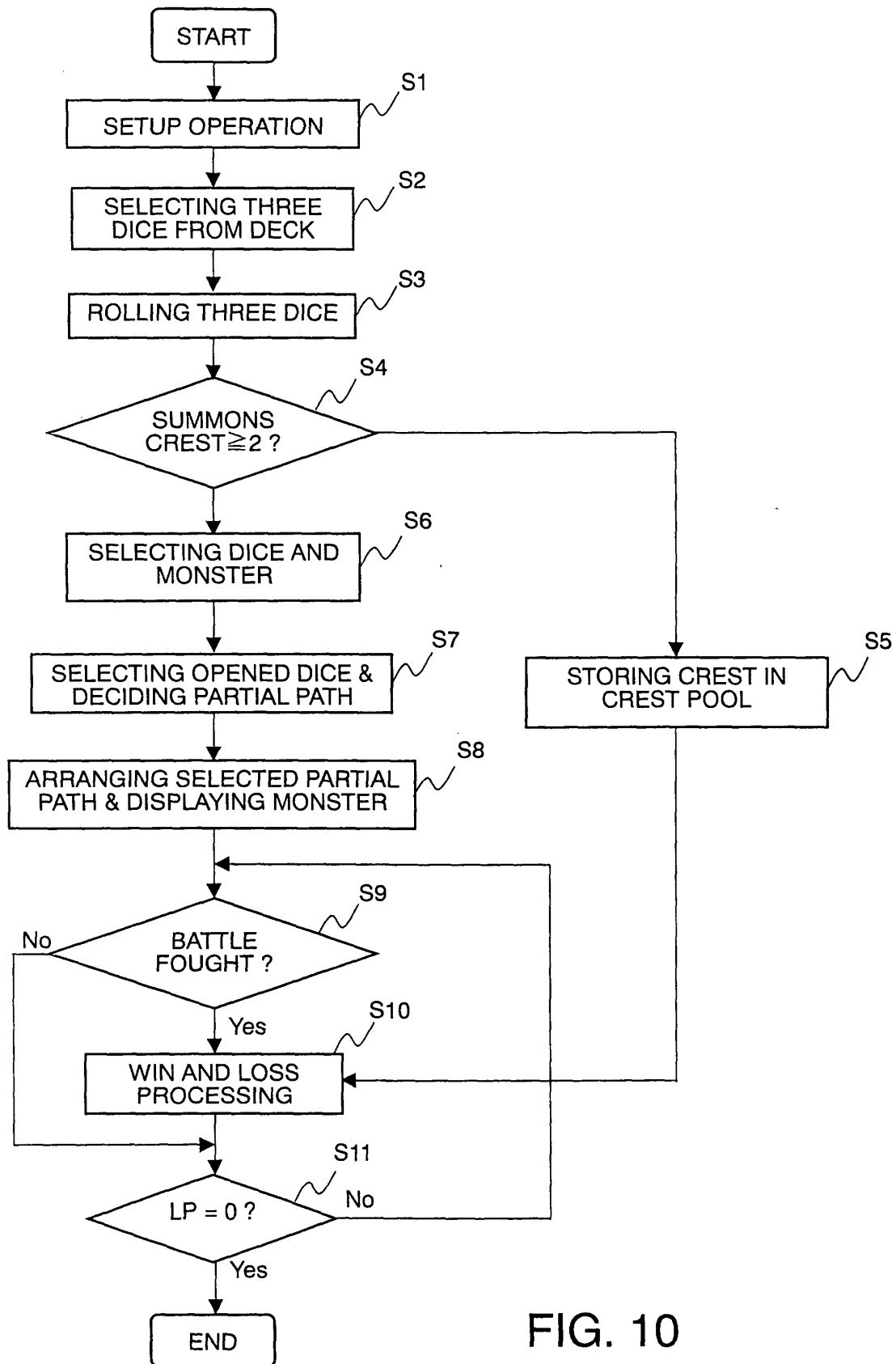


FIG. 10

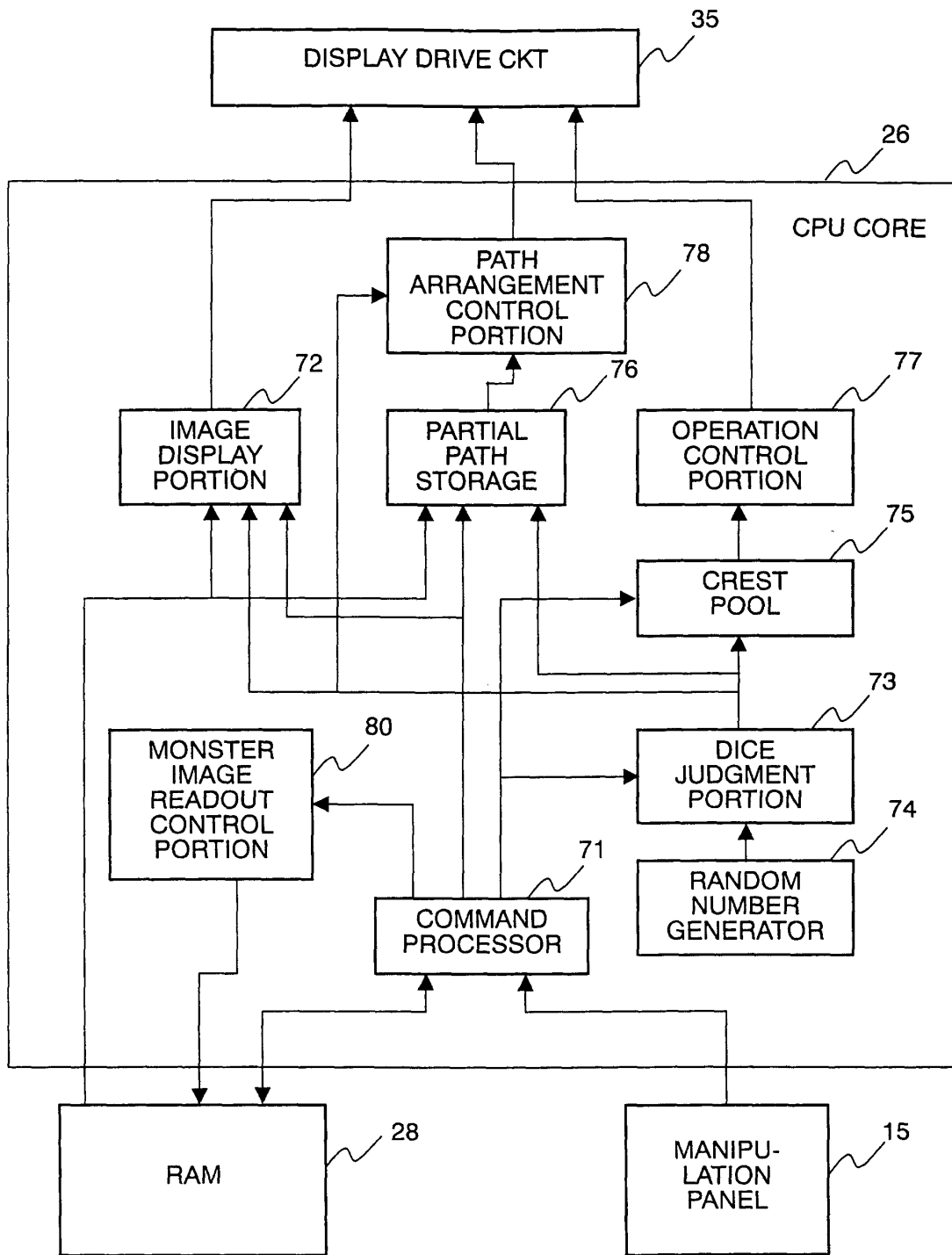


FIG. 11