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(54) **GAMING MACHINE FOR THE PLAY OF A GAME OF CHANCE, AND OUTCOME EVALUATION METHOD IN SAID GAME OF CHANCE**

(52) **U.S. Cl. 463/20**

(57) **ABSTRACT**

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A provision of a gaming machine and method for conducting a line game is provided. The method comprises providing a game representation comprising a matrix of cells with each cell bearing randomly generated indicia, and a template identifying an arrangement of cells in relative position with each other. The method comprises applying the template on the matrix using a first indexing position to position the template, thereby identifying cells and indicia forming a first template-outcome, evaluating the template-outcome, selecting a new indexing position, which results in a new application of the template on the matrix, and evaluating the resulting new template-outcome. Afterwards, the method comprises repeating steps of selecting a new indexing position and evaluating the resulting template-outcome unless an ending criterion is fulfilled. Ultimately, an award is provided based on template-outcome evaluations. The gaming machine comprises a game controller adapted to conduct a game requiring a similar process as above-described.

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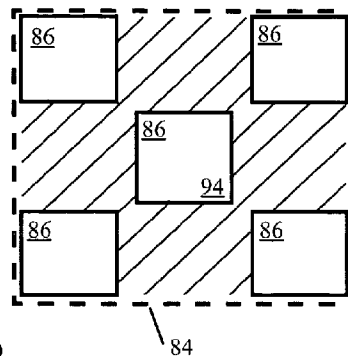
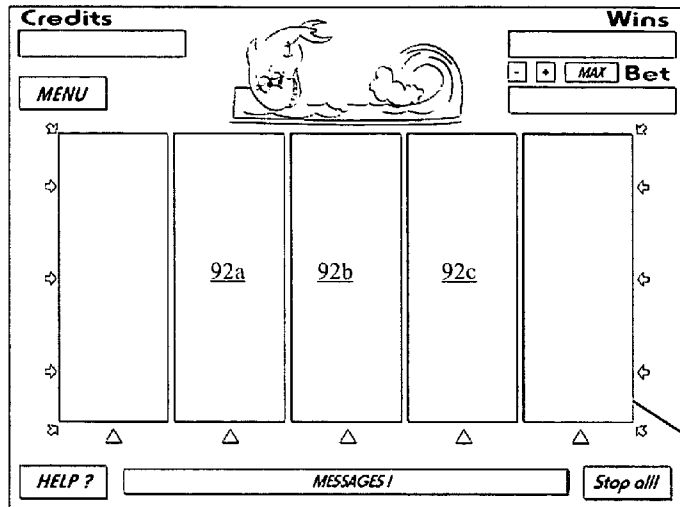


Figure 1

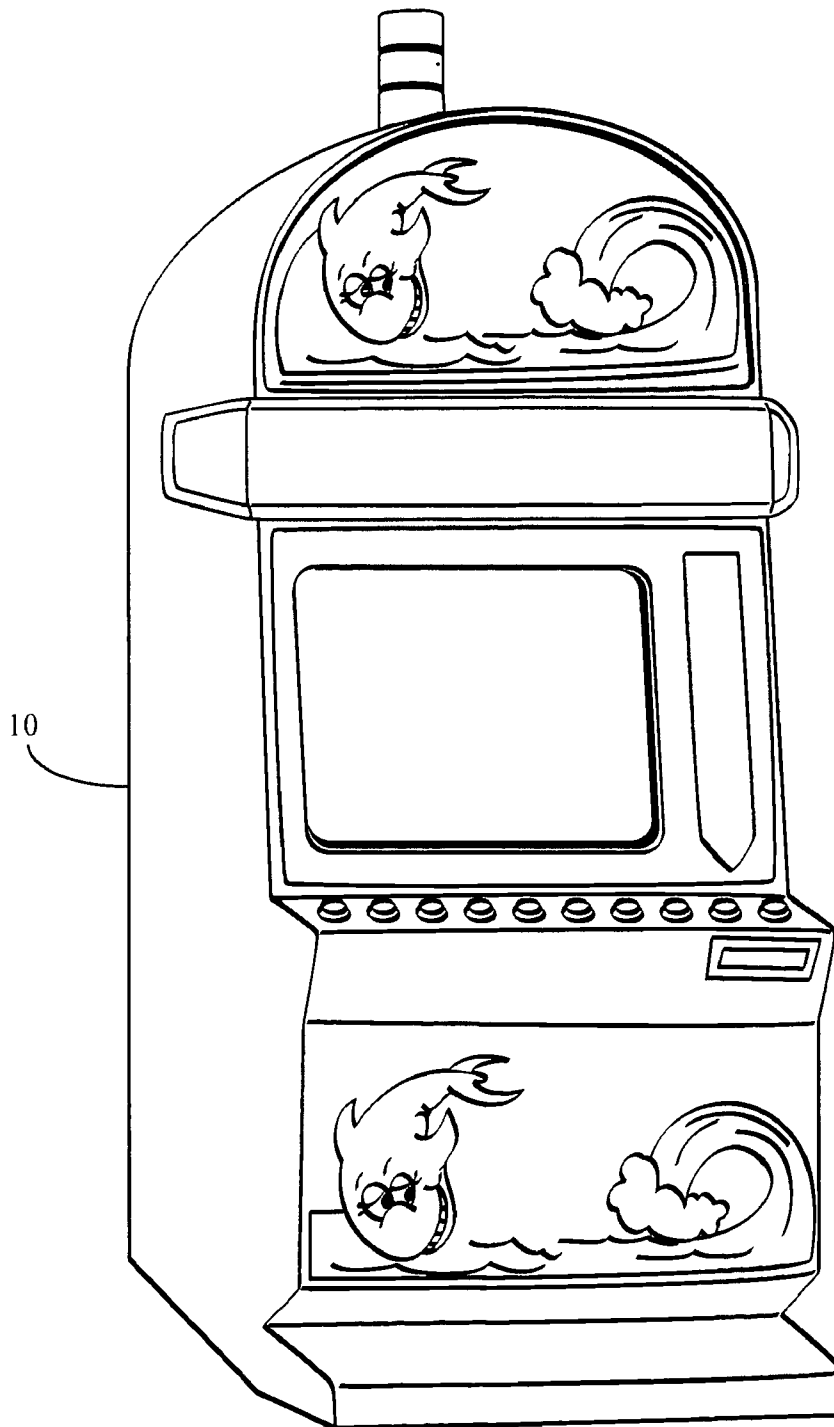


Figure 2

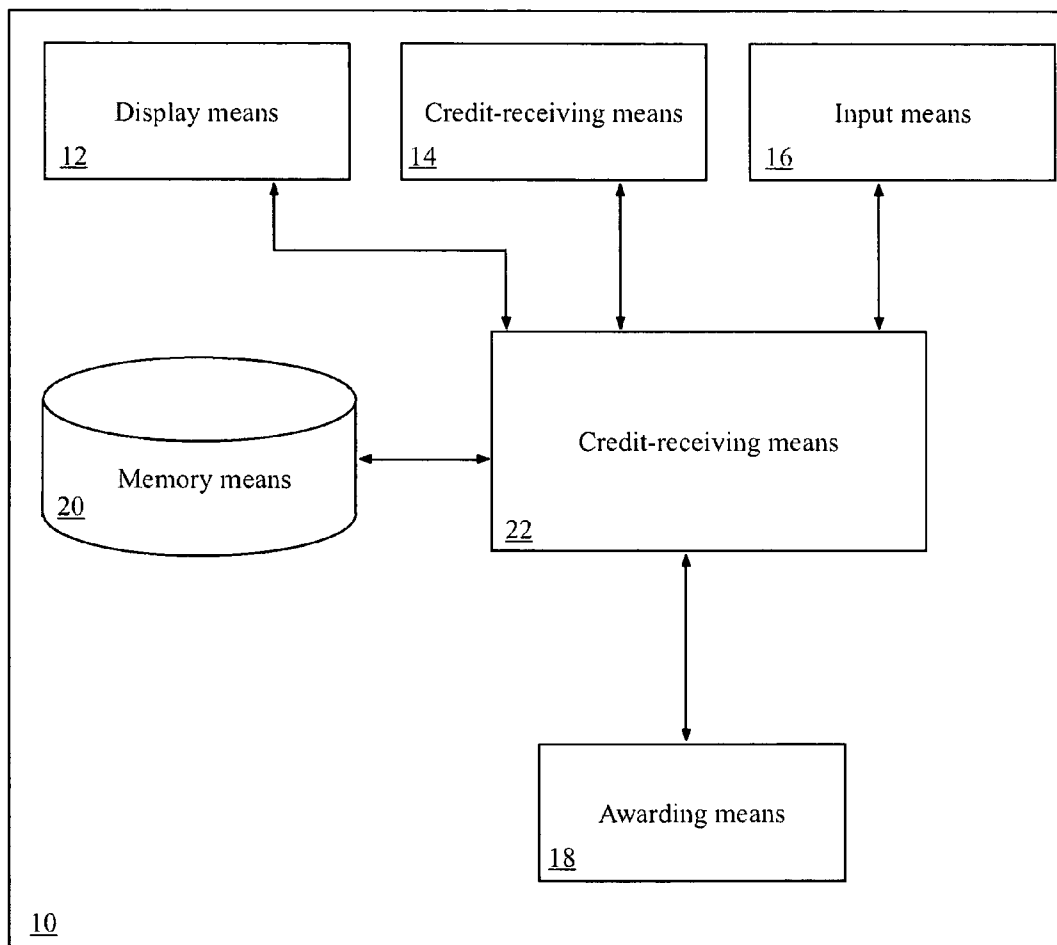


Figure 3

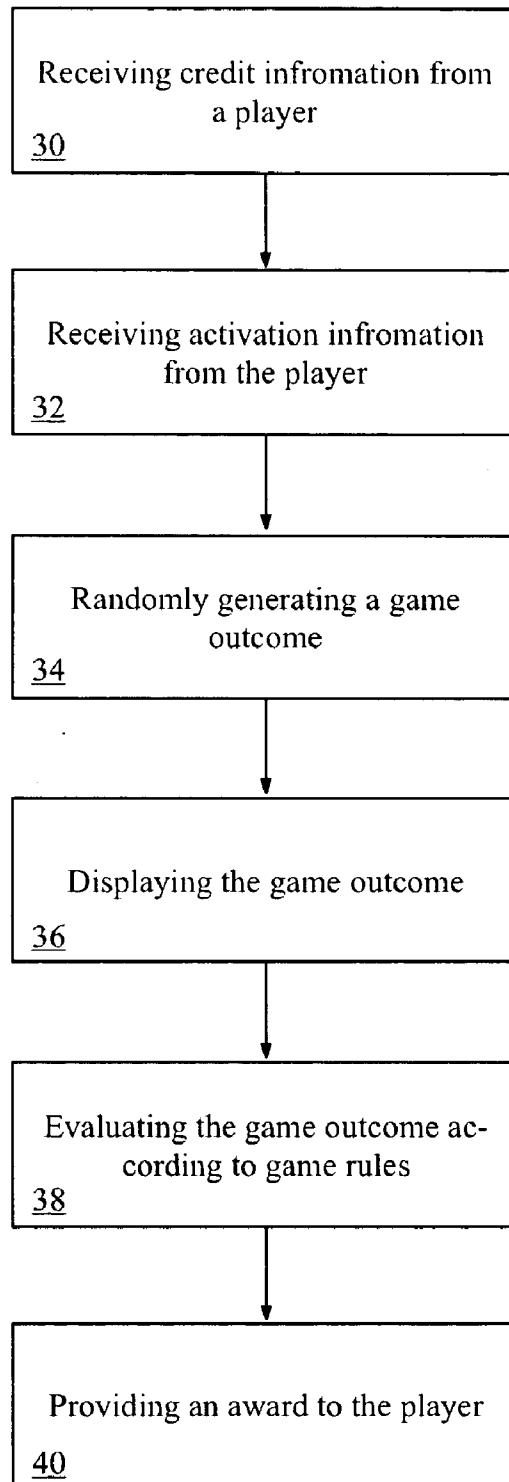


Figure 4

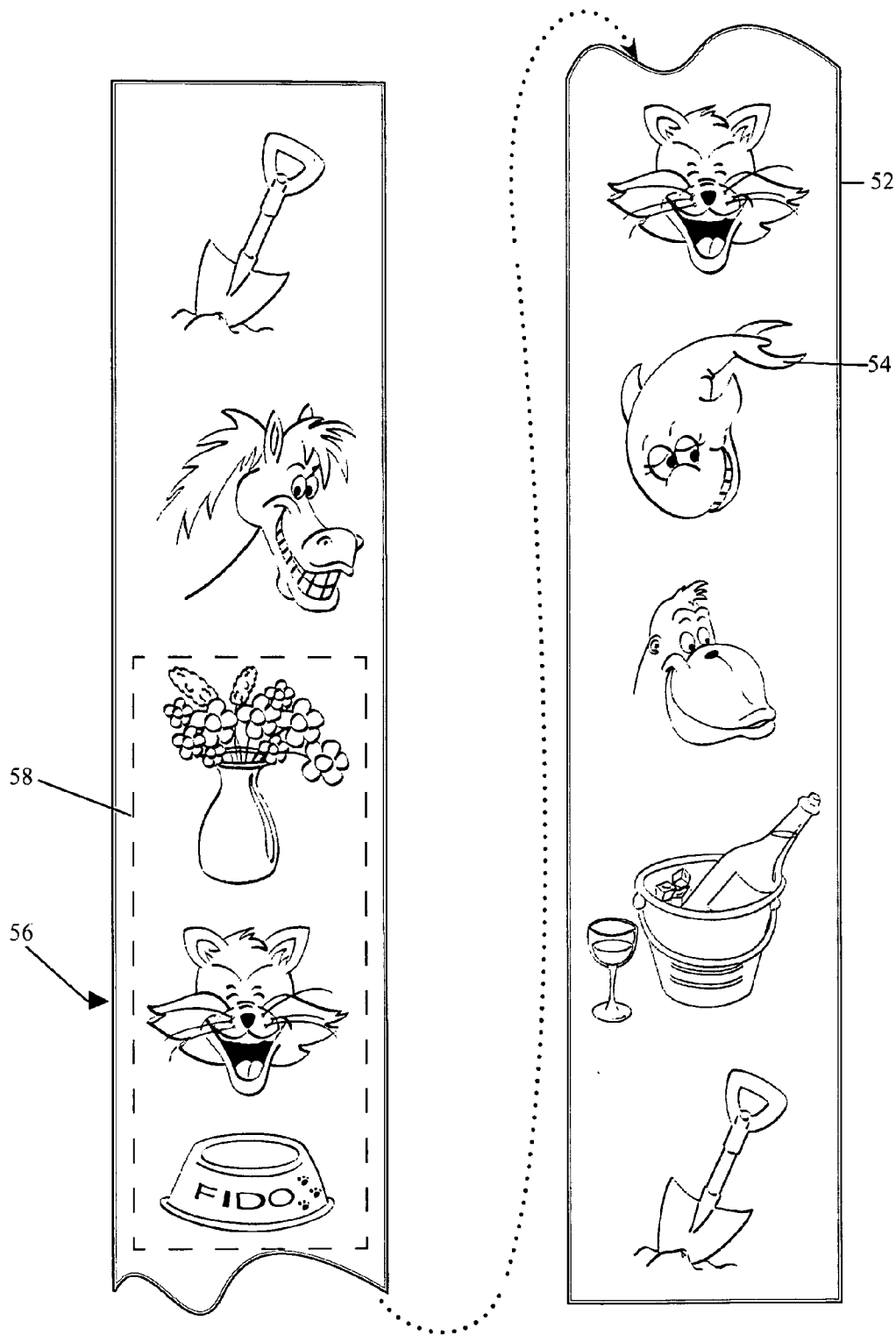


Figure 5

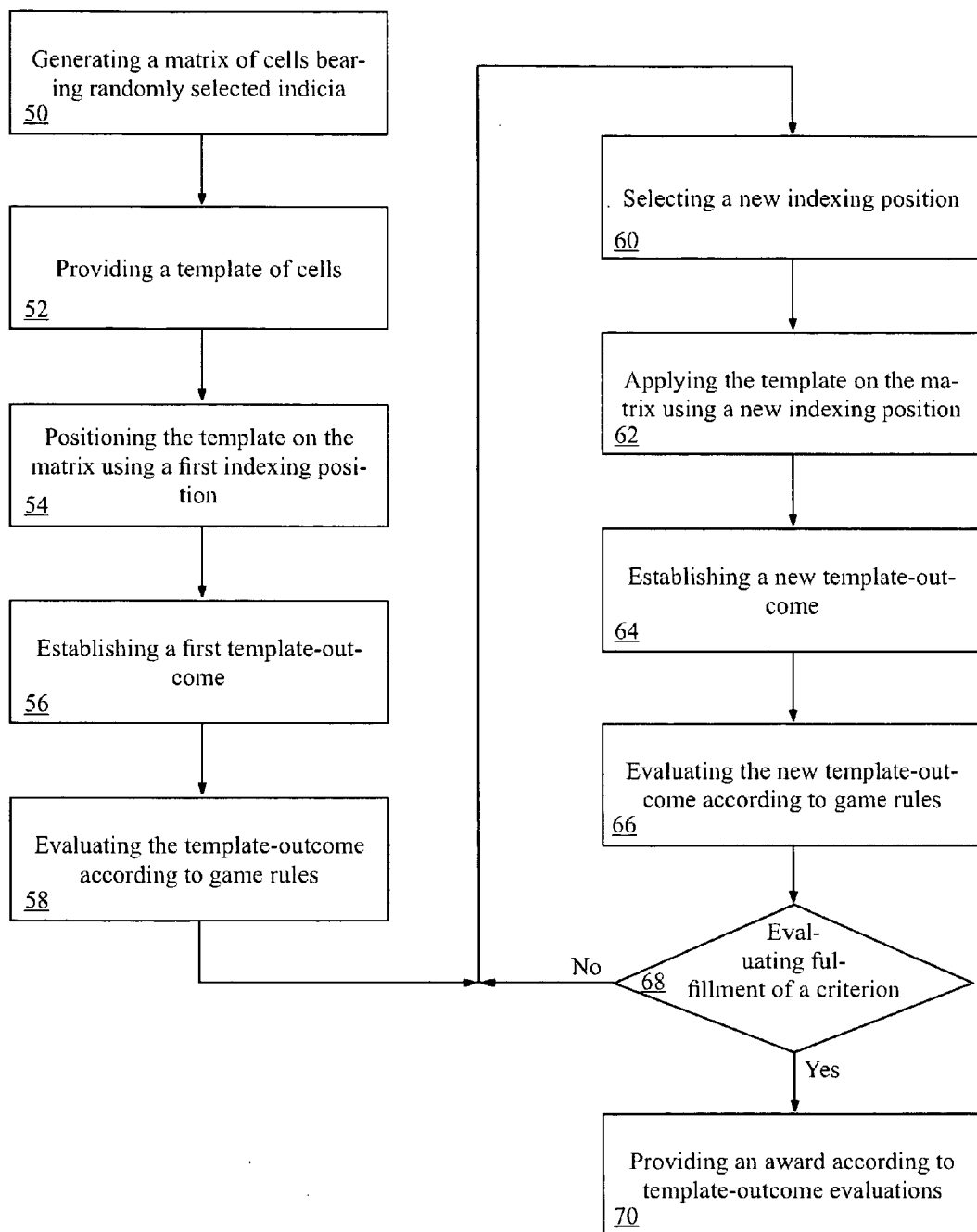


Figure 6

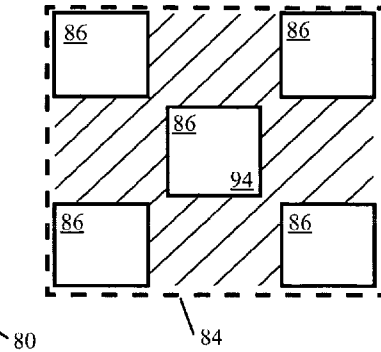
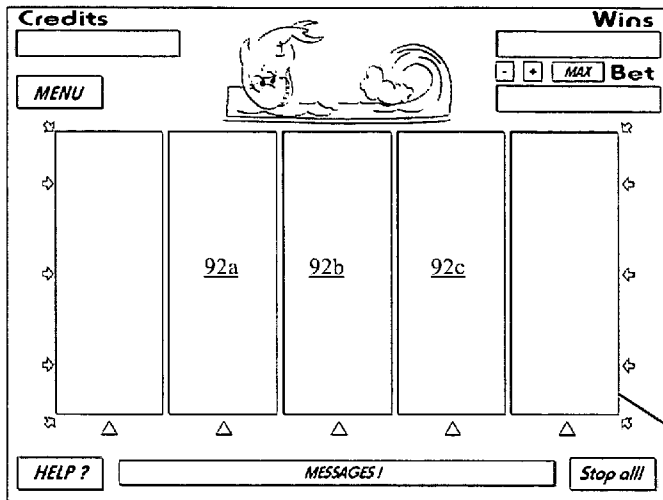


Figure 6a

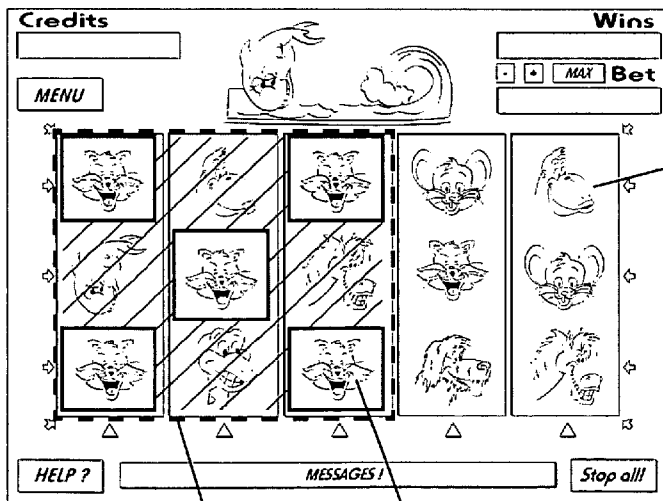


Figure 6b

90

88

Figure 6 (cont.)

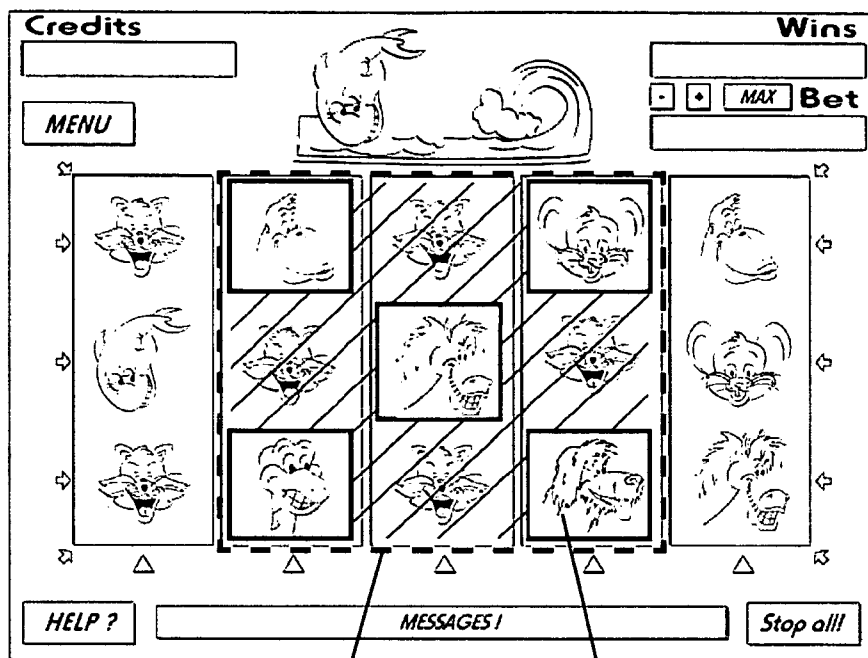


Figure 6c

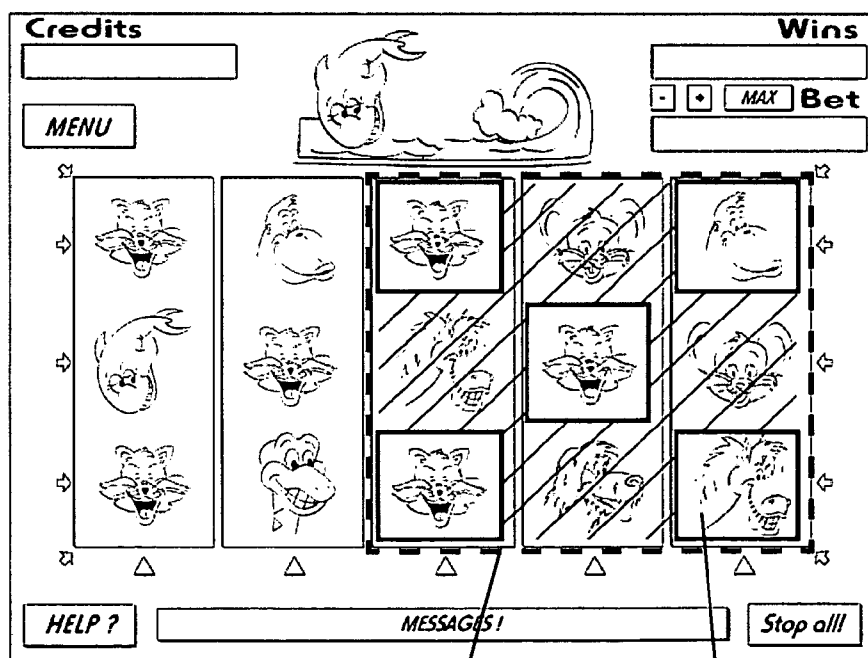


Figure 6d

Figure 7

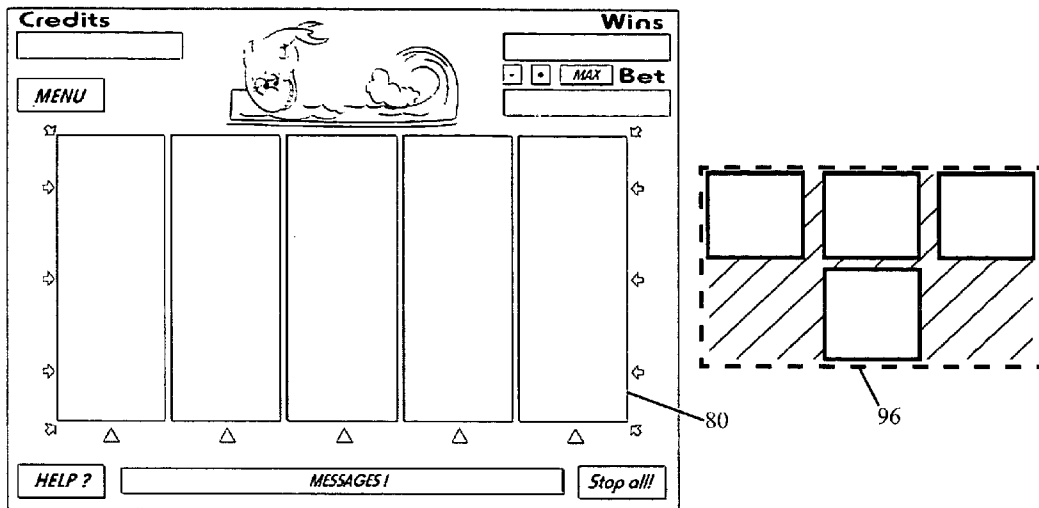


Figure 7a

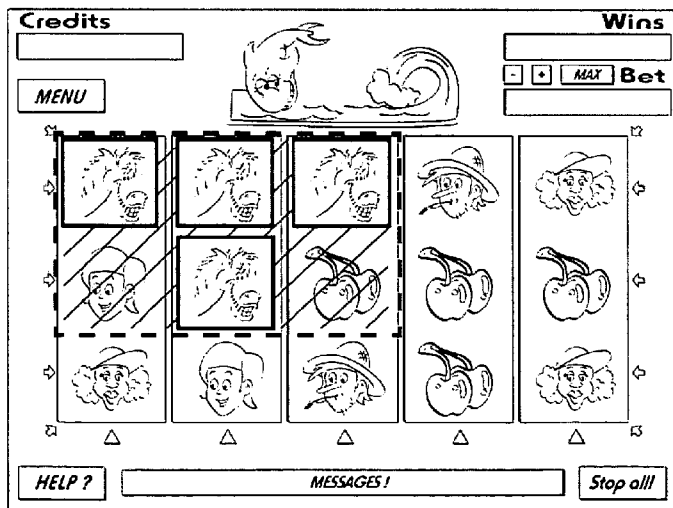


Figure 7b

Figure 7 (cont.)

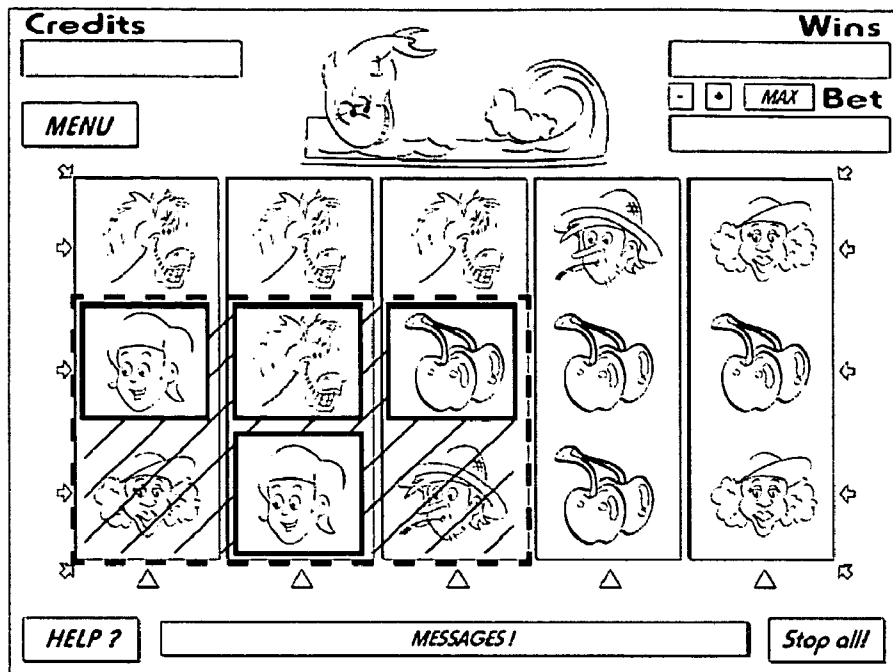


Figure 7c

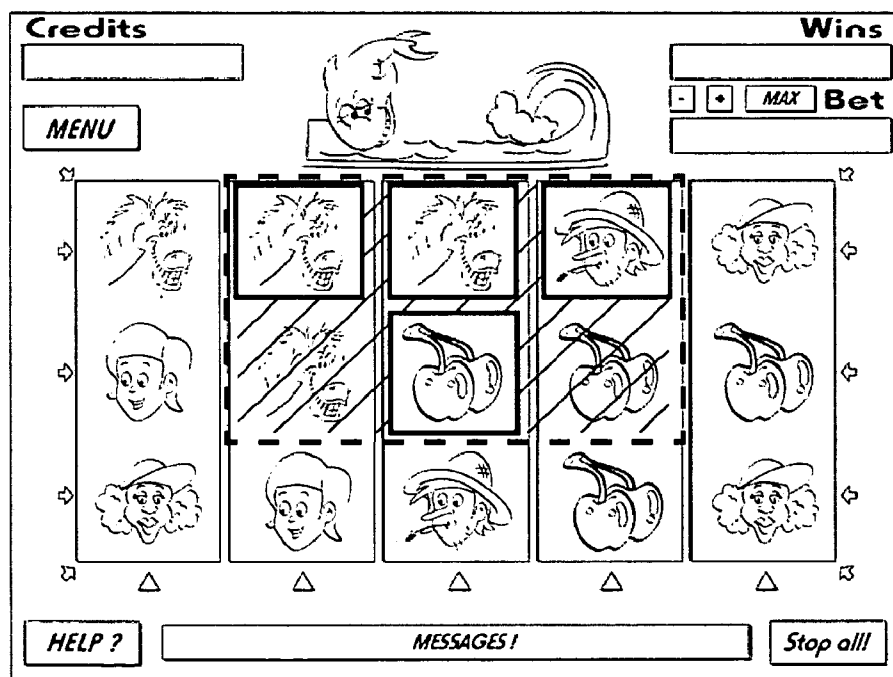


Figure 7d

Figure 7 (cont.)

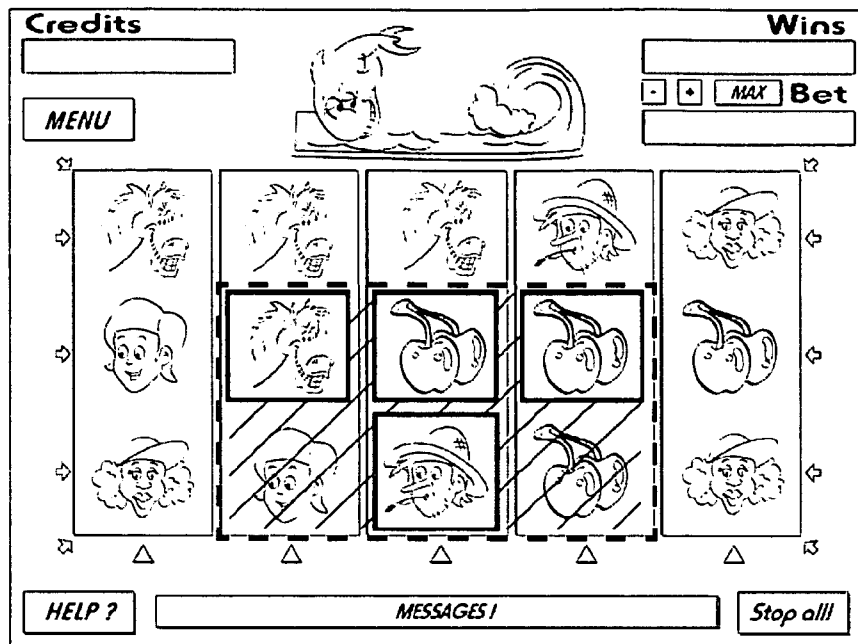


Figure 7e

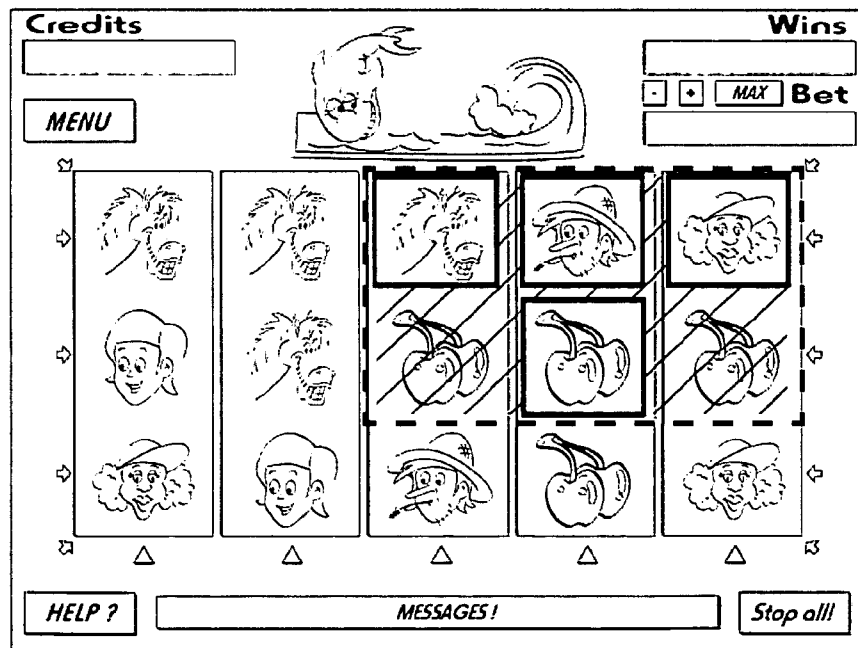


Figure 7f

Figure 7 (cont.)

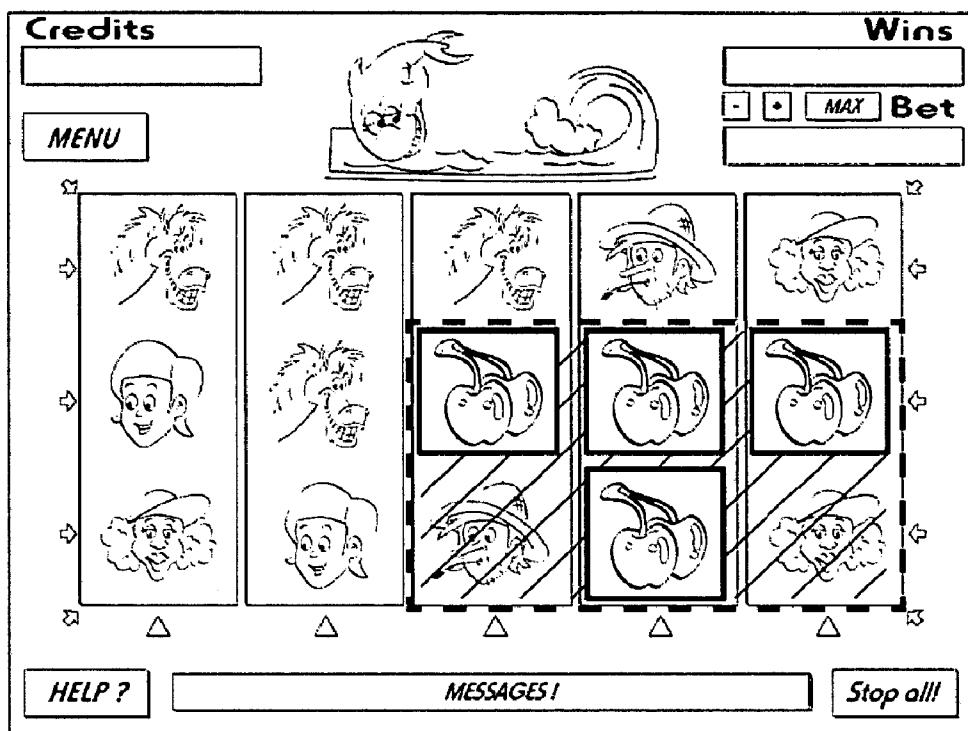


Figure 7g

Figure 8

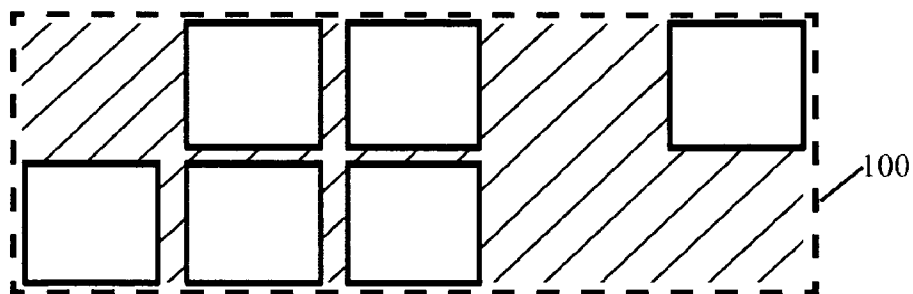
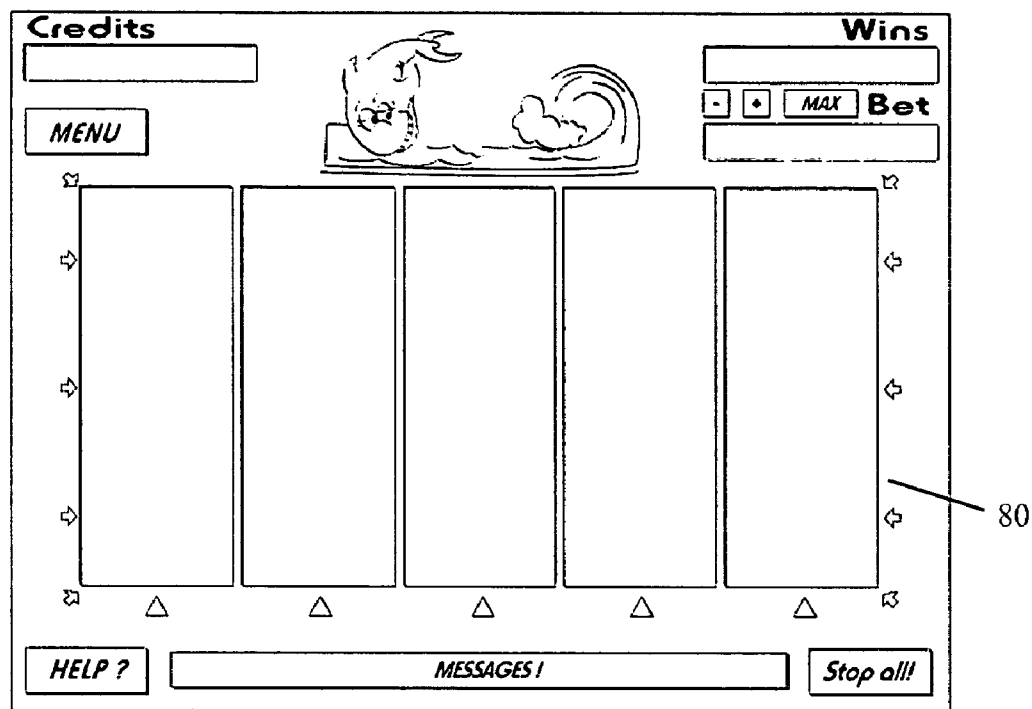


Figure 8a

Figure 8 (cont.)

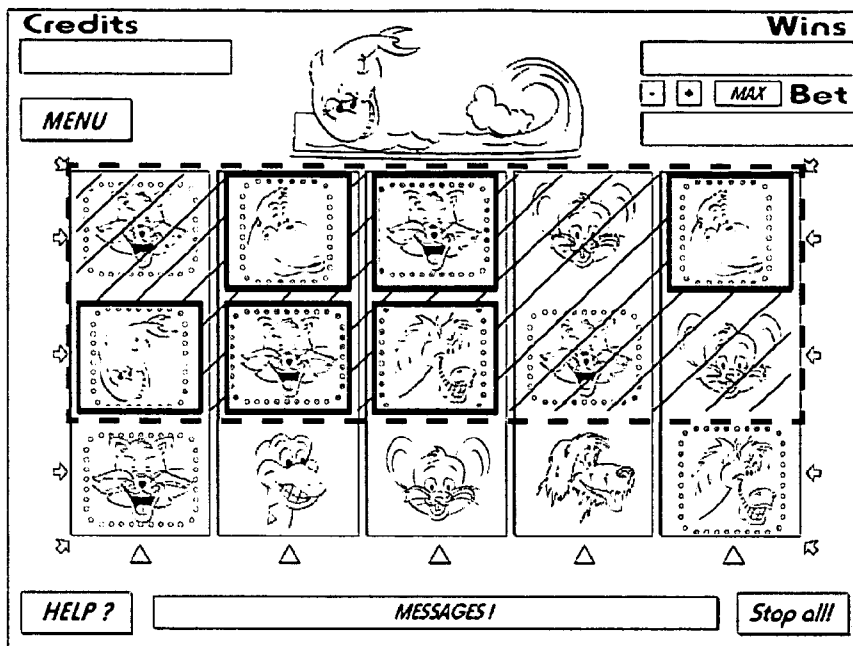


Figure 8b

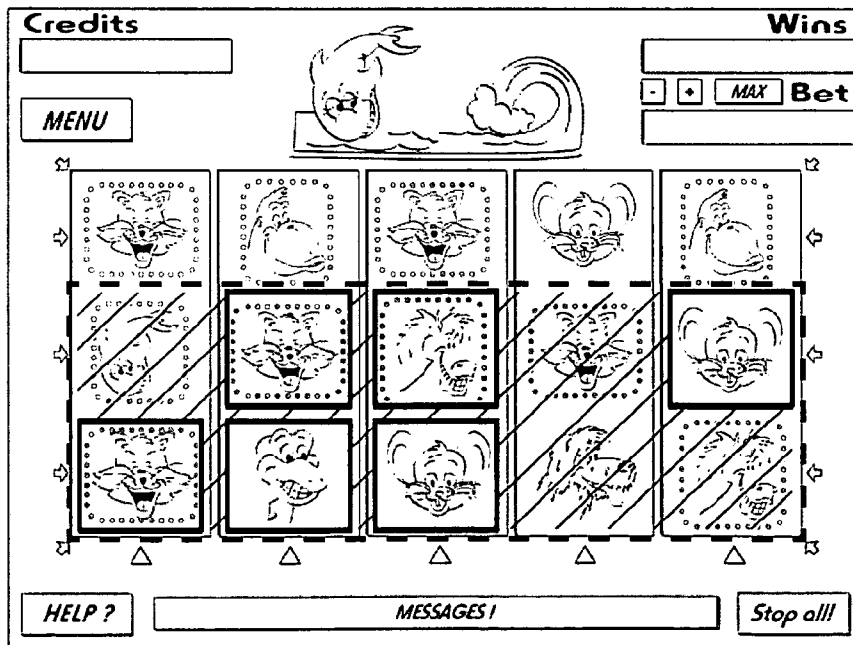


Figure 8c

Figure 9

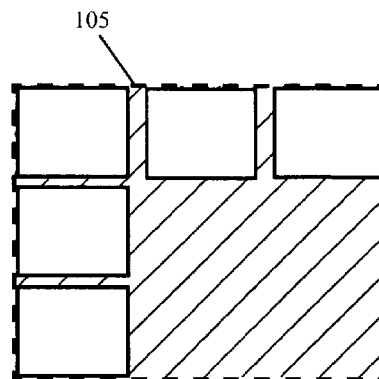
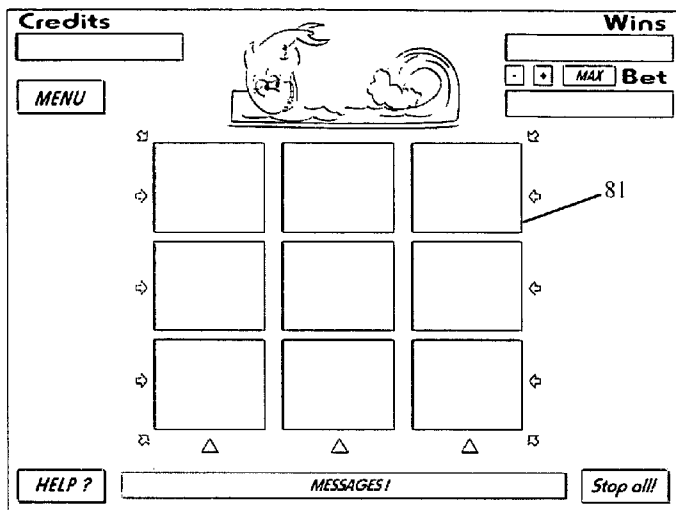


Figure 9a

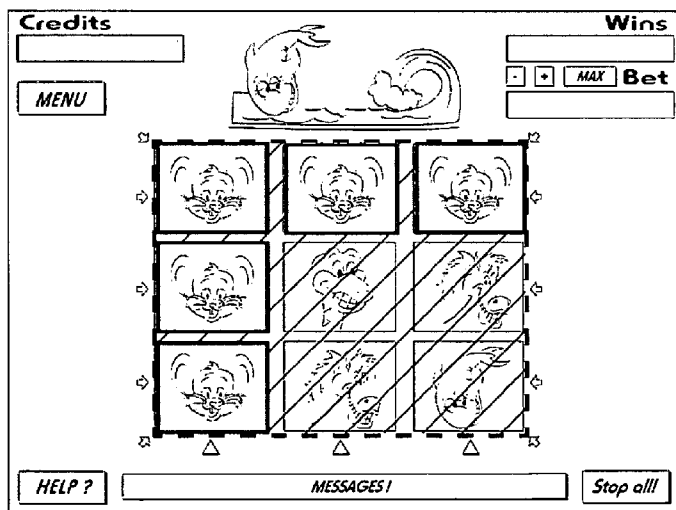


Figure 9b

Figure 9 (cont.)

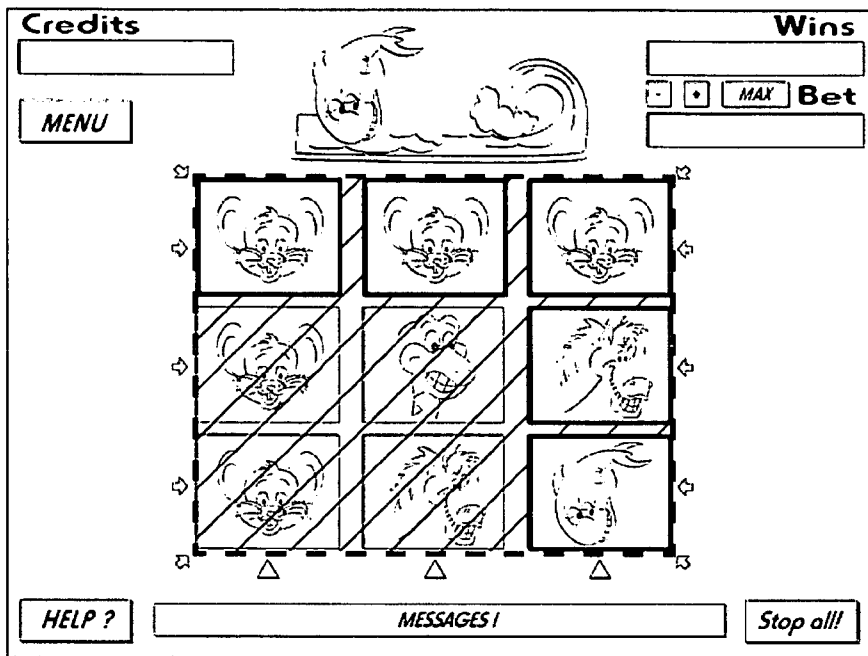


Figure 9c

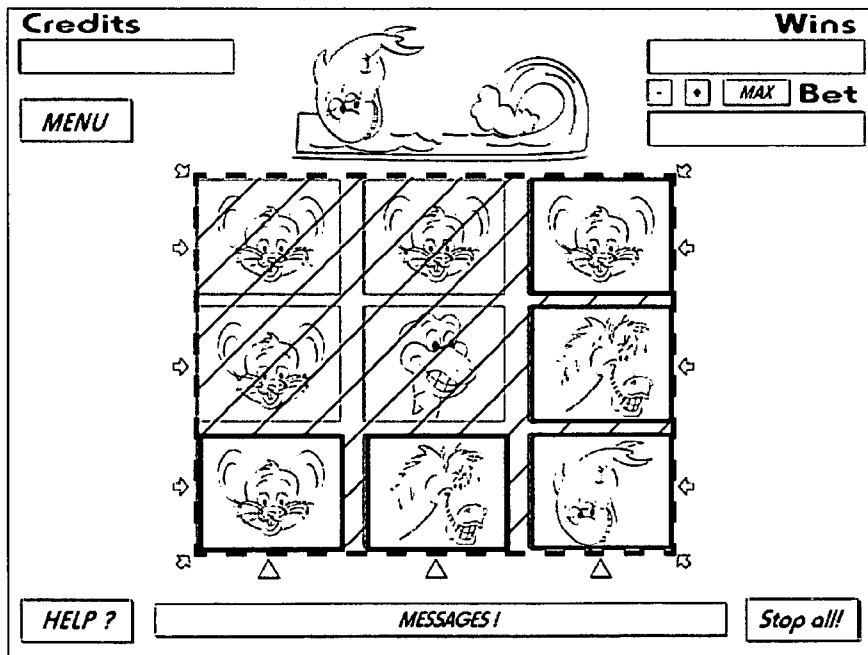


Figure 9d

Figure 9 (cont.)

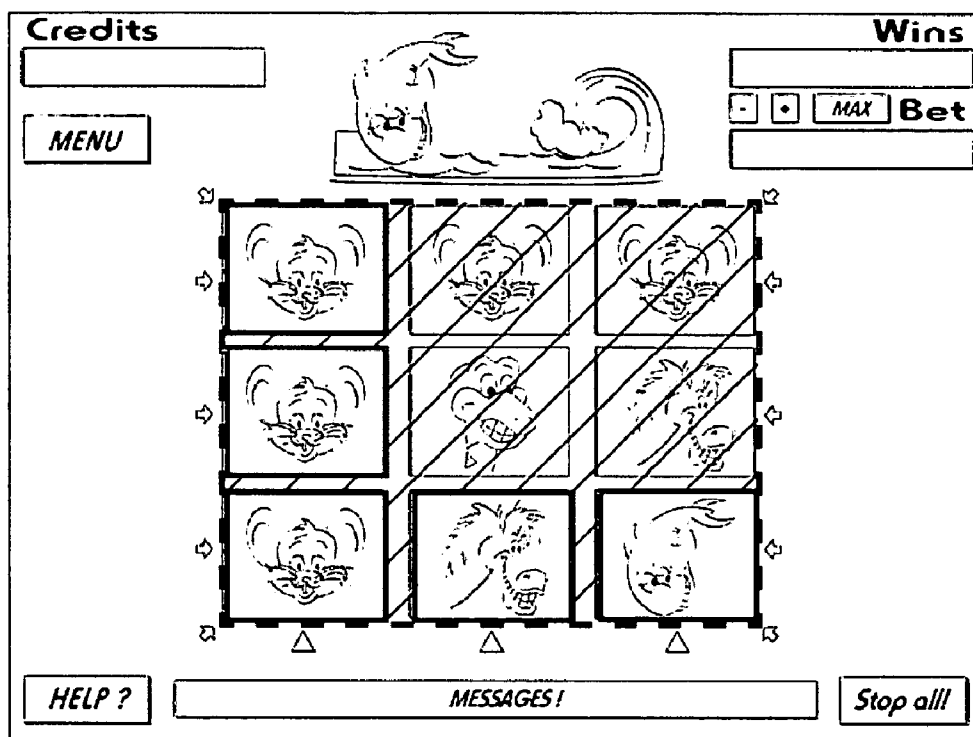
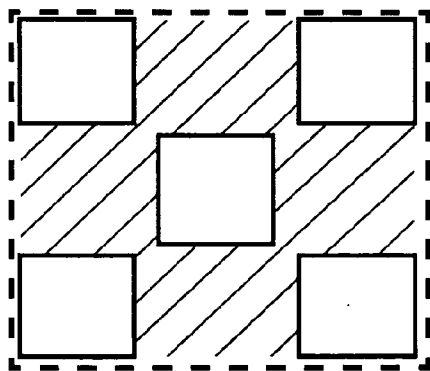
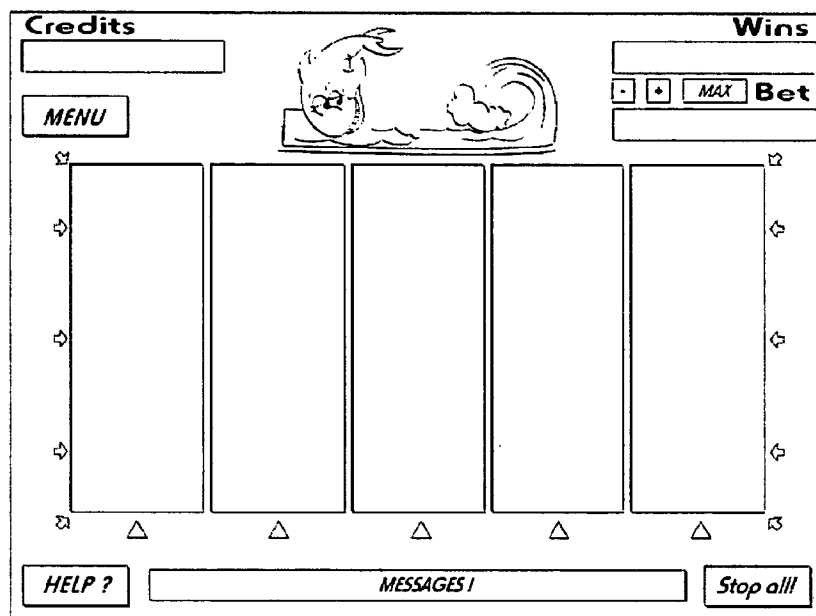
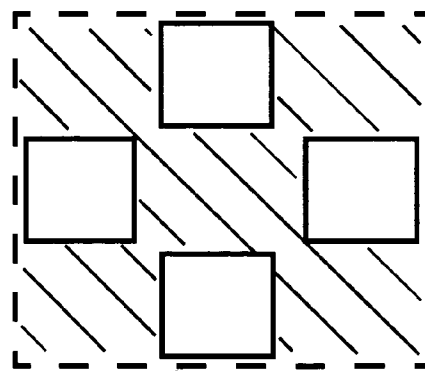


Figure 9e

Figure 10

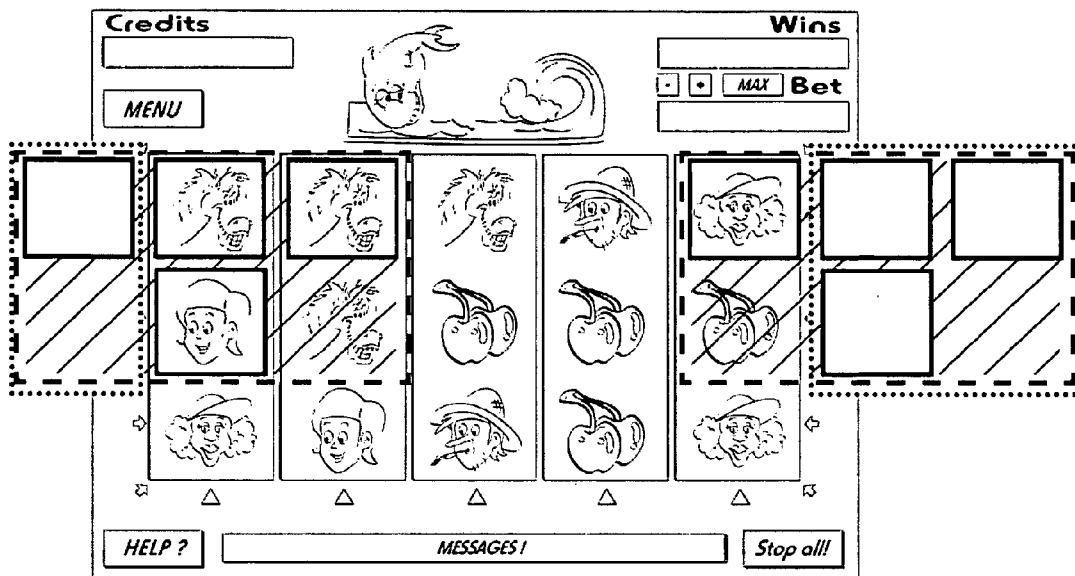


110



112

Figure 11



GAMING MACHINE FOR THE PLAY OF A GAME OF CHANCE, AND OUTCOME EVALUATION METHOD IN SAID GAME OF CHANCE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority under 35USC§119(e) of U.S. provisional patent application 60/503,502, filed on Sep. 17, 2003, the specification of which is hereby incorporated by reference.

TECHNICAL FIELD

[0002] The invention relates to a gaming machine, and more particularly to a method of evaluating outcomes in a game of chance played on the gaming machine.

BACKGROUND OF THE INVENTION

[0003] The field of casino-style games and gaming machines is in constant evolution. Players are always demanding new characteristics or new applications of these characteristics that may incite them to play. While the variety of games has increased, players and game designers are still craving for novelty.

[0004] Accordingly, improvements in this field are desired.

SUMMARY OF THE INVENTION

[0005] In an embodiment, the invention provides a method of conducting a line game. The method comprises providing a game representation comprising a matrix of cells with each cell bearing a randomly generated indicium, and providing a template identifying an arrangement of cells in relative position with each other. The method comprises applying the template on said matrix using a first indexing position whereby matrix cells that bear indicia forming a first template-outcome are identified. An evaluation of the template-outcome is performed. Selection of a new indexing position is performed, resulting in a new application of the template on the matrix and thus in a new template-outcome. An evaluation of the new template-outcome is performed. A new indexing position selection and an evaluation of the new template-outcome are then performed unless an ending criterion is fulfilled. The method also comprises providing an award based on the template-outcome evaluations.

[0006] In another embodiment, the invention provides a gaming machine adapted to conduct a line game of chance. The gaming machine comprises memory for storing game program, game controller for conducting the game, a display for providing a representation of the game, and awarding means for providing an award based on evaluations performed during the conduct of the game. In this gaming machine, the game controller is adapted to provide a game representation comprising a matrix of cells with each cell bearing a randomly generated indicium, and a template identifying an arrangement of cells in relative position with each other. The game controller is adapted to apply the template on the matrix using a first indexing position whereby matrix cells bearing indicia forming a first template-outcome are identified, to evaluate the template-outcome, to select a new indexing position resulting in a new application of the template from on the matrix and thus in a new template-outcome, to evaluate the new template-out-

come, and to repeat selecting a new indexing position and evaluating the new template-outcome unless an ending criterion is fulfilled. The game controller is adapted to establish an award to provide based on the template-outcome evaluations.

[0007] In yet another embodiment, the invention provides a program carrier or a memory media suitable to carry or bear program codes adapted for a computer or a gaming machine to provide the above-described method.

[0008] In this specification, the term “template” means “an arrangement of cells in relative position with each other, used as a guide for establishing participation of indicia in a template-outcome”.

[0009] The terms “line game” mean “a game in which an outcome composed of a plurality of indicia is generated, said outcome being evaluated based on at least one pay line with each pay line being individually activated and evaluated, starting with the first indicia read from left to right or right to left”.

[0010] The term “template-outcome” means “an arrangement of game indicia generated and displayed on a matrix during the conduct of the game, and identified by a template applied on the matrix”.

[0011] The terms “indexing position” mean “a position on the matrix used as a basis for the template application, via a cell identified on the template as a reference cell”.

[0012] The term “reels” means “a structure, mechanical or virtual, comprising indicia used to establish at least one indicium participating in a game outcome”.

[0013] The terms “template-outcome evaluation” mean “determination of the value of a template-outcome, said determination being performed according to game rules”.

[0014] The term “award” means “a payoff, under any form, provided to the player upon occurrence of a winning outcome”.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] Further features and advantages of the present invention will become apparent from the following detailed description, taken in combination with the appended drawings, in which:

[0016] **FIG. 1** is a schematic diagram showing a perspective view of a gaming machine suitable for the present invention;

[0017] **FIG. 2** is a block diagram illustrating the components of the gaming machine of **FIG. 1**;

[0018] **FIG. 3** is a flowchart illustrating the steps of a basic game process according to prior art line game as played on the gaming machine of **FIGS. 1 and 2**;

[0019] **FIG. 4** is a schematic representation of a ribbon bearing indicia such as one borne by a mechanical reel to establish outcome-participating indicia;

[0020] **FIG. 5** is a flowchart illustrating the steps of a basic game process according to the invention as played on the gaming machine of **FIGS. 1 and 2**;

[0021] FIGS. 6a to 6d are schematics illustrating template-outcome evaluations according to a first embodiment of the invention;

[0022] FIGS. 7a to 7g are schematics illustrating template-outcome evaluations according to a second embodiment of the invention;

[0023] FIGS. 8a to 8c are schematics illustrating template-outcome evaluations according to a third embodiment of the invention;

[0024] FIGS. 9a to 9e are schematics illustrating template-outcome evaluations according to a fourth embodiment of the invention;

[0025] FIG. 10 is a schematic illustrating a template selection for application of said template to generate template-outcomes; and

[0026] FIG. 11 is a schematic illustration of a matrix on which is applied a wrapping template to generate a template-outcome.

[0027] It will be noted that throughout the appended drawings, like features are identified by like reference numerals.

DETAILED DESCRIPTION OF THE INVENTION

[0028] The present invention may be carried out on a gaming machine, as illustrated on FIGS. 1 and 2. Gaming machine 10 comprises display means 12 such as a video screen or a LCD screen controlled by a video controller, or mechanical reels controlled by a microprocessor; credit-receiving means 14 such as a card reader or a coin and/or bill acceptor; input means 16 such as electro-mechanic buttons, levers or touch screen controls; awarding means 18 such as a ticket printer, a card reader or a hopper; memory means 20; and game controller means 22.

[0029] Such a gaming machine 10 is designed, in its basic realization and as shown on FIG. 3, to receive credit information from a player (step 30) either in a physical format (such as coins or bills) or in an electronic format (such as a player card or a money transfer from a bank account), to receive activation information from the player (step 32), to randomly generate (step 34) and display (step 36) a game outcome, to evaluate said game outcome according to game rules (a pay table for example) (step 38), and to award a prize to the player for a winning game outcome (step 40).

[0030] On this gaming machine, reels are used to establish the indicia participating in the outcome. FIG. 4 provides an example of a ribbon 52 as used on a mechanical-reel gaming machine. Such reel 52 bears a plurality of imprinted indicia 54 in a predetermined order. A random selection of a reel stop position 56 determines at least one indicium to be displayed as part of the outcome; each one of these participating indicia 58 occupying a cell in the matrix. The determination of the indicia order may be controlled to prevent, or on the contrary encourage, the proximity of two occurrences of an indicium.

[0031] FIG. 5 presents the basic steps to conduct a line game according to the present invention. These steps comprise generating a game representation comprising a matrix

of cells each bearing a randomly selected indicium (step 50), providing a template of cells in relative position with each other (step 52), said template comprising a reference cell, positioning the template on the matrix by superposing the template reference cell on a first indexing position (step 54) to establish a first template-outcome (step 56), and evaluating the first template-outcome participating indicia according to game rules (step 58). Afterwards, the method comprises selecting a new indexing position (step 60), thus applying once again the template on the matrix using said new indexing position (step 62) to establish a new template-outcome (step 64), and evaluating the new template-outcome (step 66). Then, an evaluation is performed (step 68) to determine whether the steps of selecting an indexing position, moving the template, establishing a new template-outcome, and evaluating this new template-outcome (steps 60, 62, 64 and 66) are repeated or not. Ultimately, an award is provided based on the template-outcome evaluations (step 70).

[0032] A first embodiment of the present invention uses a five-reel line game. As illustrated on FIG. 6a, the resulting matrix 80 bears a plurality of indicia 82 in a three rows by five columns matrix. Beside the matrix 80 is illustrated the template 84 used to establish template-outcomes: an X-shaped template defining an arrangement of five cells 86 in relative position with each other and comprising a reference cell 94. In this example, the indexing positions 92 used to apply the template 80 are the second left cell 92a, the center-reel cell 92b, and the one located right to it 92c on the center row of the matrix 80, resulting in three (3) template applications and thus three (3) template-outcomes 90. FIG. 6b illustrates the indicia participating 88 in the template-outcome 90 using the first indexing position 92a. According to the game rules, identical participating indicia establish a winning template-outcome. The evaluation of the template-outcome 90 illustrated on FIG. 6b results in a loss. FIG. 6c, with the second template-outcome 90, illustrates a winning outcome. Finally, FIG. 6d, with a template-outcome 90 formed using the third indexing position 92c, illustrates a losing outcome. An award is provided according to these results.

[0033] FIG. 7a illustrates a similar game environment using a template 96 having a dimension corresponding to a partial vertical covering of the matrix 80. Therefore, the template 96 may be applied, without changing its orientation or wrapping the template, using six different indexing positions: a high-left position (FIG. 7b), a low-left position (FIG. 7c), a high-centered position (FIG. 7d), a low-centered position (FIG. 7e), a high-right position (FIG. 7f), and a low-right position (FIG. 7g). In this embodiment, the game rules establish that, to obtain a winning template-outcome, indicia participating in a template-outcome must share the same nature. Accordingly, since both identify indicia sharing the same nature (an animal nature for FIG. 7b and a fruit nature for FIG. 7e), FIGS. 7b and 7e illustrate winning template-outcomes. Each one of these two template-outcomes has a different value according to game rules, their respective value depending on the nature of the evaluated indicia.

[0034] FIGS. 8a to 8c illustrate a game where indicia on the reels are evaluated according to two of their characteristics: their nature and their background color. Game rules identify that a pay line evaluation is performed based on the

indicia nature while a template evaluation is performed based on background color. When all indicia of a template-outcome share the same background color, the player is awarded a prize. In this embodiment, the template **100** illustrated on **FIG. 8a** occupies the whole width of the matrix, resulting in two possible indexing positions: one identifying a high template position (**FIG. 8b**) and one identifying a low template position (**FIG. 8c**). **FIG. 8b** presents a winning template-outcome comprising only indicia with a modified background color. Therefore, the player is awarded the value of this outcome.

[0035] **FIGS. 9a to 9e** illustrate the invention in a different game environment: a 3-by-3 matrix **81**, wherein each indicium is established through an independent reel. **FIG. 9a** illustrates the matrix **81** and the template **105** to apply on matrix **81**. In this embodiment, applying the template **105** on the matrix **81** using the determined indexing positions, comprises rotating the template. **FIGS. 9b to 9e** illustrate these template orientations. According to game rules, identical indicia participating in a template-outcome result in a win. **FIG. 9b** illustrates such a win. Furthermore, according to game rules, a winning template-outcome triggers the play of a bonus. The bonus game and its value may be the same regardless of the indicia triggering said bonus, or they might depend on the triggering indicia.

[0036] While the above embodiments present only game characteristics specific to the present invention, such games may be applied in games comprising regular line-game evaluations. Regular prizes on reel-based line games are usually evaluated through pay lines. In these line games, pay lines are activated through bets, one for each pay line. Active pay lines are evaluated once the indicia are randomly generated, and an award is provided for winning pay lines according to the evaluation of the “n” first indicia of a left-to-right or right-to-left reading of the pay line. Such embodiment may be illustrated through **FIG. 9a** wherein each combination of five indicia following a horizontal configuration is a pay line. To play the game, the player places a bet value of at least three credits, each credit activating a horizontal pay line. Since one of the pay lines presents a Cat indicium on the first three reels when read from left to right, the player is awarded a prize for the bet applied on this pay line. The template is applied, as illustrated on **FIG. 9b**, using at least one indexing position to generate at least one template-outcome which is then evaluated. The number of indexing positions used to apply said template may depend upon the bet value placed by the player or not. An award is provided to the player for a winning template-outcome.

[0037] In different embodiments, template evaluation may be influenced by different game modes. As example, template evaluation may be activated through the reach of a specific bet level. An example is a line game in which template-outcome evaluations are activated when the bet level placed on to play the game reaches a predetermined value.

[0038] The player may perform selections influencing template-outcome evaluations. For instance, the player may select a specific template or a criterion to evaluate the resulting template-outcomes. An example of template selection may be illustrated through **FIG. 10** where the player is invited to select, prior to the indicia generation, which of a

cross-shaped **112** or an X-shaped **110** template, both having the same number of cells, will be used to generate template-outcomes. The criterion evaluation may consist in deciding whether a template-outcome comprising only indicia sharing the same nature results in a win or a loss. This selection has an influence on the award provided for a winning outcome (template-outcome comprising only identical indicia), or on the number of cells comprised in the applied template.

[0039] This invention may be applied in a bonus, such as a series of free spins. Accordingly, regular pay line evaluations is performed during the regular portion of the game while template-outcome evaluations is performed during a series of free spins initiated by the occurrence of a triggering event during said regular portion of the game.

[0040] Another alternative embodiment, illustrated on **FIG. 11**, comprises “wrapping” the template around the matrix. Such a wrapping process may take place when the location of the indexing position does not allow the template to be entirely positioned on the matrix. The template cells that “fall” outside the matrix, through this process, are “wrapped” and identify matrix cells positioned at the opposite end of the matrix, keeping their relative position from each other. For illustrative purpose, the portions of the template falling outside the matrix and being applied at the opposite end of the matrix are illustrated in grey. According to this process, all template cells are applied on the matrix regardless of the used indexing position.

[0041] Throughout the disclosed embodiments, the award resulting from template-outcome evaluations may take different forms: credits, participation in a bonus game, free spins, progressive prizes, etc. Selection of the proper award form mostly depends on the desired incentive.

[0042] Those skilled in the art may recognize other embodiments and/or methods to provide such a game and/or functionalities, either through a central distribution of play data to networked gaming machines, a computer program adapted for such a game application and performing said game on computers, or program codes broadcasted using a suitable carrier or saved on memory, said program codes being suitable, when loaded on a computer or a gaming machine, for said apparatus to perform said game. However, all of such alternatives are intended to be incorporated in the present document through the herein reference.

[0043] It will be noted that the above embodiments illustrate different characteristics the present invention may present. Those skilled in the art will recognize that, even if the instant embodiments describe these characteristics as part of different embodiments, one could combine some of these characteristics. Furthermore, the invention may also present other characteristics and/or variations, with such characteristics falling within the scope of the invention, as set forth in the appended claims.

[0044] While the appended block diagrams illustrate the present invention as groups of discrete components communicating with each other via distinct data signal connections, it will be understood by those skilled in the art that the invention may be embodied through a combination of hardware and software components, with some components being implemented by a given function or operation of a hardware or software system, and many of the data paths

illustrated being implemented by data communication within a computer application or operating system. The structure illustrated is thus provided for efficiency of teaching embodiments of the invention.

[0045] It should be noted that the present invention can be carried out, as above described, as a method or embodied in a machine or a system. However, it may also be carried out as a computer readable medium, a processing-readable memory, or an electrical or electromagnetic signal.

[0046] Thereupon, it is the intent to efficiently teach the invention through exemplary embodiments, while solely the scope of the appended claims is intended to limit the scope of the invention.

I/we claim:

1. A method of conducting a line game comprising:
 - providing a game representation comprising a matrix of cells with each cell bearing a randomly generated indicium;
 - providing a template identifying an arrangement of cells in relative position with each other;
 - applying said template on said matrix using a first indexing position to position said template whereby matrix cells that bear indicia forming a first template-outcome are identified;
 - evaluating said template-outcome;
 - selecting a new indexing position whereby a new application of the template on the matrix is performed and a new template-outcome is generated;
 - evaluating said new template-outcome;
 - repeating said steps of selecting a new indexing position and evaluating said new template-outcome unless an ending criterion is fulfilled; and
 - providing an award based on said template-outcome evaluations.
2. The method of claim 1, wherein the ending criterion is selected from a list comprising: a) there is no more possible indexing positions allowing an application of said template on the matrix; b) a predetermined number of indexing positions have been used to apply said template on the matrix; c) a randomly determined number of indexing positions have been used to apply said template on the matrix; and d) the evaluation of a template-outcome results in the fulfillment of an evaluation ending criterion.
3. The method of claim 1, further comprising receiving a bet value from a player.
4. The method of claim 3, wherein the number of indexing positions used to apply said template is dependent upon said bet value.
5. The method of claim 3, wherein reception of said bet value activates at least one of a) a pay line, b) a template, and c) a game attribute influencing template-outcome evaluation.
6. The method of claim 1, wherein a plurality of independent reels performs said random generation of indicia.
7. The method of claim 6, wherein at least two indicia are dependently generated by a single reel.
8. The method of claim 6, wherein at least three reels participate in said random generation of indicia.

9. The method of claim 1, wherein the new application of said template comprises at least one of: a) repositioning said template; and b) rotating said template.

10. The method of claim 1, wherein said template-outcome evaluation is based on one of a) identical indicia; or b) indicia sharing at least one common characteristic.

11. The method of claim 1, wherein the award is selected from a list comprising a monetary prize, a comp prize, a prize multiplier, a game advantage, a progressive prize, a free spin feature, a bonus feature participation, and a tournament participation.

12. The method of claim 1, wherein said award is evaluated based on a) all evaluated template-outcomes or b) each evaluated template-outcome, wherein the award value depends on at least one of 1) indicia participating in the template-outcome, 2) the indexing position used to generate the evaluated template-outcome, 3) the number of winning template-outcomes, 4) the evaluation criteria used to evaluate the evaluated template-outcome and 5) a player selection influencing the template-outcome generation or evaluation.

13. The method of claim 1, further comprising one of: a) receiving a template selection from a player, said selection activating a template from a list of templates, and b) receiving a player input influencing template evaluation process.

14. The method of claim 1, wherein the steps of said method are performed in the described order.

15. A gaming machine for conducting a line game comprises a memory storing a game program, game controller conducting said game, a display providing representations of said game, and awarding means providing awards according to game outcomes, the game controller being adapted:

- to provide a game representation comprising a matrix of cells with each cell bearing a randomly generated indicium;

- to provide a template identifying an arrangement cells in relative position with each other;

- to apply said template on said matrix using a first indexing position whereby matrix cells that bear indicia forming a first template-outcome are identified;

- to evaluate said template-outcome;

- to select a new indexing position whereby a new application of the template on the matrix is performed and whereby a new template-outcome is generated;

- to evaluate said new template-outcome;

- to repeat said steps of selecting a new indexing position and evaluating said new template-outcome unless an ending criterion is fulfilled; and

- to establish an award based on said template-outcome evaluations.

16. The gaming machine of claim 15, wherein the display is one of a mechanical display and an electronic display.

17. The gaming machine of claim 15, wherein indicia are established through a plurality of independent reels each comprising a plurality of indicia in ordered relationship with each other.

18. The gaming machine of claim 15, further comprising input means, wherein the conduct of the game is influenced by player's inputs received through said input means.

19. A computer program embodied in an electric or an electro-magnetic carrier signal having codes adapted, when performed by a CPU of a device, to conduct a line game, the game conduct involving:

a game representation comprising a matrix of cells with each matrix cell bearing a randomly generated indicium;

a template identifying an arrangement of cells in relative position with each other;

applying said template on said matrix using a first indexing position whereby matrix cells that bear indicia forming a first template-outcome are identified;

evaluating said template-outcome;

selecting a new indexing position whereby a new application of the template on the matrix is performed and a new template-outcome is generated;

evaluating said new template-outcome;

repeating said steps of selecting a new indexing position and evaluating said new template-outcome unless an ending criterion is fulfilled; and

providing an award based on said template-outcome evaluations.

20. A computer program embodied on a computer medium or processor readable memory having codes

adapted, when performed by a CPU of a device, to conduct a line game, the game conduct involving:

a game representation comprising a matrix of cells with each matrix cell bearing a randomly generated indicium;

a template identifying an arrangement of cells in relative position with each other;

applying said template on said matrix using a first indexing position whereby matrix cells that bear indicia forming a first template-outcome are identified;

evaluating said template-outcome;

selecting a new indexing position whereby a new application of the template on the matrix is performed and a new template-outcome is generated;

evaluating said new template-outcome;

repeating steps of moving said template and evaluating said new template-outcome unless an ending criterion is fulfilled; and

providing an award based on said template-outcome evaluations.

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