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(54) **Gaming machine with persistent bonus state**

(57) A method of conducting a wagering game on a gaming machine during a single gaming session is disclosed. The wagering game includes a basic game and a bonus game. The bonus game is triggered by a special outcome in the basic game. According to the method, the machine receives a first wager to play the wagering game. In response to an occurrence of the special outcome, the bonus game is conducted until terminated at one of a plurality of possible states. The machine subsequently receives a second wager to play the wagering game. In response to a subsequent occurrence of the special outcome, the bonus game resumes from the one of the plurality of possible states as long as game credits remain in the machine between the occurrence and the subsequent occurrence of the special outcome. Otherwise, the bonus game resets so that it commences from an introductory state when the special outcome subsequently occurs.

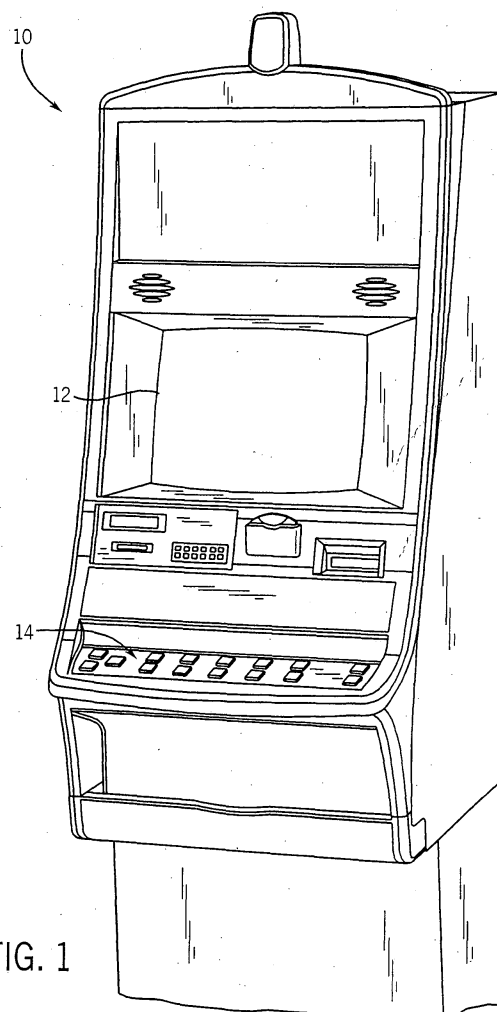


FIG. 1

Description

FIELD OF THE INVENTION

[0001] The present invention relates generally to gaming machines and, more particularly, to a gaming machine including a persistent game feature state.

BACKGROUND OF THE INVENTION

[0002] Gaming machines, such as slot machines, video poker machines and the like, have been a cornerstone of the gaming industry for several years. Generally, the popularity of such machines with players is dependent on the likelihood (or perceived likelihood) of winning money at the machine and the intrinsic entertainment value of the machine relative to other available gaming options. Where the available gaming options include a number of competing machines and the expectation of winning each machine is roughly the same (or believed to be the same), players are most likely to be attracted to the most entertaining and exciting of the machines. Shrewd operators consequently strive to employ the most entertaining and exciting machines available because such machines attract frequent and extended play and hence increase profitability to the operator. Accordingly, in the competitive gaming machine industry, there is a continuing need for gaming machine manufacturers to produce new types of games, or enhancements to existing games, which will attract frequent and extended play by enhancing the entertainment value and excitement associated with the game.

[0003] One concept that has been successfully employed to enhance the entertainment value of a game is the concept of a "secondary" or "bonus" game that may be played in conjunction with a "basic" game. The bonus game may comprise any type of game, either similar to or completely different from the basic game, which is entered upon the occurrence of a selected event or outcome of the basic game. Because the bonus game concept offers tremendous advantages in player appeal and excitement relative to other known games, and because such games are attractive to both players and operators, there is a continuing need to develop new features and themes for bonus games to satisfy the demands of players and operators. Preferably, such new bonus game features and themes will maintain, or even further enhance, the level of player excitement offered by bonus games heretofore known in the art. The present invention is directed to satisfying these needs.

SUMMARY OF THE INVENTION

[0004] A method of conducting a wagering game on a gaming machine during a single gaming session is disclosed. The wagering game includes a basic game and a bonus game. The bonus game is triggered by a special outcome in the basic game. According to the method,

the machine receives a first wager to play the wagering game. In response to an occurrence of the special outcome, the bonus game is conducted until terminated at one of a plurality of possible states. The machine subsequently receives a second wager to play the wagering game. In response to a subsequent occurrence of the special outcome, the bonus game resumes from the one of the plurality of possible states as long as game credits remain in the machine between the occurrence and the subsequent occurrence of the special outcome. Otherwise, the bonus game resets so that it commences from an introductory state when the special outcome subsequently occurs.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] The foregoing and other advantages of the invention will become apparent upon reading the following detailed description and upon reference to the drawings in which:

FIG. 1 is a perspective view of a gaming machine embodying the present invention;

FIG. 2 is a block diagram of a control system suitable for operating the gaming machine;

FIG. 3 is a display image associated with a basic slot game and showing a symbol combination for triggering a multi-level adventure bonus;

FIGS. 4 through 12 are display images associated with the adventure bonus feature; and

FIG. 13 is a display image via which a player elects to play either a single-level standard bonus or the multi-level adventure bonus.

[0006] While the invention is susceptible to various modifications and alternative forms, specific embodiments have been shown by way of example in the drawings and will be described in detail herein. However, it should be understood that the invention is not intended to be limited to the particular forms disclosed. Rather, the invention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the appended claims.

DESCRIPTION OF SPECIFIC EMBODIMENTS

[0007] Turning now to the drawings and referring initially to FIG. 1, a gaming machine 10 is operable to play a wagering game having a treasure hunting theme. The wagering game includes a basic slot game with five simulated spinning reels and a multi-level adventure bonus triggered by a start-feature outcome in the basic slot game. In addition to the adventure bonus, the basic slot game may produce certain outcomes for triggering other special features and bonus games.

[0008] The gaming machine 10 includes a visual display 12 preferably in the form of a dot matrix, CRT, LED, LCD, electro-luminescent, or other type of video display

known in the art. The display 12 preferably includes a touch screen overlaying the monitor. In the illustrated embodiment, the gaming machine 10 is an "upright" version in which the display 12 is oriented vertically relative to the player. Alternatively, the gaming machine may be a "slant-top" version in which the display 12 is slanted at about a thirty-degree angle toward the player of the gaming machine 10.

[0009] FIG. 2 is a block diagram of a control system suitable for operating the gaming machine 10. Money/credit detector 16 signals a central processing unit ("CPU") 18 when a player has inserted money or played a number of credits. The money may be provided by coins, bills, tickets, coupons, cards, etc. Then, the CPU 18 operates to execute a game program that causes the display 12 to display five simulated symbol-bearing reels. The player may select a number of pay lines to play, an amount to wager, and start game play via the touch screen 20 or the push-buttons 14, causing the CPU 18 to set the reels in motion, randomly select a game outcome, and then stop the reels to display symbols corresponding to the pre-selected game outcome. In one embodiment, one of the basic game outcomes triggers a multi-level adventure bonus.

[0010] A system memory 22 stores control software, operational instructions and data associated with the gaming machine 10. In one embodiment, the system memory 22 comprises a separate read-only memory (ROM) and battery-backed random-access memory (RAM). However, it will be appreciated that the system memory 22 may be implemented on any of several alternative types of memory structures or may be implemented on a single memory structure. A payoff mechanism 24 is operable in response to instructions from the CPU 18 to award a payoff to the player in response to certain winning outcomes that might occur in the basic game or the adventure bonus. The payoff may be provided in the form of coins, bills, tickets, coupons, cards, etc. The payoff amounts are determined by one or more pay tables stored in the system memory 22.

[0011] Referring to FIG. 3, the basic game is implemented on the display 12 on five video simulated spinning reels 30 with nine pay lines 32. Each of the pay lines 32 extends through one symbol on each of the five reels 30. Generally, game play is initiated by inserting money or playing a number of credits, causing the CPU to activate a number of pay lines 32 corresponding to the amount of money or number of credits played. In one embodiment, the player selects the number of pay lines 32 (between one and nine) to play by pressing an onscreen "Select Lines" key 34 on the video display 12. The player then chooses the number of coins or credits to bet on the selected pay lines 32 by pressing an onscreen "Bet Per Lines" key 36.

[0012] After activation of the pay lines 32, the reels 30 may be set in motion by touching an onscreen "Spin Reels" key 38 or, if the player wishes to bet the maximum amount per line, by using an onscreen "Max Bet Spin"

key 40 on the video display 12. Alternatively, other mechanisms such as, for example, a lever or push button may be used to set the reels 30 in motion. The CPU uses a random number generator to select a game outcome (e.g., "basic" game outcome) corresponding to a particular set of reel "stop positions." The CPU then causes each of the video reels 30 to stop at the appropriate stop position. Video symbols are displayed on the reels 30 to graphically illustrate the reel stop positions and indicate whether the stop positions of the reels 30 represent a winning game outcome.

[0013] Winning basic game outcomes (e.g., symbol combinations resulting in payment of coins or credits) are identifiable to the player by a pay table. In one embodiment, the pay table is affixed to the machine 10 and/or displayed by the video display 12 in response to a command by the player (e.g., by pressing an onscreen "Pay Table" key 42). A winning basic game outcome occurs when the symbols appearing on the reels 30 along an active pay line 32 correspond to one of the winning combinations on the pay table. A winning combination, for example, could be three or more matching symbols along an active pay line 32, where the award is greater as the number of matching symbols along the active pay line 32 increases. If the displayed symbols stop in a winning combination, the game credits the player an amount corresponding to the award in the pay table for that combination multiplied by the amount of credits bet on the winning pay line 32. The player may collect the amount of accumulated credits by pressing an onscreen "Collect" key 44. In one implementation, the winning combinations start from the leftmost one of the reels 30 and span adjacent reels (left to right). In an alternative implementation, the winning combinations start from either the leftmost one or rightmost one of the reels 30 and span adjacent reels.

[0014] Included among the plurality of basic game outcomes is a start-feature outcome for triggering play of a multi-level adventure bonus. A start-feature outcome may be defined in any number of ways. For example, a start-feature outcome occurs when a special start-feature symbol or a special combination of symbols appears on one or more of the reels 30. The start-feature outcome may require the combination of symbols to appear along an active pay line, or may alternatively require that the combination of symbols appear anywhere on the display regardless of whether the symbols are along an active pay line. The appearance of the appropriate start-feature outcome causes the CPU to shift operation from the basic game to the multi-level adventure bonus.

[0015] In the embodiment illustrated in FIG. 3, the appearance of three scattered DIRK DANGEROUS symbols 50 anywhere on the display triggers the multi-level adventure bonus. The DIRK DANGEROUS symbols 50 are highlighted using, for example, a flashing border.

[0016] Referring generally to FIGS. 4 through 12, the multi-level adventure bonus includes a series of nested

levels that allow a player to explore various scenes along with a character called "Dirk Jensen," a world famous photojournalist. Dirk Jensen is also a secret agent for the World Society of Ancient Artifacts (WSAA). He has a reputation for finding great treasures in areas that others thought were useless for treasure hunting.

[0017] Referring to FIG. 4, the adventure bonus begins in the Staff of Ra Chamber. The Staff of Ra Chamber represents the introductory (first) level of the adventure bonus. The player is prompted to select two of five chests 52 in the Staff of Ra Chamber to reveal his/her bonus awards. If the Staff of Ra is revealed by one of the two selected chests, the adventure bonus proceeds to the next (second) level. Otherwise, the CPU awards the revealed awards and shifts operation from the adventure bonus back to the basic slot game. Referring to FIG. 5, in the illustrated example the two selected chests reveal respective awards of 50 credits and 150 credits, along with the Staff of Ra. Therefore, the adventure bonus proceeds to the next (second) level, which is represented by the Inner Chamber of Ra.

[0018] Referring to FIG. 6, the player is prompted to select four of ten items 54 in the Inner Chamber of Ra to reveal his/her bonus awards. If a map is revealed by one of the four selected items, the adventure bonus proceeds to the next (third) level. Otherwise, the CPU awards the revealed awards and shifts operation from the adventure bonus back to the basic slot game. Referring to FIG. 7, in the illustrate example the four selected items reveal respective awards of 20 credits, 50 credits, 70 credits, and 100 credits, along with the map. Therefore, the adventure bonus proceeds to the next (third) level, which is represented by an Old Nile scene.

[0019] Referring to FIG. 8, the player is prompted to select four of six items 56 in the Old Nile scene to reveal his/her bonus awards. If a map is revealed by one of the four selected items, the adventure bonus proceeds to the final (fourth) level. Otherwise, the CPU awards the revealed awards and shifts operation from the adventure bonus back to the basic slot game. Referring to FIG. 9, in the illustrate example the four selected items reveal respective awards of 20 credits, 50 credits, 70 credits, and 100 credits, along with the map. Therefore, the adventure bonus proceeds to the final (fourth) level, which is represented by the Guardian of the Eye.

[0020] Referring to FIG. 10, the player is prompted to select three of five items 58 in the Guardian of the Eye scene to reveal his/her bonus awards. The award for each selected item is presented in a respective popup window as shown in FIGS. 11 and 12. If one of the selected items reveals an extra large bonus (e.g., an image of Dirk Jensen holding a diamond and 1000 credits as in FIG. 12), the adventure bonus awards that bonus and cycles back to the introductory (first) level described above where the player essentially replays the bonus game from the start. Otherwise, the CPU awards only the revealed awards (not the extra large bonus) and shifts operation from the adventure bonus back to the

basic slot game.

[0021] As noted above, the adventure bonus is triggered by a special outcome in the basic slot game and includes a plurality of possible bonus levels. In the illustrated example the special outcome is the appearance of three DIRK DANGEROUS symbols anywhere on the reel display, and the adventure bonus includes four possible levels. In accordance with the present invention, each time the adventure bonus is conducted during a gaming session, the CPU records the level at which the bonus is terminated prior to shifting operation back to the basic slot game. Then, in response to an occurrence of the special outcome for triggering the adventure bonus during the same gaming session, the CPU resumes the adventure bonus from the recorded level at which the bonus was previously terminated if and only if game credits have remained in the machine (i.e., non-zero balance on the game credit meter 46 in FIG. 3) since the last time the bonus was played. If, however, the credit meter was reduced to zero since the last time the bonus was played, i.e., the gaming session ended, the adventure bonus resets so that it commences from the first level when it is subsequently triggered. In one embodiment, if the credit meter runs out of game credits, the CPU may offer a grace period, such as a couple minutes, for loading game credits onto the credit meter to prevent the adventure bonus from resetting to the first level.

[0022] By way of example, the player first loads game credits on the credit meter 46 in FIG. 3 and maintains a non-zero balance on the credit meter during the following typical scenario. Second, the machine receives an initial series of one or more wagers to play the basic slot game. Third, in response to a first occurrence of three scattered DIRK DANGEROUS symbols 50 in FIG. 3, the adventure bonus commences from the first level (e.g., Staff of Ra Chamber in FIGS. 4 and 5) and proceeds until terminated at the third level (e.g., Old Nile scene in FIGS. 8 and 9) prior to completion thereof. The adventure bonus would terminate at the third level if the player did not find the map behind one of the four selected items. The CPU shifts operation back to the basic slot game. Fourth, the machine receives a second series of one or more wagers to play the basic slot game. Fifth, in response to a second occurrence of three scattered DIRK DANGEROUS symbols 50 in FIG. 3, the adventure bonus resumes from (returns to) the third level (e.g., Old Nile scene in FIGS. 8 and 9) and proceeds until terminated at the fourth level (e.g., Guardian of the Eye scene in FIGS. 10, 11, and 12) prior to completion thereof. The adventure bonus would terminate at the fourth level if the player did not find the extra large bonus behind one of the three selected items. The CPU shifts operation back to the basic slot game. Sixth, the machine receives a third series of one or more wagers to play the basic slot game. Seventh, in response to a third occurrence of three scattered DIRK DANGEROUS symbols 50 in FIG. 3, the adventure bonus resumes from the

fourth level (e.g., Guardian of the Eye scene in FIGS. 10, 11, and 12) and proceeds until completion of the fourth level. The player would complete the fourth level by finding the extra large bonus behind one of the three selected items. The adventure bonus cycles back to the first level (e.g., Staff of Ra Chamber in FIGS. 4 and 5) where the player essentially replays the bonus game from the start until terminated.

[0023] While the present invention has been described with reference to one or more particular embodiments, those skilled in the art will recognize that many changes may be made thereto without departing from the spirit and scope of the present invention. For example, in response to triggering the multi-level adventure bonus, the machine may present the player with an option to play either a standard bonus (e.g., "Magic Key" bonus) or the adventure bonus as shown in FIG. 13. The standard bonus has a single level and therefore plays more quickly than the adventure bonus. As noted above, the adventure bonus has multiple levels. The theoretical expected payoff of both the standard bonus and the adventure bonus may be the same so that, on average, the player will win the same amount of money whether the player chooses to play the standard bonus or chooses to play the adventure bonus. Each of these embodiments and obvious variations thereof is contemplated as falling within the spirit and scope of the claimed invention, which is set forth in the following claims.

Claims

1. A method of conducting a wagering game on a gaming machine during a single gaming session, the wagering game including a bonus game triggered by at least one special outcome in at least one other portion of the wagering game, the method comprising:

receiving a first wager to play the wagering game;
in response to an occurrence of the special outcome, conducting the bonus game;
receiving a second wager to play the wagering game; and
in response to a subsequent occurrence of the special outcome, resuming the bonus game from a state at which the bonus game was previously terminated.

2. The method of claim 1, wherein the bonus game includes a plurality of possible levels, and wherein the step of conducting the bonus game includes terminating the bonus game at one of the plurality of levels, the state being the one of the plurality of levels.

3. The method of claim 1, wherein the step of conduct-

ing the bonus game includes terminating the bonus game at one of a plurality of possible bonus states, the state being the one of the plurality of possible bonus states.

4. The method of claim 1, wherein the step of conducting the bonus game includes commencing the bonus game from an introductory state, and further including in response to dispensing any game credits remaining in the machine, resetting the bonus game so that the bonus game commences from the introductory state when the special outcome subsequently occurs.

5. The method of claim 1, wherein the step of resuming the bonus game from the state at which the bonus game was previously terminated occurs as long as game credits remain in the machine between the occurrence and the subsequent occurrence of the special outcome.

6. The method of claim 1, wherein the at least one other portion of the wagering game includes a basic game.

7. A method of conducting a wagering game on a gaming machine during a single gaming session, the wagering game including a bonus game triggered by at least one special outcome in at least one other portion of the wagering game, the method comprising:

in response to an occurrence of the special outcome, conducting the bonus game; and
in response to a subsequent occurrence of the special outcome, resuming the bonus game from a state at which the bonus game was terminated during the conducting step.

8. The method of claim 7, wherein the bonus game includes a plurality of possible levels, and wherein the step of conducting the bonus game includes terminating the bonus game at one of the plurality of levels, the state being the one of the plurality of levels.

9. The method of claim 7, wherein the step of conducting the bonus game includes terminating the bonus game at one of a plurality of possible bonus states, the state being the one of the plurality of possible bonus states.

10. The method of claim 7, wherein the step of conducting the bonus game includes commencing the bonus game from an introductory state, and further including in response to dispensing any game credits remaining in the machine, resetting the bonus game so that the bonus game commences from the intro-

ductory state when the special outcome subsequently occurs.

11. The method of claim 7, wherein the step of resuming the bonus game from the state at which the bonus game was terminated during the conducting step occurs as long as game credits remain in the machine between the occurrence and the subsequent occurrence of the special outcome.

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12. The method of claim 7, wherein the at least one other portion of the wagering game includes a basic game.

13. A method of conducting a wagering game on a gaming machine during a single gaming session, the wagering game including a bonus game triggered by at least one special outcome in. at least one other portion of the wagering game, the method comprising:

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in response to an occurrence of the special outcome, conducting the bonus game until terminated at one of a plurality of possible states; and

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in response to a subsequent occurrence of the special outcome, resuming the bonus game from the one of the plurality of possible states.

14. The method of claim 13, wherein the step of conducting the bonus game includes commencing the bonus game from an introductory state, and further including in response to dispensing any game credits remaining in the machine, resetting the bonus game so that the bonus game commences from the introductory state when the special outcome subsequently occurs.

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15. The method of claim 13, wherein the step of resuming the bonus game from the one of the plurality of possible states occurs as long as game credits remain in the machine between the occurrence and the subsequent occurrence of the special outcome.

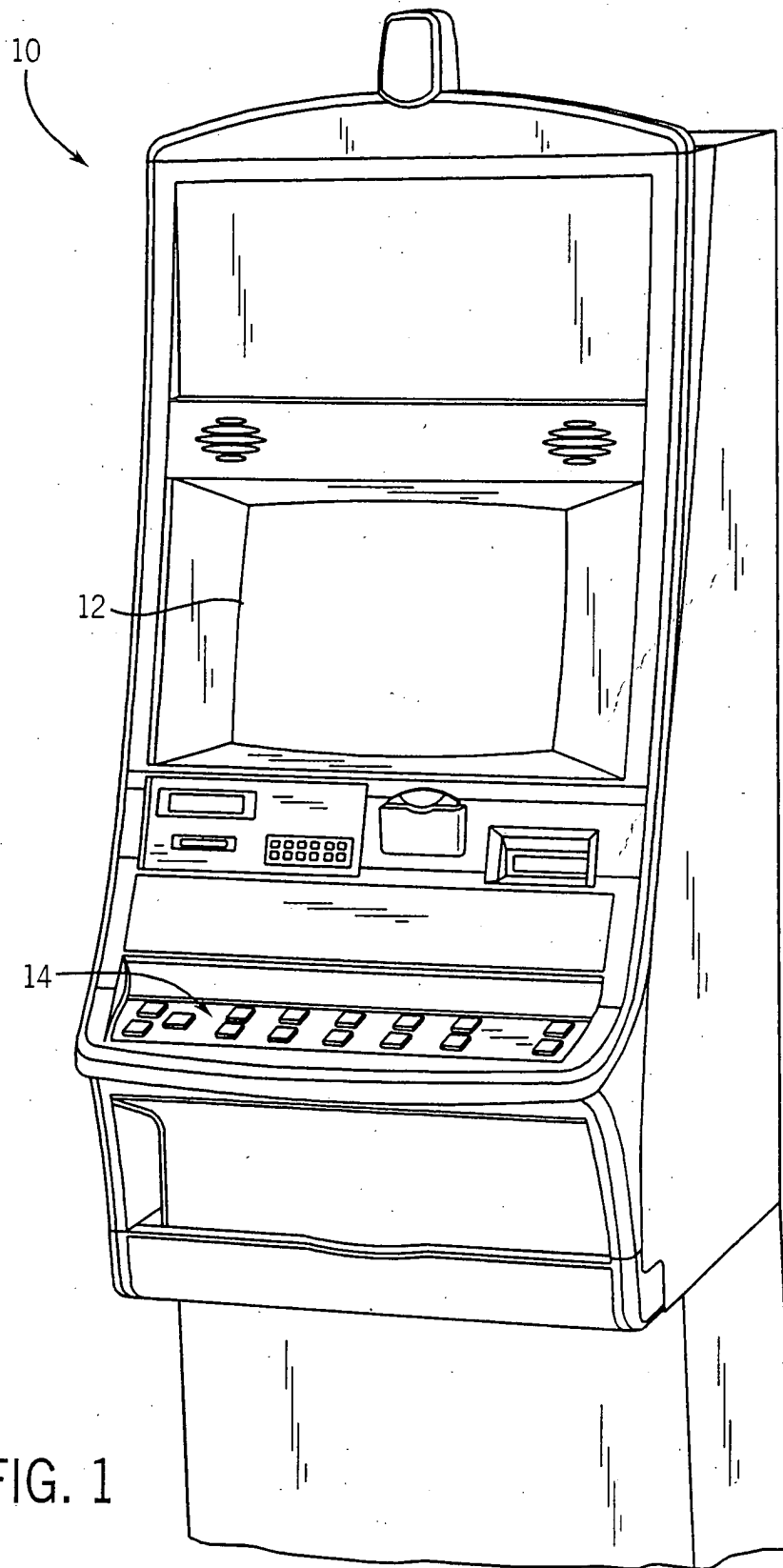
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16. The method of claim 13, wherein the at least one other portion of the wagering game includes a basic game.

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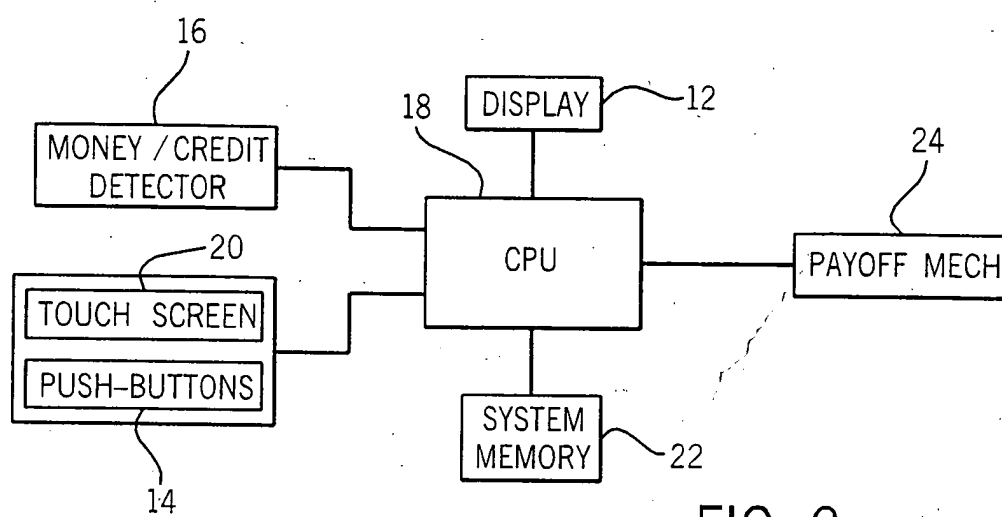
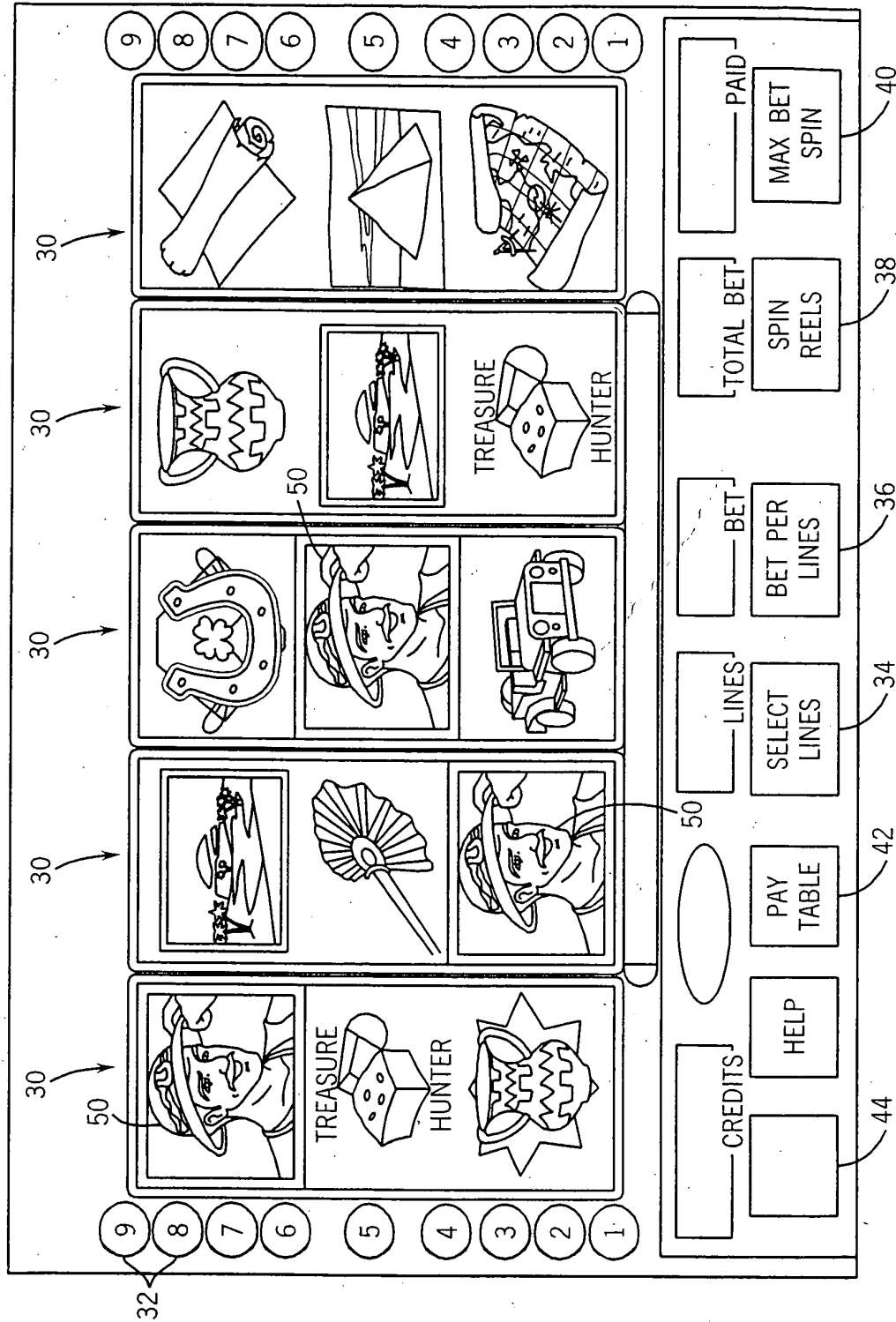


FIG. 2



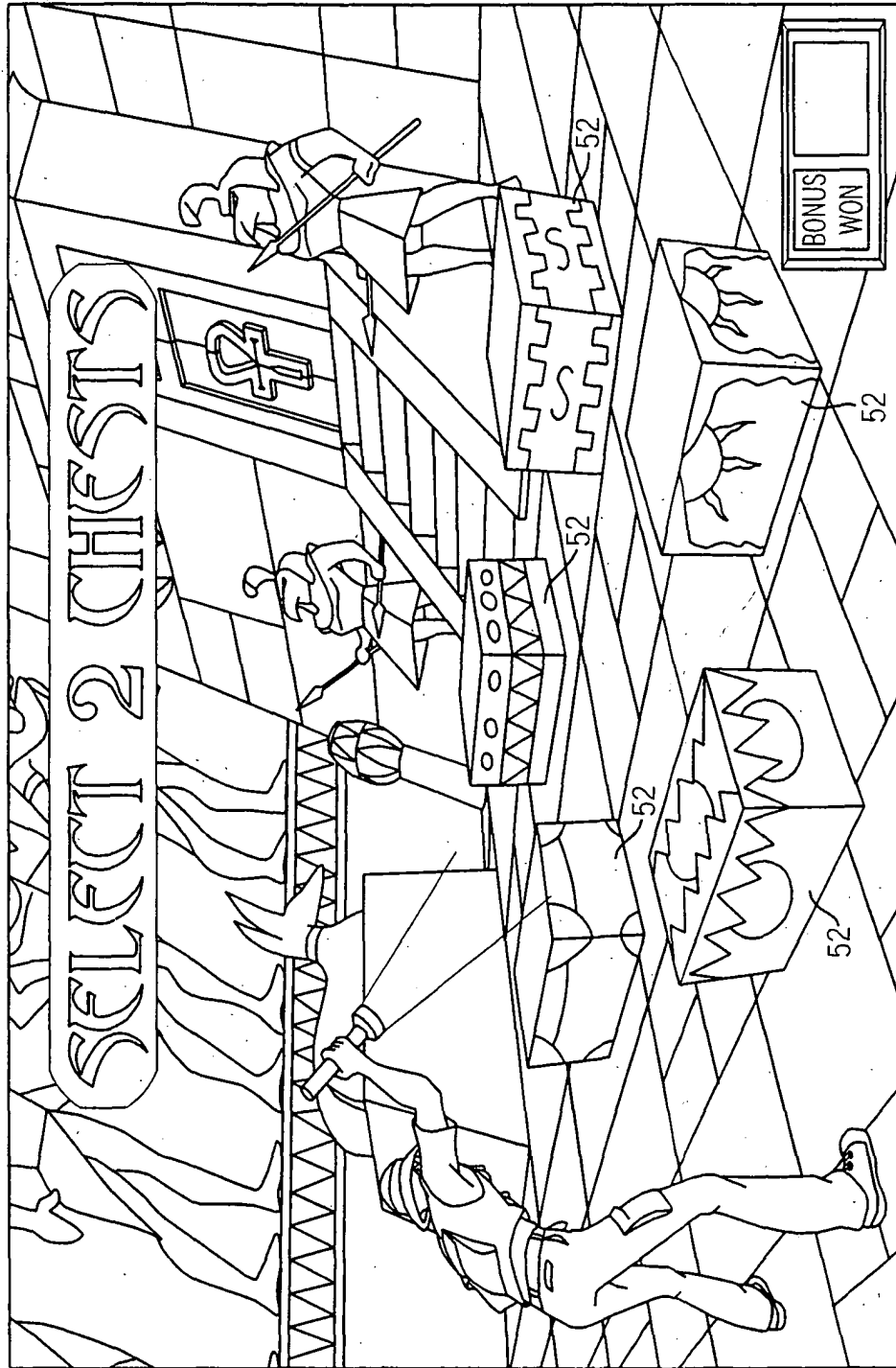


FIG. 4

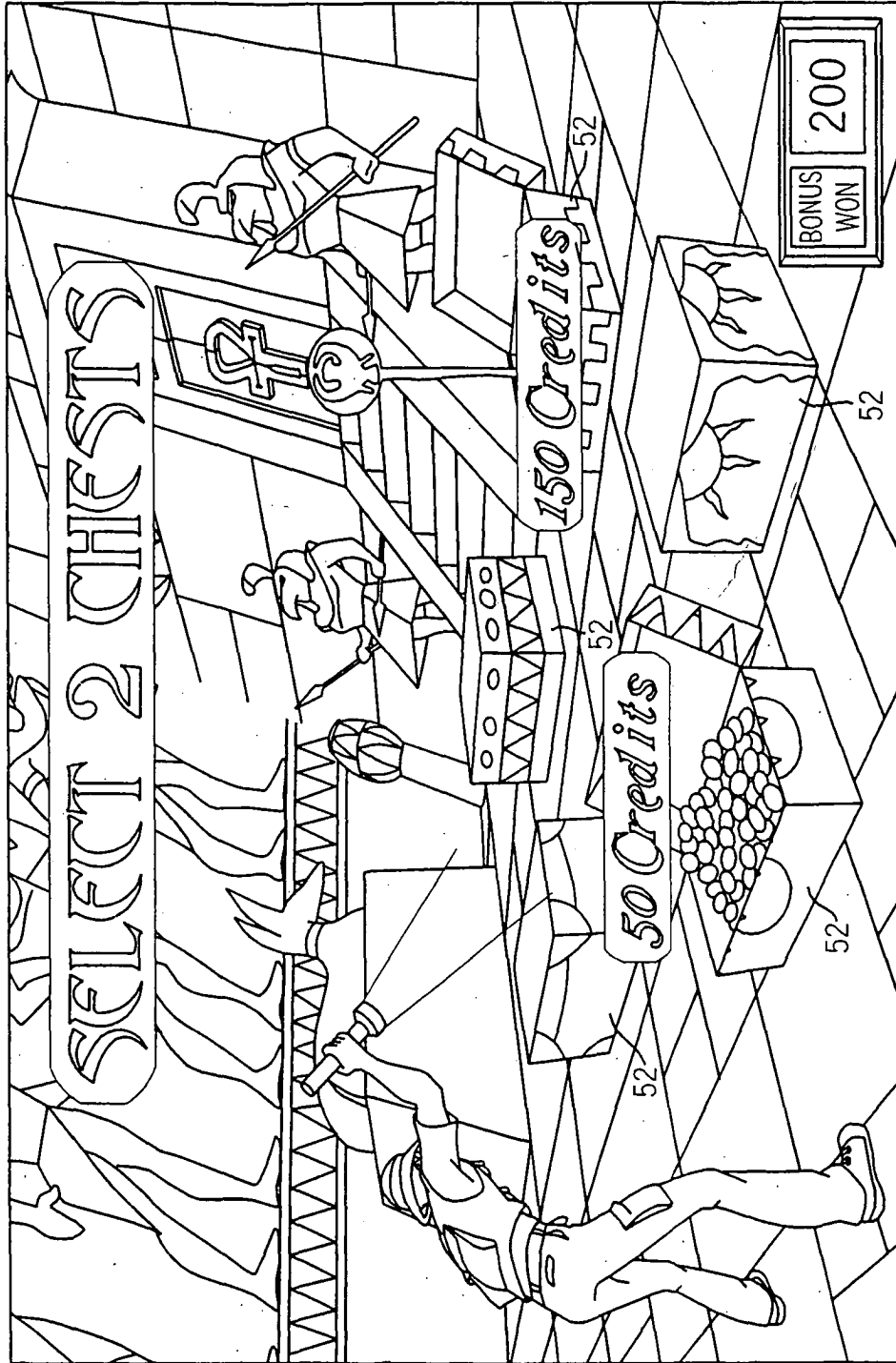


FIG. 5

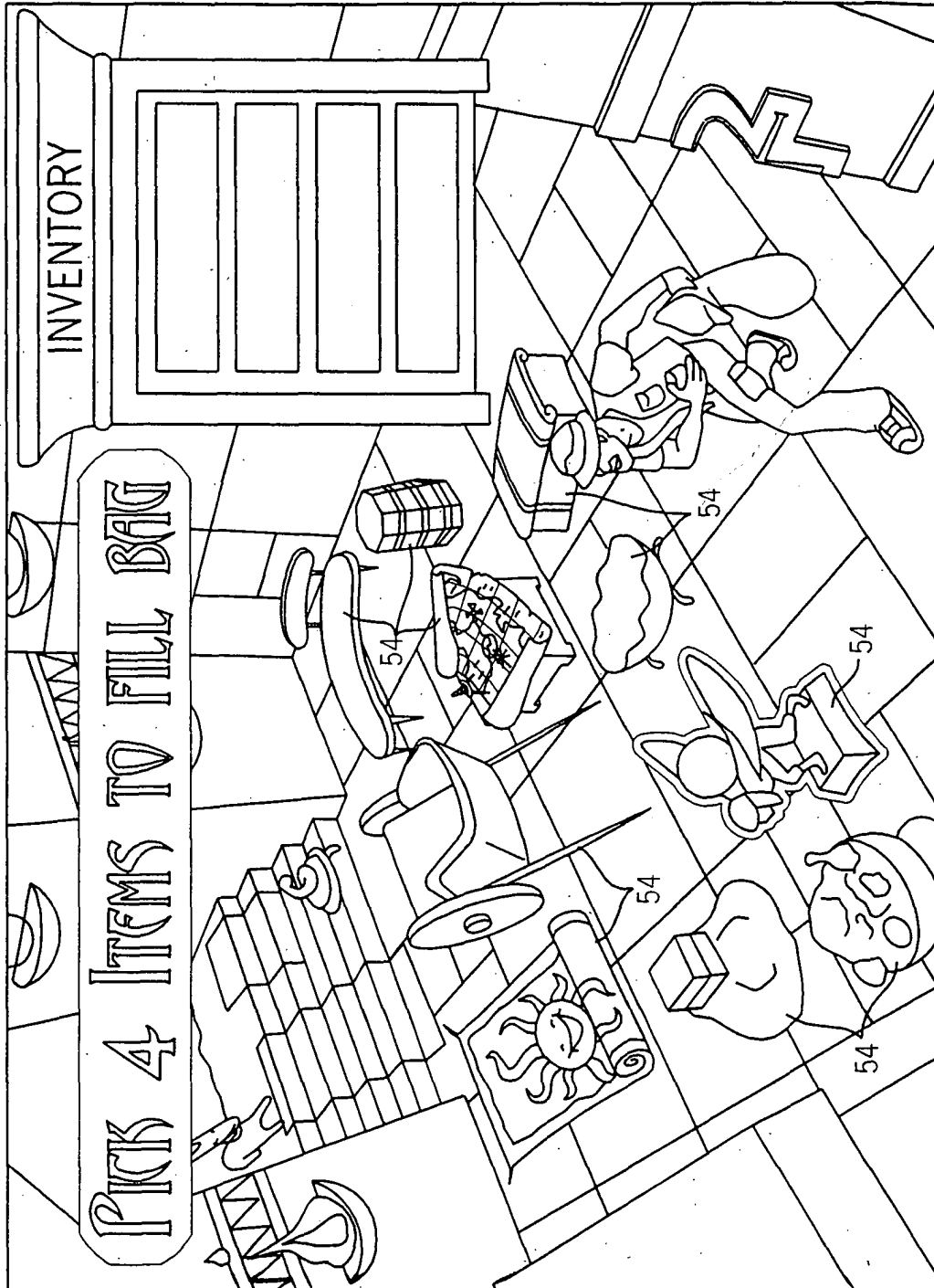


FIG. 6

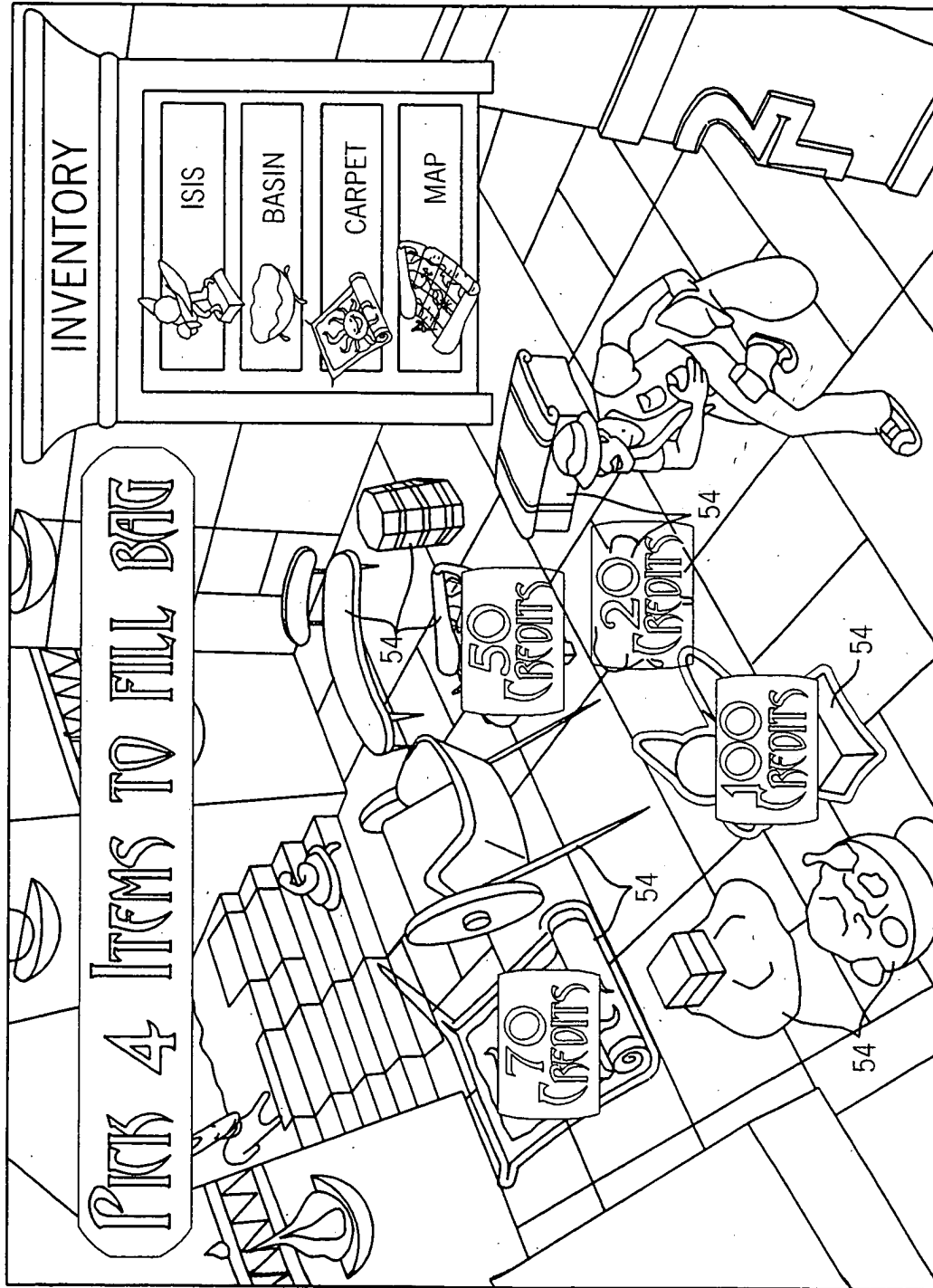


FIG. 7

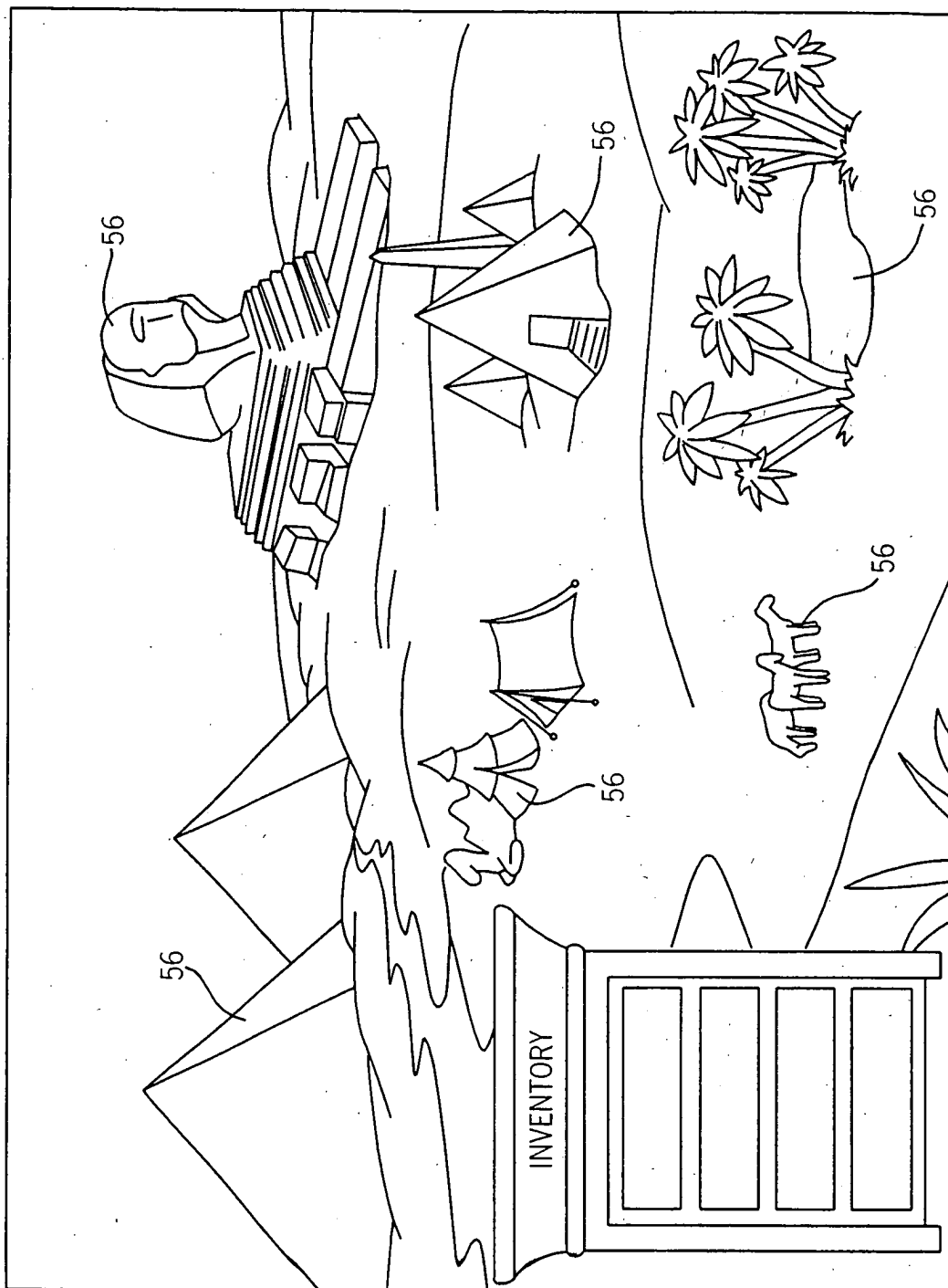


FIG. 8

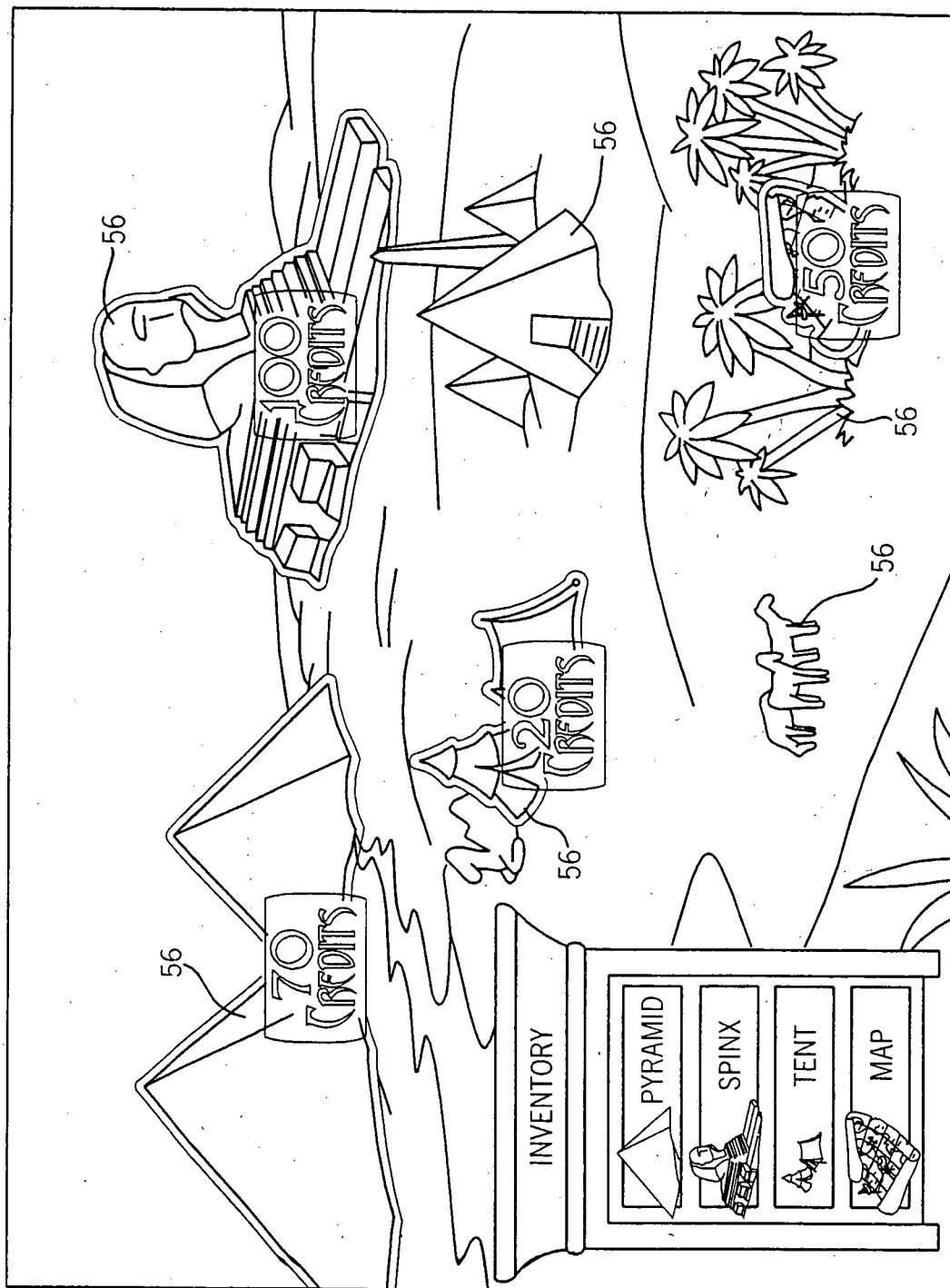


FIG. 9

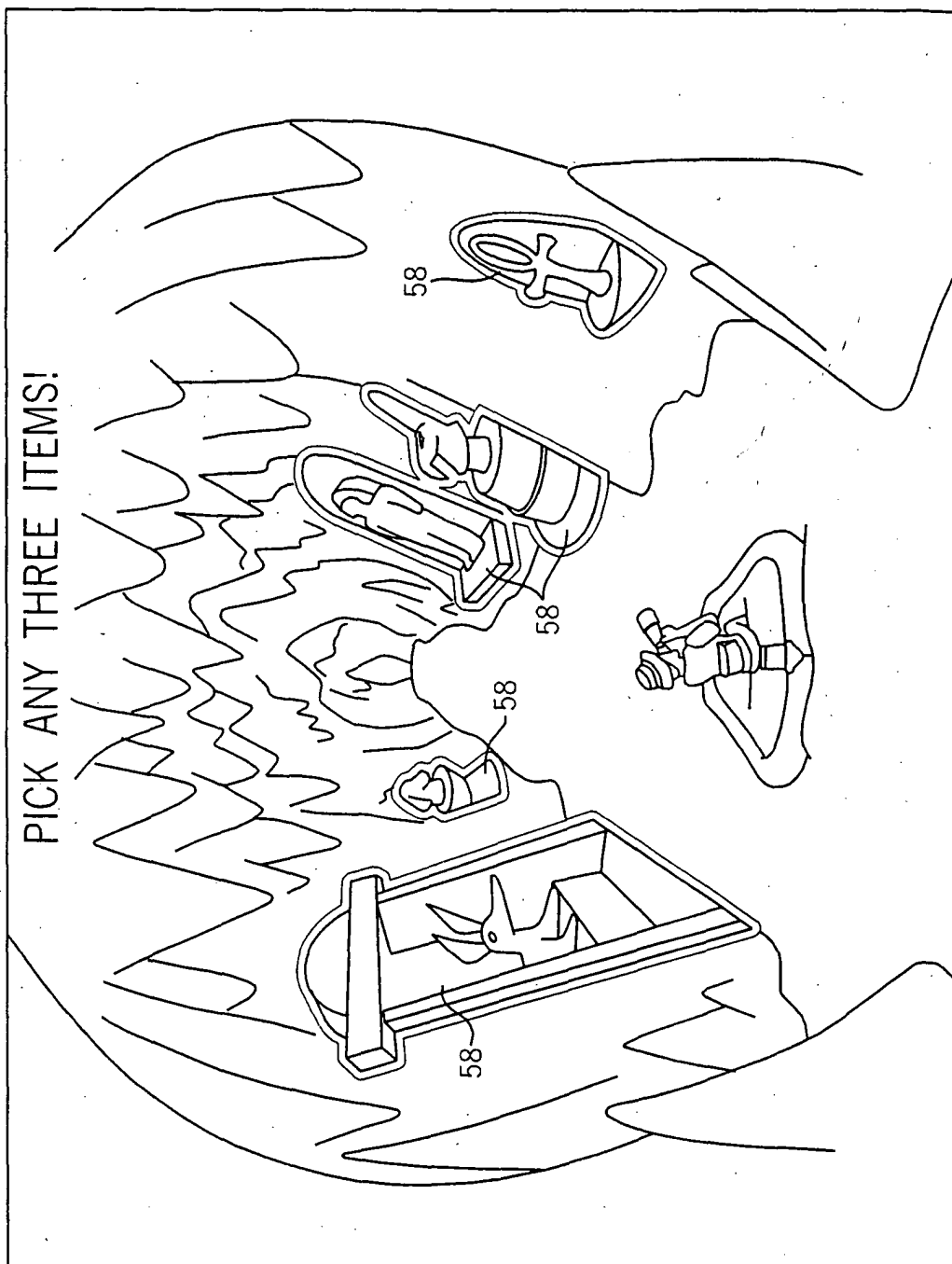


FIG. 10

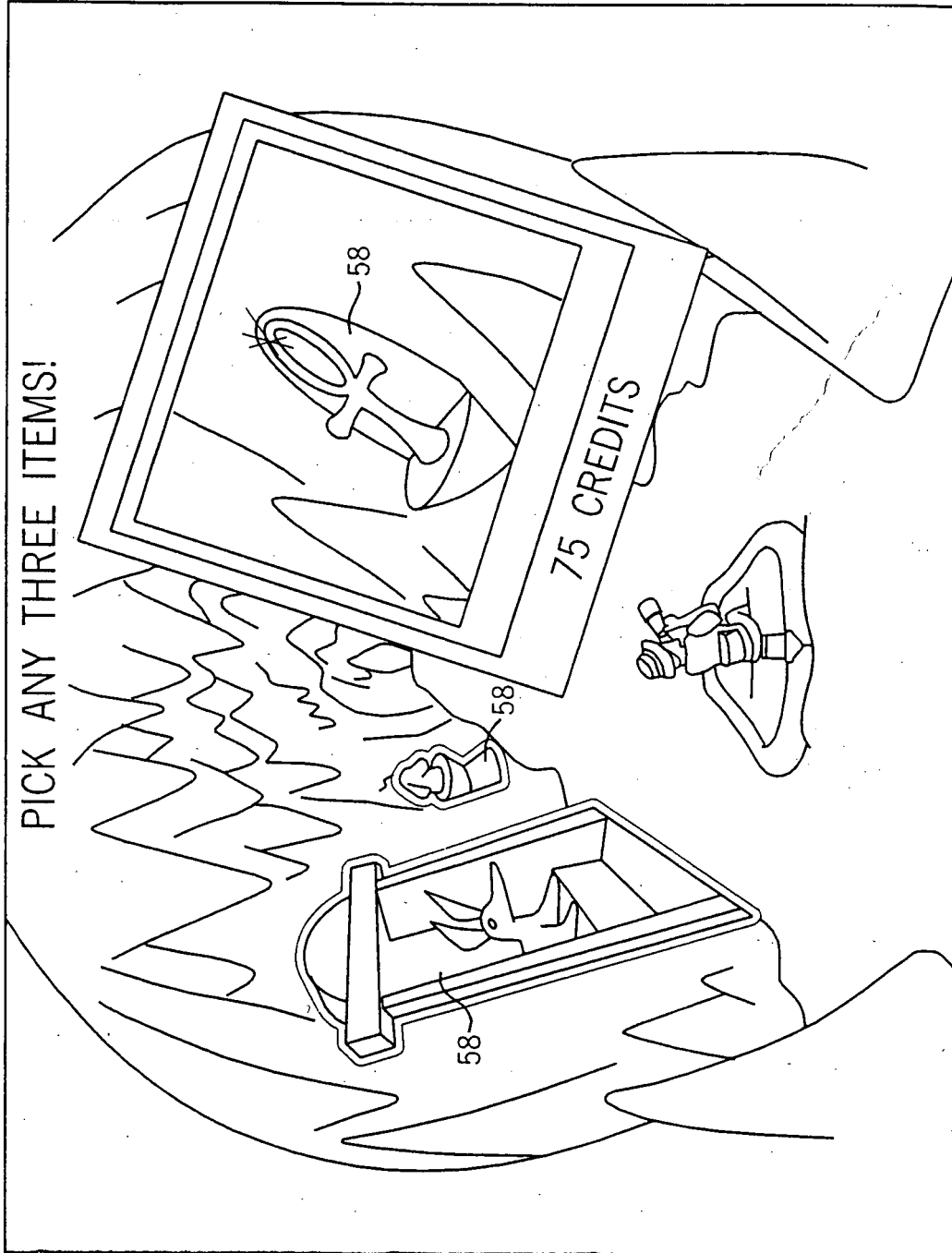
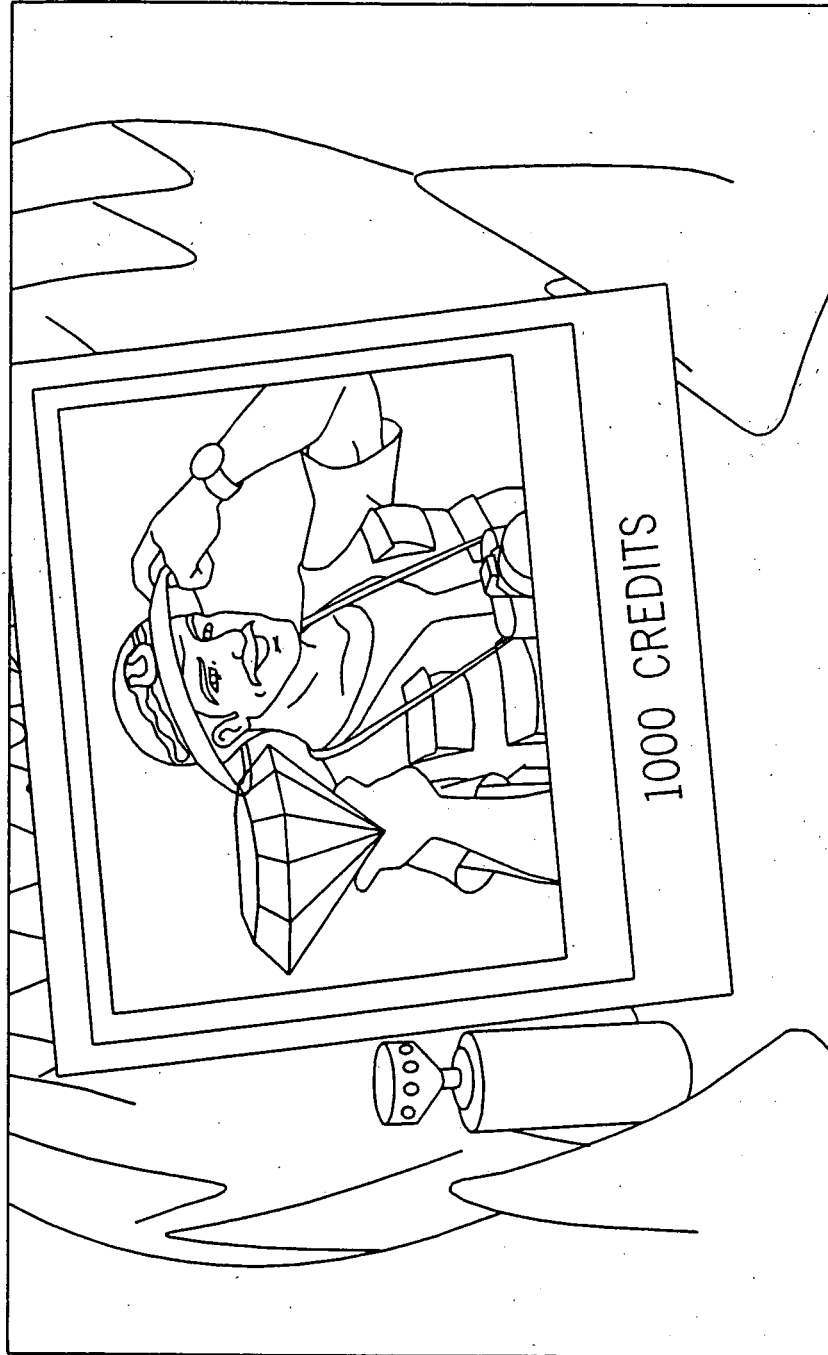


FIG. 11

FIG. 12



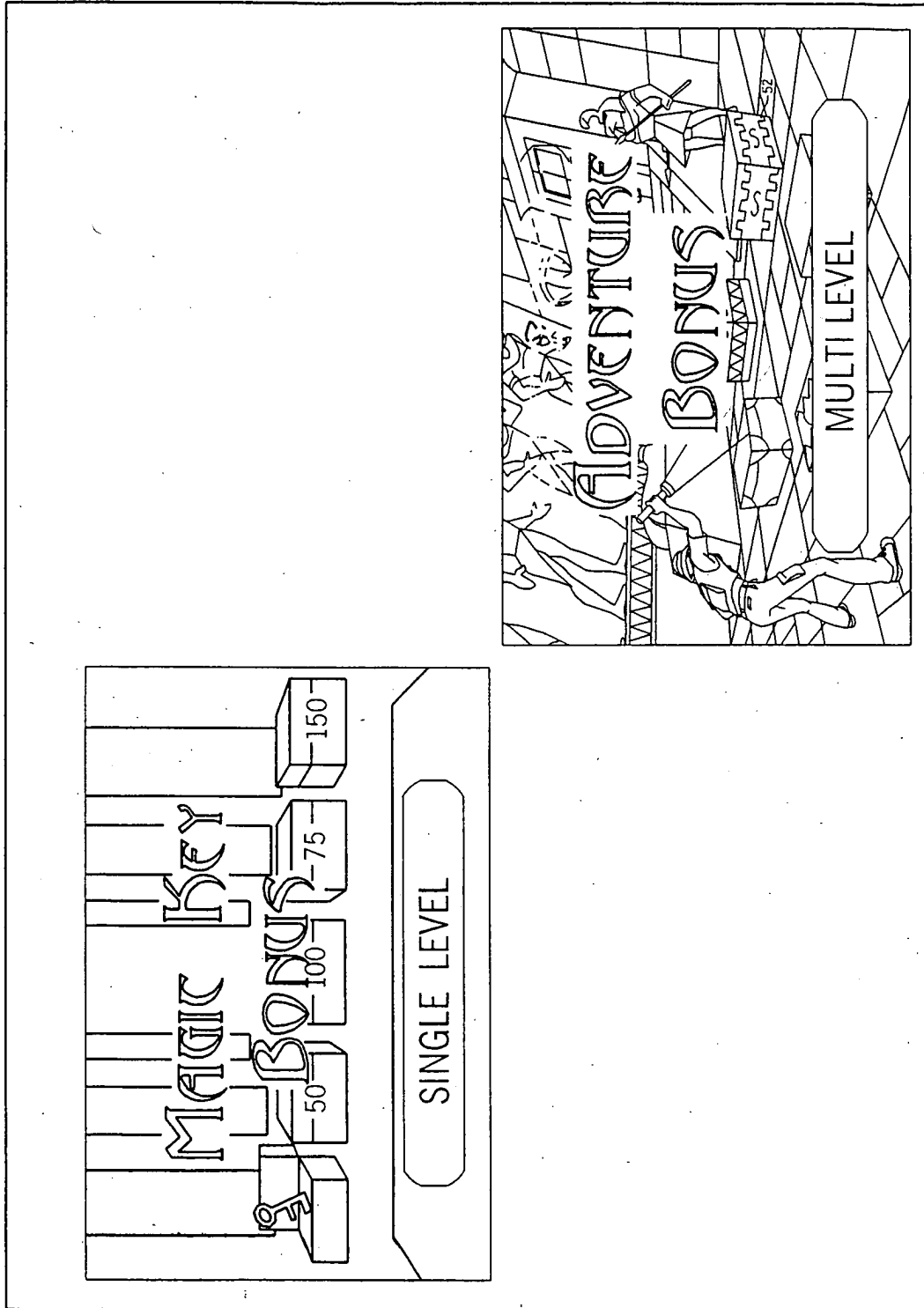


FIG. 13