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(54) **GAMING MACHINE WITH PUZZLE FEATURE**

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(76) **Inventor: Natalie Bryant, Sydney (AU)**

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Correspondence Address:  
**Rosenman & Colin LLP**  
**575 Madison Avenue**  
**New York, NY 10022-2585 (US)**

(57) **ABSTRACT**

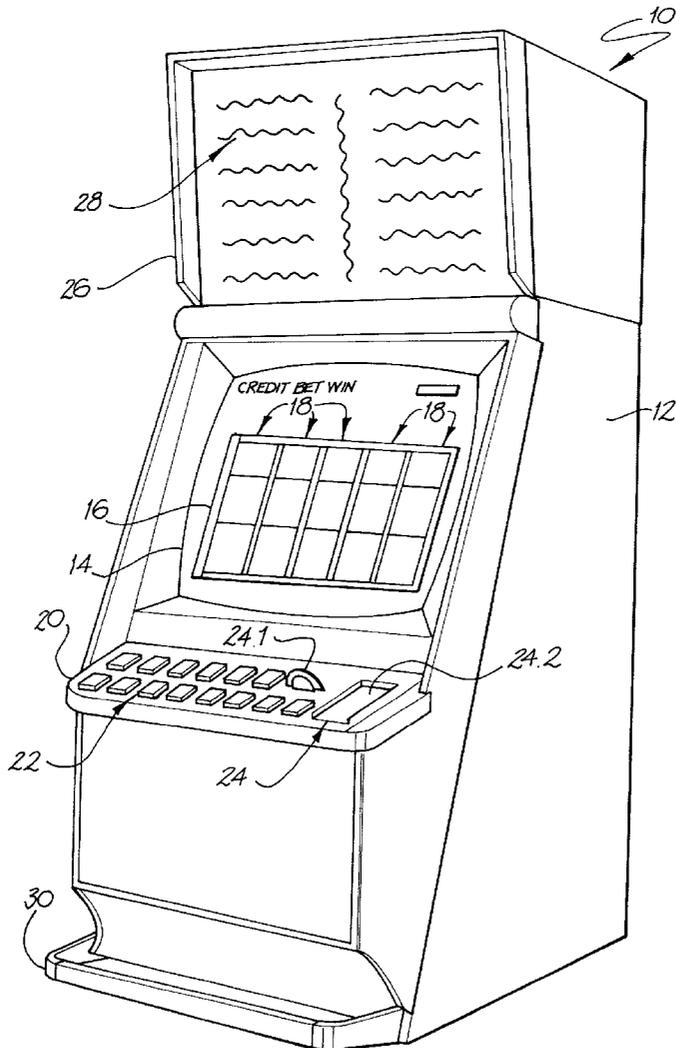
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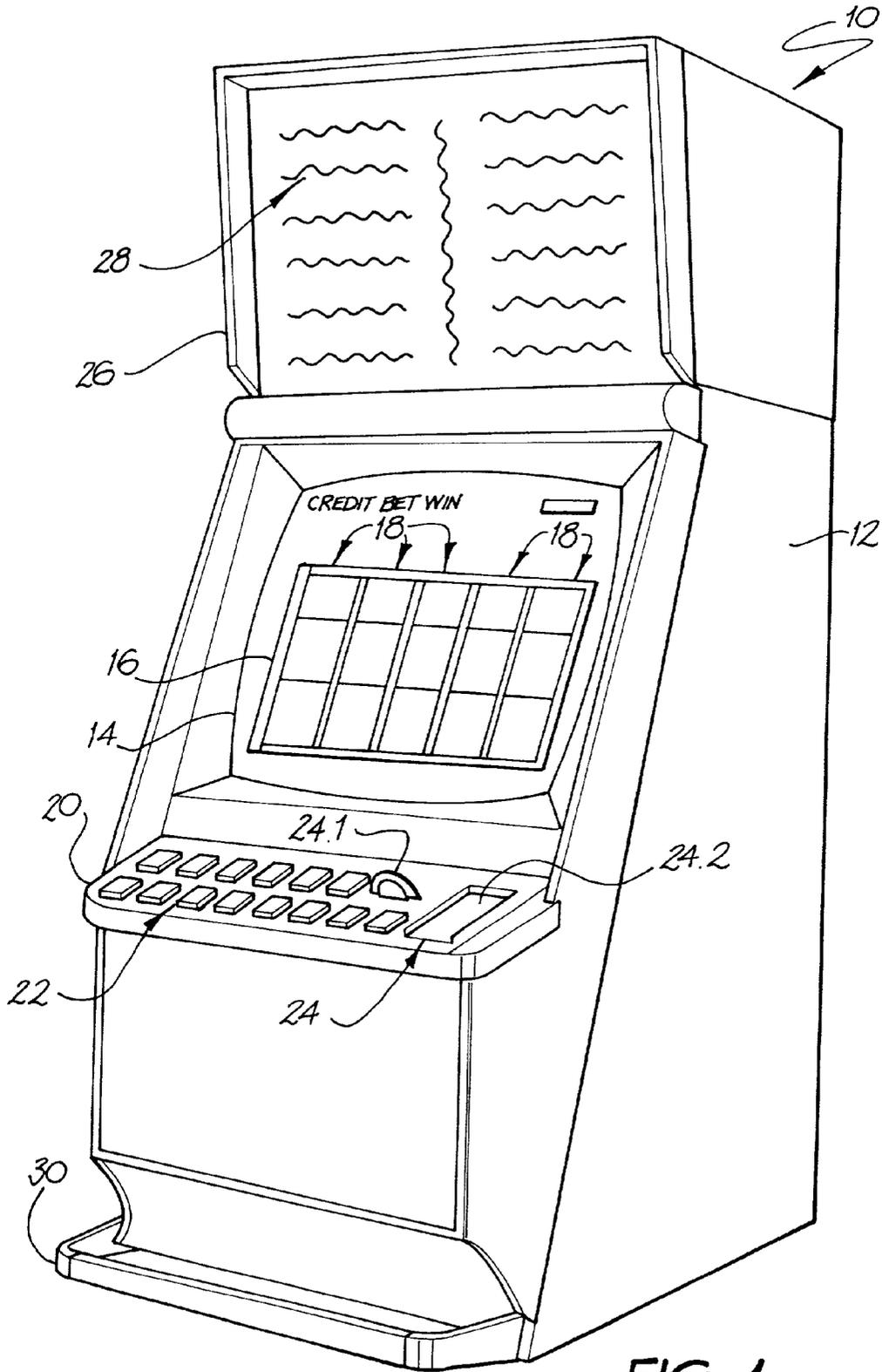
A gaming machine **10** has a display **14** and a game controller **42** arranged to control images displayed on the display **14**. The game controller **42** is arranged to play a game **16** wherein at least one random event is caused to be displayed on the display **14** and, if a predefined winning event occurs, the machine **10** awards a prize. When a trigger condition arises, at least certain displayed game symbols are replaced by other, puzzle symbols, each puzzle symbol being a representation of a part of a larger picture.

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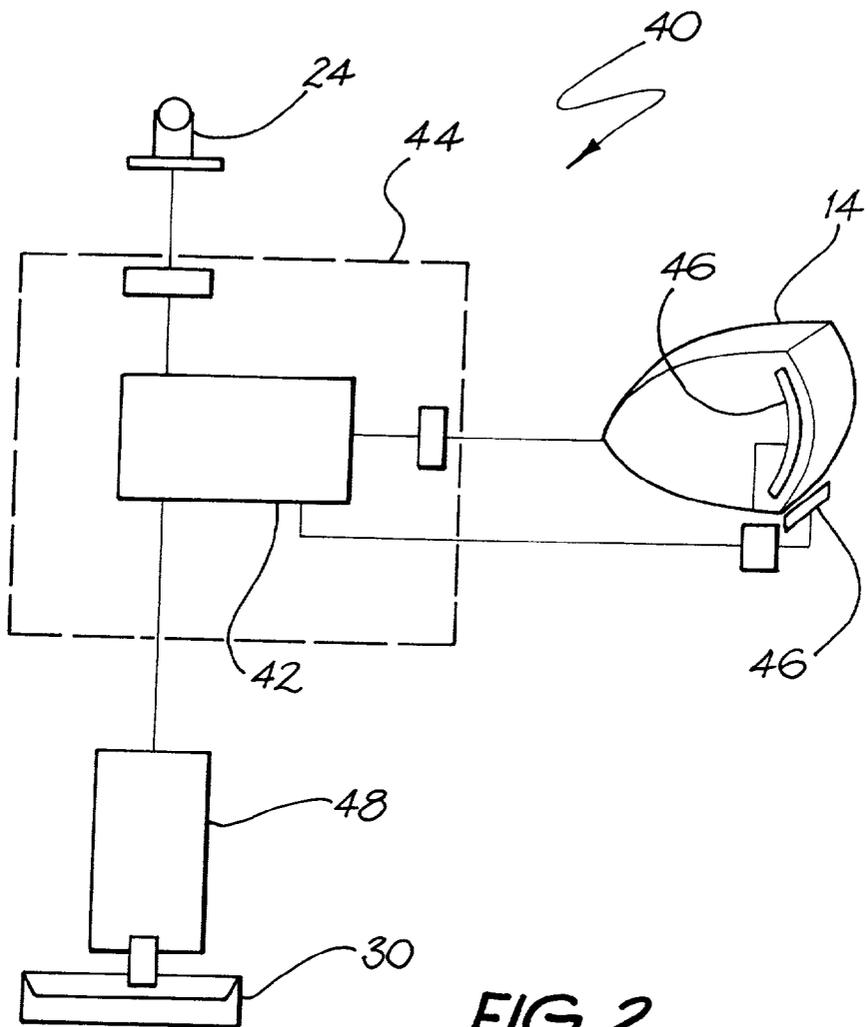
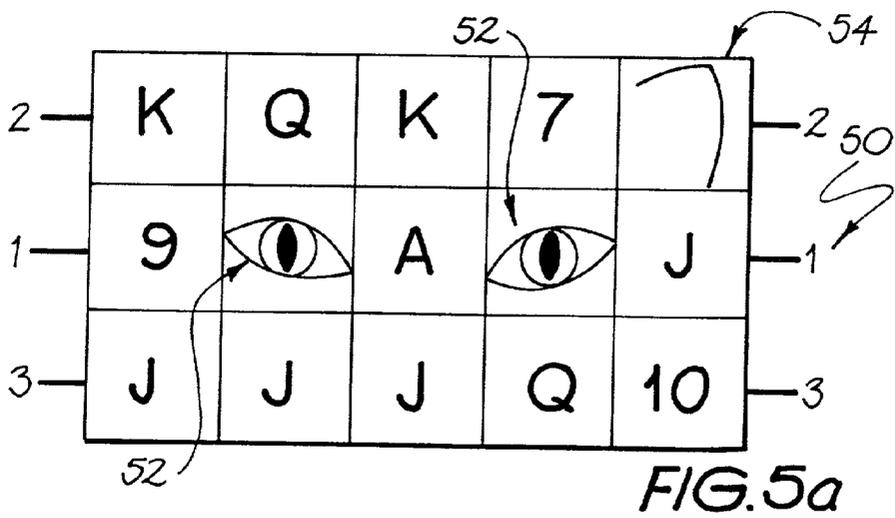
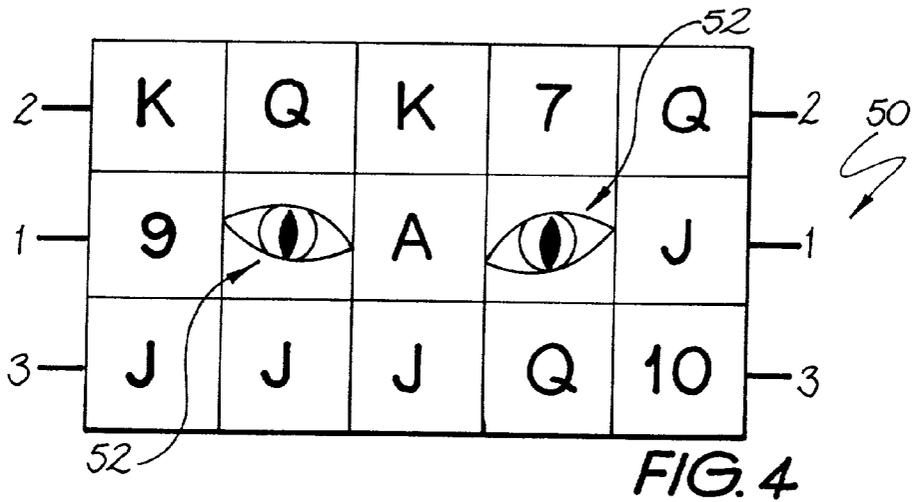
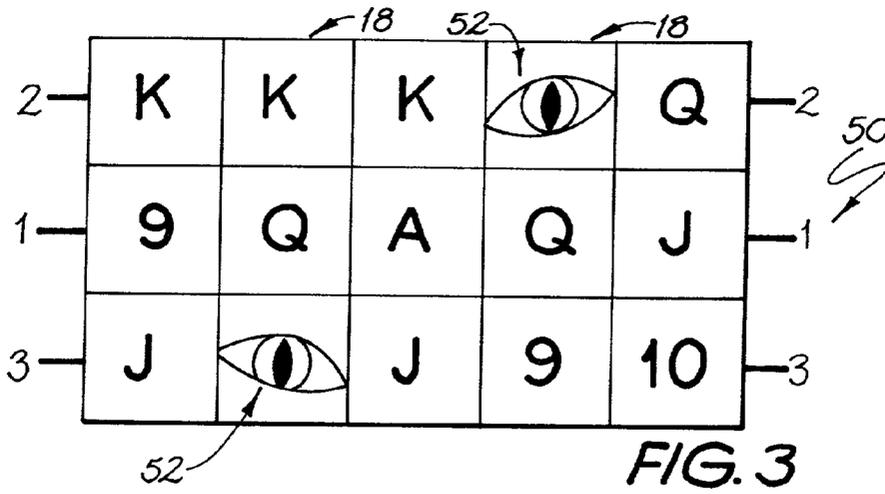
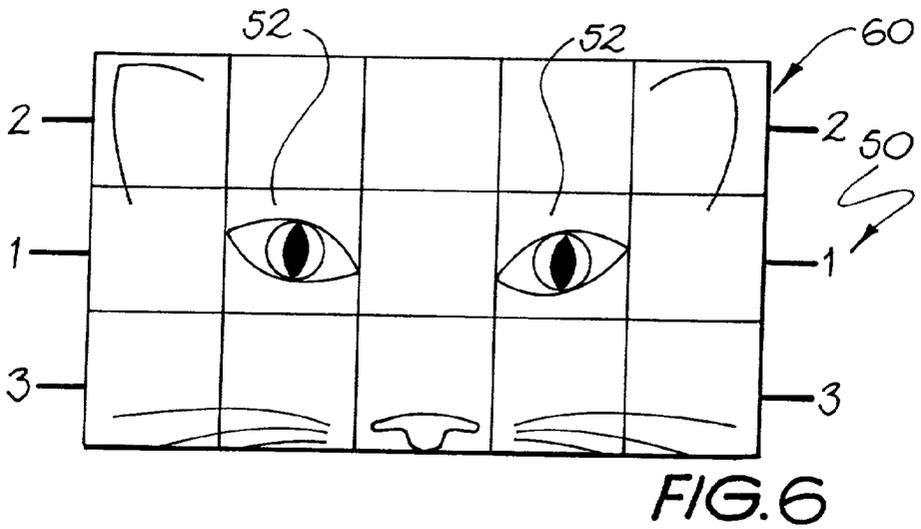
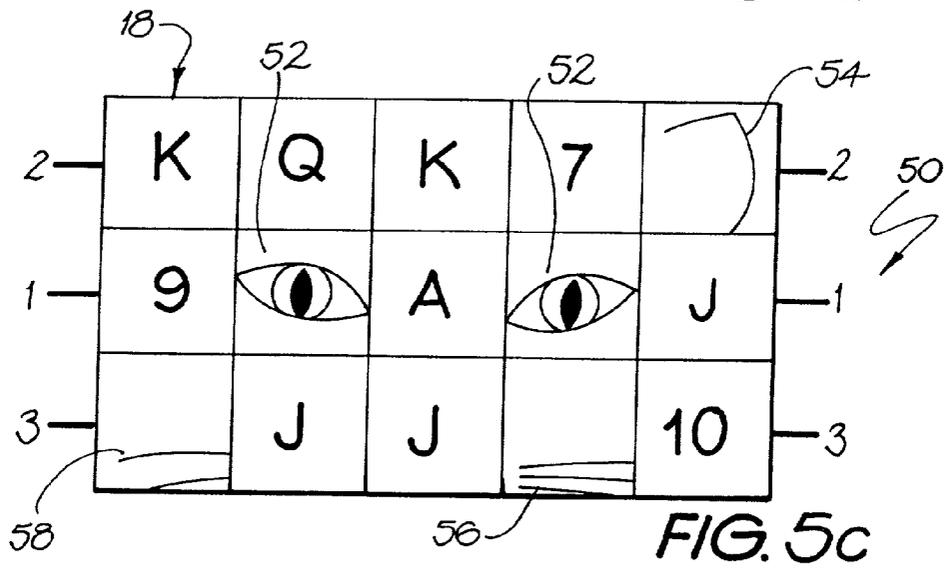
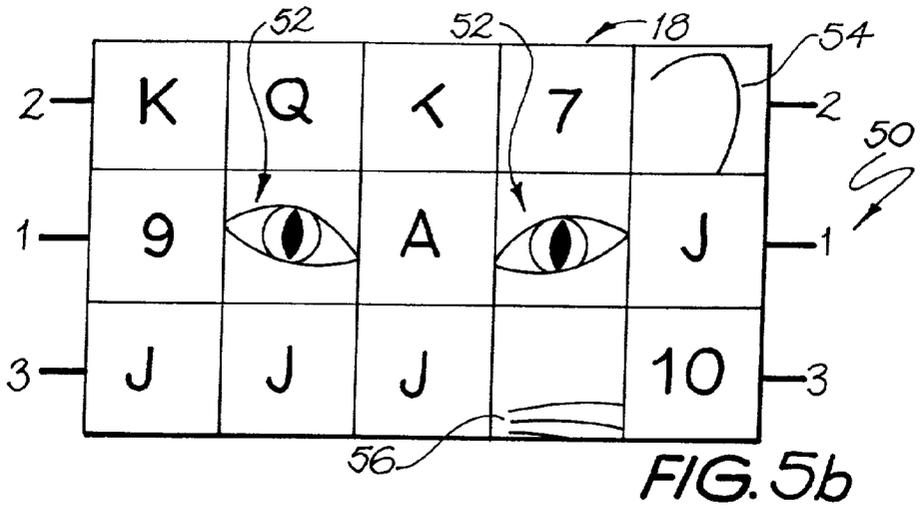


FIG. 2





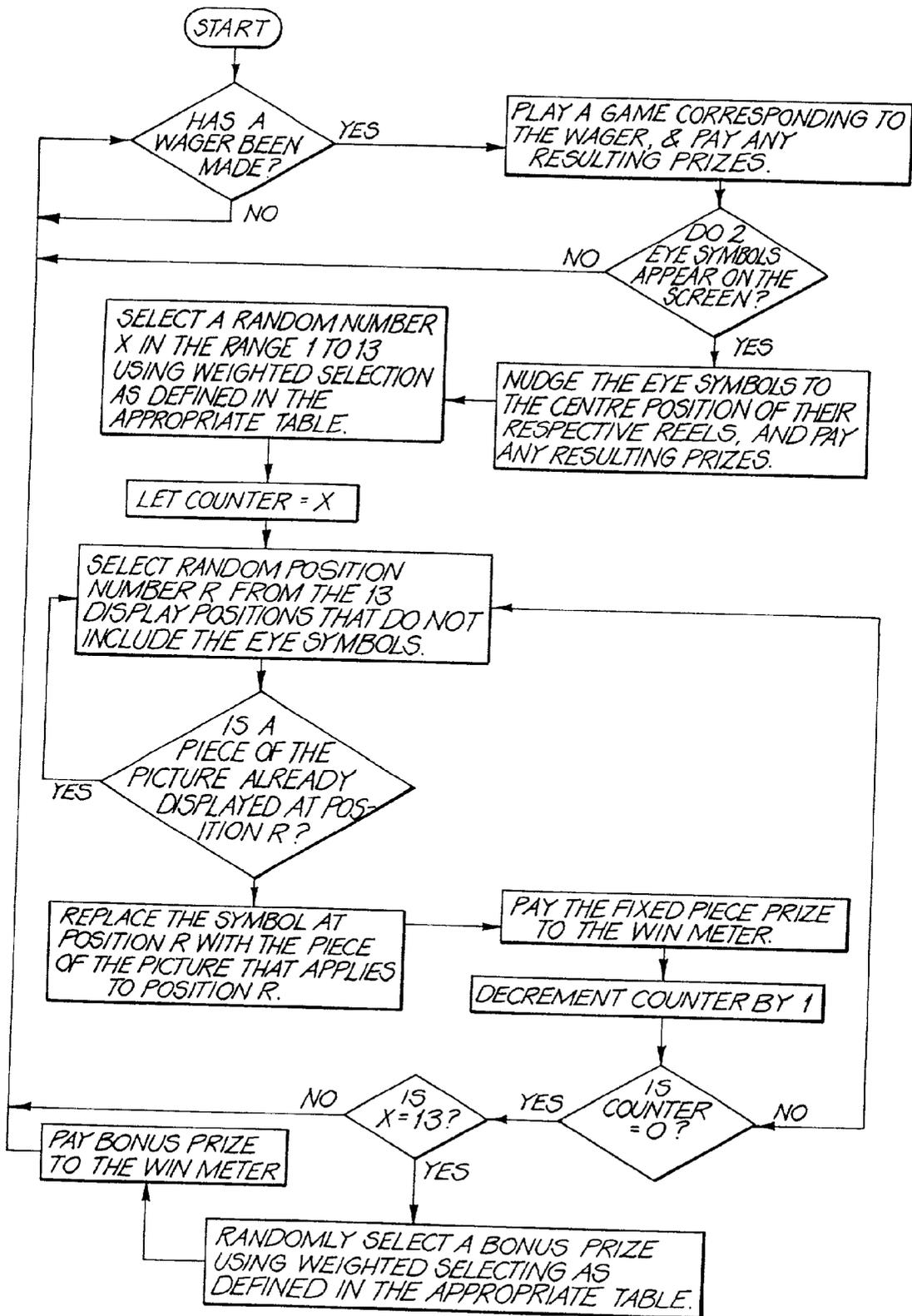


FIG. 7

## GAMING MACHINE WITH PUZZLE FEATURE

### FIELD OF THE INVENTION

[0001] This invention relates to a gaming machine. More particularly, the invention relates to a gaming machine and to an improvement to a game played on such a gaming machine.

### BACKGROUND OF THE INVENTION

[0002] Players who regularly play gaming machines quickly tire of particular games and therefore it is necessary for manufacturers of these machines to develop innovative game features which add interest to the games. In so doing, it is hoped to keep players amused and therefore willing to continue playing the game as well as to attract new players.

[0003] Also, with the growth that has occurred in the gaming machine market, there is intense competition between manufacturers to supply various existing and new venues. When selecting a supplier of gaming machines, the operator of a venue will often pay close attention to the popularity of various games with their patrons. Therefore, gaming machine manufacturers are keen to devise games which are popular with the players as a mechanism for improving sales, retaining customers and attracting new customers.

### SUMMARY OF THE INVENTION

[0004] According to the invention, there is provided a gaming machine having a display means and a game control means arranged to control images displayed on the display means, the game control means being arranged to play a game wherein at least one random event is caused to be displayed on the display means and, if a predefined winning event occurs, the machine awards a prize, the gaming machine being characterized in that, when a trigger condition arises, at least certain displayed game symbols are replaced by other, puzzle symbols, each puzzle symbol being a representation of a part of a larger picture.

[0005] Preferably, the game is a spinning reel game having representations of spinning reels, each reel representation displaying a plurality of game symbols on the display means, for example, three game symbols. At least certain of the game symbols may also be special symbols.

[0006] Thus, the trigger condition may arise when a predetermined number of the special symbols are displayed. In a preferred embodiment, the special symbols are predetermined puzzle pieces, ie. representations of predetermined parts of the larger picture. Instead, the trigger condition is independent of the larger picture. In other words, the symbols giving rise to the trigger condition may not be representations of the parts of the larger picture.

[0007] The control means may select the number of puzzle symbols that will be displayed when the trigger condition arises by generating a random number. The random number selected may fall in the range from 1 to, at most, the total number of display positions. Where the trigger condition is the display of a predetermined number of the special symbols, the random number may fall within the range from 1 to the total number of display positions minus any display positions that already contain the special symbols. It will be appreciated that, when the trigger condition is independent

of the larger picture, the range may simply be from 1 to the total number of display positions.

[0008] Once the random number has been selected, the control means may reveal the equivalent number of puzzle symbols in place of the game symbols.

[0009] If the entire picture is revealed, a special bonus may be awarded. When the entire picture is revealed, the entire picture may enlarge to fill the display means. Further, the enlarging of the picture may be accompanied by appropriate audio outputs and the special bonus is paid in discrete packets.

[0010] Preferably, a fixed prize is also awarded for each puzzle symbol that is revealed.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The invention is now described by way of example with reference to the accompanying diagrammatic drawings in which:

[0012] **FIG. 1** shows a three dimensional view of a gaming machine, in accordance with the invention;

[0013] **FIG. 2** shows a block diagram of a control circuit of the gaming machine;

[0014] **FIG. 3** shows a screen display at the end of a base game;

[0015] **FIG. 4** shows a screen display after an initial step of a special feature;

[0016] **FIGS. 5a to 5c** show screen displays of one embodiment of the special feature;

[0017] **FIG. 6** shows a screen display upon completion of another embodiment of the special feature; and

[0018] **FIG. 7** shows a flow chart of the game played on the gaming machine of **FIG. 1**.

### DETAILED DESCRIPTION OF THE DRAWINGS

[0019] In **FIG. 1**, reference numeral **10** generally designates a gaming machine, including a game, in accordance with the invention. The machine **10** includes a console **12** having a video display unit **14** on which a game **16** is played, in use. The base game of the game **16** is a spinning reel game which simulates the rotation of a number of spinning reels **18**. A midtrim **20** of the machine **10** houses a bank **22** of buttons for enabling a player to play the game **16**. The midtrim **20** also houses a credit input mechanism **24** including a coin input chute **24.1** and a bill collector **24.2**.

[0020] The machine **10** includes a top box **26** on which artwork **28** is carried. The artwork **28** includes paytables, details of bonus awards, etc.

[0021] A coin tray **30** is mounted beneath the console **12** for cash payouts from the machine **10**.

[0022] Referring now to **FIG. 2** of the drawings, a control means or control circuit **40** is illustrated. A program which implements the game and user interface is run on a processor **42** of the control circuit **40**. The processor **42** forms part of a controller **44** which drives the screen of the video display unit **14** and which receives input signals from sensors **46**. The sensors **46** include sensors associated with the bank **22** of buttons and touch sensors mounted in the screen **16**. The

controller 44 also receives input pulses from the mechanism 24 indicating that a player has provided sufficient credit to commence playing. The mechanism 24 may, instead of the coin input chute 24.1 or the bill collector 24.2, or in addition thereto, be a credit card reader (not shown) or any other type of validation device.

[0023] Finally, the controller 44 drives a payout mechanism 48 which, for example, may be a coin hopper for feeding coins to the coin tray 30 to make a pay out to a player when the player wishes to redeem his or her credit.

[0024] As described above, the game 16 is a spinning reel game which simulates the rotation of a plurality of spinning reels 18. After a trigger condition arises, some or all of the symbol positions that are displayed by the reels 18 on the screen 16 will be randomly replaced by pieces of a larger picture.

[0025] Accordingly, after an initial or base game, a screen display 50 is as shown in FIG. 3 of the drawings. In the description which follows, it is assumed that there are three active paylines that prizes are awarded for left-to-right combinations only and that only combinations of three or more of a kind pay prizes.

[0026] In the screen display 50 shown in FIG. 3 of the drawings, two special symbols 52 are displayed in addition to the standard symbols. The special symbols 52 are eyes of an animal, for example, a tiger. The special symbols 52 thus form part of a larger picture, as will be described in greater detail below. In addition, the special symbols 52 also function as substitute symbols which substitute for all other standard symbols during the base game except for scatter symbols.

[0027] Still further, the presence of the two special symbols 52 constitute a trigger condition for the awarding of a special feature, in accordance with the invention. The special feature is that, once the trigger condition has arisen, one or more pieces of a larger picture will be revealed.

[0028] Accordingly, when the trigger condition arises, the control means 44 makes a random selection of the number of pieces of the larger picture that is to be revealed.

[0029] As illustrated, the preferred embodiment applies to a five reel spinning reel game where three positions of each reel are displayed on the screen 14, at any one time. Accordingly, the random number that is selected by the control means 44 will be in the range of 1 to the total number of display positions on the screen minus any positions that already contain pieces of the picture. Accordingly, in the game shown in FIG. 3 of the drawings, the random number could be between 1 and 13.

[0030] As indicated above, the picture which is to be revealed is the face of a tiger. It will be appreciated that, with the positions of the eyes shown in FIG. 3 of the drawings, the face would be lopsided. Accordingly, after any prizes have been paid for the result shown on the screen display 50 shown in FIG. 3 of the drawings, an initial step involves the nudging of the second reel 18 upwardly and the nudging of the fourth reel 18 downwardly so that the eye symbols 52 are in a central position of each of the second and fourth reels 18, as shown in FIG. 4 of the drawings.

[0031] In the case of the screen display 50 shown in FIG. 3 of the drawings, because the eye symbols 52 act as

substitute symbols, a prize is paid for 4xK on payline two and 3xJ on payline three. After the second and fourth reels 18 have been nudged to the position shown in FIG. 4 of the drawings a further prize is paid for 3xJ on payline three.

[0032] A random number between 1 and 13, the selection of the random number preferably being weighted, will then be selected by the control means 44 as the number of pieces of the picture which are to be revealed. By "weighted" is meant that there is not an even 1 in 13 chance of selecting each of the numbers from 1 to 13.

[0033] For the embodiment of the invention shown in FIGS. 5a to 5c of the drawings, it is assumed that the random number selected is three. When the random number is chosen, random display positions, excluding the positions of the eye symbols 52, will be chosen to replace the standard symbols at those positions with pieces of the picture or puzzle symbols.

[0034] Thus, as shown at FIG. 5a, initially the first reel strip position of the fifth reel, as indicated at 54, is replaced by a part of the picture. Preferably, the piece that will be revealed at any display position will be the piece that represents that part of the picture of the tiger that is appropriate to be displayed at that position. It will, however, be appreciated that in other embodiments, the pieces may not necessarily match up to their correct locations initially. An additional shuffle feature may also be implemented where the puzzle symbols are shuffled around in attempting to complete the picture.

[0035] Next, as shown in FIG. 5b of the drawings, a puzzle symbol 56 is shown displayed at the third position of the fourth reel 18.

[0036] Finally, as shown in FIG. 5c of the drawings, a puzzle symbol 58 is shown at the third position of the first reel 18.

[0037] For each puzzle symbol 54-58 that is revealed, a prize is paid. As indicated above, the random number selected was three so that, after the puzzle symbol 58 has been revealed, the feature ends.

[0038] In the embodiment of the invention illustrated in FIG. 6 of the drawings, the random number selected by the control means 44 is thirteen such that all the standard symbols, excluding the eye symbols 52, are replaced by puzzle symbols to reveal the picture 60, being the face of the tiger. The puzzle symbols are revealed one at a time until all the standard symbols have been replaced by the appropriate piece of the picture.

[0039] A special bonus prize is randomly selected from a range of bonus prizes and is paid for completing the picture 60. This bonus prize is paid in addition to the prizes that were given for each individual piece of the picture 60 as that piece is revealed.

[0040] In a preferred form of the invention, where the entire picture is revealed, once it has been revealed it enlarges to fill the entire screen of the video display unit 14, not just the reel positions in the display. As the picture enlarges it is accompanied by appropriate audio outputs. Thus, in the case of a picture of a tiger, the picture enlarges to the accompaniment of a sound of a tiger roaring.

[0041] Also, the special bonus prize is paid in packets or portions in that a roar sound is played and the win meter is

incremented by 10xthe bet on the base game **16** that triggered the feature. The roar sound is then played again followed by the win meter being incremented by another 10xthe bet on the base game. This procedure is followed until the entire special bonus prize has been credited to the win meter. This adds to the suspense of the awarding of the special bonus prize when the entire picture has been completed.

**[0042]** Accordingly, it is an advantage of the invention that a game is provided having a special feature which will heighten the excitement for players of the game.

**[0043]** It will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive.

We claim:

**1.** A gaming machine having a display means and a game control means arranged to control images displayed on the display means, the game control means being arranged to play a game wherein at least one random event is caused to be displayed on the display means and, if a predefined winning event occurs, the machine awards a prize, the gaming machine being characterized in that, when a trigger condition arises, at least certain displayed game symbols are replaced by other, puzzle symbols, each puzzle symbol being a representation of a part of a larger picture.

**2.** The gaming machine of claim 1 in which the game is a spinning reel game having representations of spinning reels, each reel representation displaying a plurality of game symbols on the display means.

**3.** The gaming machine of claim 2 in which at least certain of the game symbols are also special symbols.

**4.** The gaming machine of claim 3 in which the trigger condition arises when a predetermined number of the special symbols are displayed.

**5.** The gaming machine of claim 4 in which the special symbols are predetermined puzzle pieces.

**6.** The gaming machine of claim 1 in which the trigger condition is independent of the larger picture.

**7.** The gaming machine of claim 1 in which the control means selects the number of puzzle symbols that will be displayed when the trigger condition arises by generating a random number.

**8.** The gaming machine of claim 7 in which the random number selected falls in the range from 1 to, at most, the total number of display positions.

**9.** The gaming machine of claim 7 in which, once the random number has been selected, the control means reveals the equivalent number of puzzle symbols in place of the game symbols.

**10.** The gaming machine of claim 1 in which, if the entire picture is revealed, a special bonus is awarded.

**11.** The gaming machine of claim 10 in which, when the entire picture is revealed, said entire picture enlarges to fill the display means.

**12.** The gaming machine of claim 11 in which the enlarging of the picture is accompanied by appropriate audio outputs and the special bonus is paid in discrete packets.

**13.** The gaming machine of claim 1 in which a fixed prize is awarded for each puzzle symbol that is revealed.

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