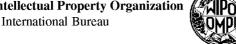
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(57) Abstract: A gaming device including a plurality of reel sets where at least one of the reel sets includes an inner reel and an outer reel. The other reel sets include a plurality of symbols. Upon the activation of the reel sets, the inner reel displays a plurality of nudge symbols, which each identify a direction of movement of the outer reel. The outer reel includes a plurality of symbols and defines a viewable area. A processor causes the outer reel to indicate one of the symbols or the viewable area. If the viewable area is indicated, the processor moves the outer reel to indicate one of the symbols on the outer reel based on the direction of movement associated with the nudge symbol viewable through the viewable area. The processor provides an outcome to a player based on the symbols indicated on the reel sets.



#### SPECIFICATION

## TITLE OF THE INVENTION

# GAMING DEVICE HAVING CONCENTRIC REELS AND A DISPLAYABLE NUDGE SYMBOL

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#### BACKGROUND OF THE INVENTION

The present invention relates in general to a gaming device, and more particularly to a gaming device having concentric reels having at least one nudge symbol.

Contemporary gaming devices such as slot machines often include a primary game and one or more bonus rounds or bonus games. The primary games typically include the generation of one or more symbols using one or more symbol generators. The traditional symbol generators are a set of reels, where each reel has a plurality of symbols. If the player achieves a predetermined combination of symbols on the reels, the player wins a value. In addition, if the player achieves a bonus triggering event, the gaming device advances the player to a bonus game where the player can accumulate additional values. The traditional bonus triggering event occurs when the player achieves a predetermined symbol on one of the reels or a predetermined combination of symbols on a plurality of reels. If the combination of symbols indicated on the reels is not a predetermined symbol or symbol combination, the gaming device does not provide an award to the player.

Conventional gaming devices employ different symbols to form different winning symbol combinations in a game. Conventional gaming devices also employ different symbols which perform a function in a game. One such symbol is a nudge symbol. A nudge symbol is typically included on one or more reels of the gaming device. When a nudge symbol on a reel is indicated by a payline, the nudge symbol causes the reel (on which the nudge symbol is indicated) to move or rotate in the direction of movement indicated by the nudge symbol. For example, if the indicated nudge symbol indicates an upward or counterclockwise direction of movement, the reel moves or rotates

in the upward or counterclockwise direction. Typically, a nudge symbol causes a reel to move or rotate one symbol position. The nudge symbol may also cause the reel to move or rotate for one or more symbol positions. The nudge symbol therefore causes a reel to move or rotate in a particular direction to indicate a different symbol on the reel and change the symbol combination indicated by the reels. After the movement of the reel caused by the nudge symbol, the indicated symbols are evaluated for any winning combinations.

As described above, when a nudge symbol is indicated on a reel or reels, the gaming device causes the reels to move in the direction of movement associated with the indicated nudge symbol. In other known gaming devices that employ one or more nudge symbols, the gaming devices enable the player to initiate or activate the reel to move the outer reel in the direction of movement associated with the indicated nudge symbol. For example, the gaming device may include a selector or button which causes the reel to move in the direction of movement associated with an indicated nudge symbol on the reel after the player presses or otherwise activates the selector or button.

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Concentric reels are also known. A concentric reel includes an inner reel and an outer reel which are aligned on substantially the same rotational axis. The outer reel includes a plurality of symbols and at least one window. The inner reel includes a plurality of symbols. In a play of the game, the gaming device activates the concentric reels which causes the inner reel and the outer reel to move or rotate. When the inner and outer reel stop, one of the symbols of the outer reel or the window is indicated by a payline associated with the concentric reel. If the window is present on the payline, the window indicates the symbol on the inner reel on the payline. The indicated symbol on the inner reel is part of the evaluated symbol combination with the other symbols of the other reels indicated by the payline. The gaming device provides an award for any winning symbol combination associated with these symbols indicated by the payline.

Players are attracted to gaming devices which provide new game schemes including different ways of obtaining winning symbol combinations or

different types of triggering events. Therefore, to increase player enjoyment and excitement, it is desirable to provide players with new game schemes for gaming devices which include new and different ways of indicating symbol combinations and triggering events.

#### SUMMARY OF THE INVENTION

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The present invention relates in general to a gaming device, and more particularly to a gaming device having concentric reels having at least one viewable area or window and at least one nudge symbol where the nudge symbol causes one of the reels to move to change a symbol combination in a game when the nudge symbol is viewable through the viewable area or window.

In one embodiment, the gaming device includes a plurality of reel sets where at least one of the reel sets includes concentric reels or concentrically arranged reels. The concentric reels include an inner reel which includes at least one nudge symbol and preferably a plurality of nudge symbols and an outer reel which includes a plurality of conventional symbols and defines a viewable area or window. The nudge symbols on the inner reels each identify a direction of movement for the associated outer reel. It should be appreciated that one, a plurality or all of the reels sets may include an inner reel and an outer reel and one, a plurality or all of said reel sets may employ one, or a plurality of nudge symbols.

In a play of the game, the gaming device activates the reel sets to indicate symbol combinations on the outer reels of the reel sets. On at least one of the reel sets, the gaming device causes the inner reel to display a nudge symbol and causes the outer reel to indicate one of the symbols or the viewable area. If the viewable area is indicated and a nudge symbol on the inner reel is indicated through the viewable area, the gaming device moves the outer reel to indicate one of the symbols on that outer reel based on the direction of movement associated with that nudge symbol viewable through the viewable area. For example, if the nudge symbol is an upwardly pointing arrow, the gaming device moves or rotates the outer reel upward one or more symbol positions or stops. If the nudge symbol is an downwardly pointing

arrow, the gaming device moves the outer reel downward one or more symbol positions or stops. After the outer reel moves and indicates one of the symbols, the gaming device provides an outcome to the player based on the symbols indicated on the reel sets such as along a payline associated with the reel sets or in accordance with any scatter pays.

As described above, the present invention increases a player's excitement and enjoyment of a game because the player has a better opportunity to obtain an outcome in the game and particularly, the opportunity to obtain a winning symbol combination in a game where the player did not initially receive a winning symbol combination in the game.

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In another embodiment, a plurality of paylines are associated with the reel sets in a conventional manner. The gaming device provides an outcome such as an award to the player based on the symbols on the paylines associated with the reel sets assuming the payer wagered on such paylines.

In a further embodiment, the inner reel includes one or a plurality of nudge symbols and at least one or a plurality of conventional symbols. The symbol can be part of the indicated symbol combination when the viewable area is indicated and one of the symbols, other than one of the nudge symbols, is viewable through the viewable area.

In one embodiment, the gaming device or player activates the reel sets in a play of the game to indicate symbols on the reel sets. When a nudge symbol is viewable through an indicated viewable area or window, the gaming device causes the outer reel to automatically move or rotate in the direction of movement associated with the indicated nudge symbol. The gaming device then evaluates the symbol combination indicated on that payline after the outer reel moves based on the nudge symbol. In another embodiment, the gaming device or player activates the reel sets to indicate symbols on the reel sets. When one or more nudge symbols are visible through a viewable area or window as indicated on a payline, the gaming device evaluates the symbol combination indicated by that payline before causing the outer reel to move or rotate in the direction of movement associated with the indicated nudge symbol. The gaming device may wait a designated period of time and then

cause the outer reel to move or rotate in the direction of movement associated with the nudge symbol or enable the player to activate or cause the outer reel to move or rotate. The gaming device then performs another evaluation after the outer reel moves or rotates to a designated symbol position to determine if the symbols indicated by the payline form a winning symbol combination. It should be appreciated that the gaming device may evaluate the symbols indicated by the reel sets any suitable number of times in a play of the game.

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In one embodiment, one or more of the nudge symbols on the inner reel indicate a direction of movement for the outer reel which moves the outer reel one symbol position. In another embodiment, at least one of the nudge symbols indicates a direction of movement for the outer reel which moves the outer reel a plurality of symbol positions or stops. For example, the nudge symbol may cause the outer reel to move upward two symbol positions or cause the outer reel to move downward three symbol positions. It should be appreciated that one or more of the nudge symbols may indicate a direction of movement for the outer reel which moves the outer reel in any suitable direction. It should also be appreciated that the nudge symbol may indicate a direction of movement of the outer reel and any suitable number of symbol positions which the outer reel will move. In one embodiment, the number of symbol positions associated with the direction of movement indicated by the nudge symbol is pre-determined. In one alternative embodiment, the number of symbol positions associated with the direction of movement indicated by the nudge symbol is randomly determined.

In a further embodiment, one or more of the nudge symbols on the inner reel indicate a direction of movement for the outer reel which causes the outer reel to move and indicate a symbol on the outer reel that can provide a winning symbol combination or provides a symbol combination which is closer to a winning symbol combination on the reel sets (i.e., more symbols of the winning combination). In this embodiment, the gaming device is determining the best symbol position to move the outer reel to indicate a winning symbol combination or a symbol combination which is closer to a winning symbol combination.

In another embodiment, the inner reel includes a plurality of symbol positions where two nudge symbols are displayed at one of the symbol positions. In this embodiment, the gaming device includes a selector which enables a player to pick one of the nudge symbols when the two nudge symbols are viewable through the viewable area or window of the outer reel. The player can therefore pick the direction of movement of the outer reel to determine the movement direction of the outer reel which determines the outcome provided to the player. In a further embodiment, two or more nudge symbols are displayed at a plurality of the symbol positions. In an alternative embodiment, the gaming device picks the nudge symbol of the plurality of nudge symbols viewable through the viewable area which results in the best symbol combination for the player such as a winning symbol combination.

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In a further embodiment, the nudge symbol causes the outer reel to move or rotate to the closest win or closest winning symbol combination on the reels. For example, if two bar symbols and a nudge symbol are indicated in a play of the game, the nudge symbol causes the outer reel to move or rotate to indicate the closest symbol to the indicated viewable area or window which will provide a winning symbol combination in that play of the game. For instance, of the outer reel includes a bar symbol which is one symbol position away from the viewable area or window and a double bar symbol which is four symbol positions away from the viewable area window, the nudge symbol causes the outer reel to move to indicate the bar symbol which is closest to the indicated viewable area window in that play of the game. Therefore, if the bar symbol is closer than the double bar symbol (i.e., less symbol positions away from the indicated viewable area or window), then the gaming device will indicate the bar symbol by moving the outer reel to indicate the bar symbol.

In a further embodiment, when a nudge symbol is visible through an indicated viewable area, the nudge symbol causes the outer reel to move to indicate a designated symbol or predetermined symbol on the reel. For example, if a cherry symbol is the designated symbol, the gaming device causes the reel to move to indicate the cherry symbol when the nudge symbol is viewable through the indicated viewable area on the reel.

In another embodiment, the nudge symbol causes the outer reel to move to indicate a wild symbol on the outer reel. The wild symbol is combined with other symbols indicated by the reels to determine if the player obtained a winning symbol combination in a play of a game. It should be appreciated that 5 the nudge symbol may cause the gaming device to move the outer reel to indicate a designated symbol, a randomly determined symbol, a wild symbol, or any other suitable symbol on the outer reel.

In another embodiment, the nudge symbol causes the outer reel to move to indicate a featured win or designated winning symbol combination on 10 the reels when the nudge symbol is viewable through an indicated viewable area. A featured win or designated symbol combination may be any suitable symbol combination including the symbols on the outer reel. Additionally, the nudge symbol causes the outer reel to move to indicate a randomly determined winning symbol combination or win on the reels. For example, the gaming device randomly determines a winning symbol combination to provide to the player and causes the outer reel to move to indicate that winning symbol combination when the nudge symbol is viewable through the indicated viewable area.

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It should be appreciated that the inner reel and outer reel may be any suitable display, such as a video display, a mechanical reel, a rotatable display or rotatable belt, or any other suitable video or mechanical display.

It should be appreciated that the nudge symbols may indicate any suitable direction and may be employed with any suitable symbol display besides a reel which moves in one or more directions. It should also be appreciated that the present invention may be employed in a primary or base game, a secondary or bonus game or in any suitable game.

It is therefore an object of the present invention to provide a gaming device having at least one reel set including a concentrically arranged inner reel and outer reel, wherein the inner reel has at least one nudge symbol which causes the outer reel to move to change a symbol combination in a game.

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Additional features and advantages of the present invention are described in, and will be apparent from, the following Detailed Description of the Invention and the Figures.

#### BRIEF DESCRIPTION OF THE FIGURES

- Fig. 1A is a perspective view of one embodiment of the gaming device of the present invention.
  - Fig. 1B is a perspective view of another embodiment of the gaming device of the present invention.
- Fig. 2A is a schematic block diagram of the electronic configuration of one embodiment of the gaming device of the present invention.
  - Fig. 2B is a schematic block diagram illustrating the plurality of gaming terminals and communication with a central controller.
  - Fig. 3 is an enlarged exploded perspective view of one embodiment of a reel set including concentric reels.
- Figs. 4A and 4B are enlarged elevation views illustrating an example of a game employing at least one reel set including the concentric reels of the embodiment shown in Fig. 3.
  - Fig. 5A is an enlarged exploded perspective view of another embodiment of a reel set including concentric reels.
- Figs. 5B and 5C are enlarged elevation views of an example of a game employing a plurality of reel sets including concentric reels of the embodiment shown in Fig. 5A.
  - Figs. 6A and 6B are enlarged elevation views illustrating an example of a further embodiment of the present invention.
- Fig. 7 is an enlarged exploded perspective view of another embodiment of a reel set including concentric inner and outer reels where the outer reel includes at least one nudge symbol.
  - Fig. 8 is a side perspective view of an alternative embodiment of a reel set including concentric inner and outer rotatable displays.
- Fig. 9 is a front perspective view of an alternative embodiment of a reel set including an inner video display and an outer reel.

Fig. 10 is a front perspective view of an alternative embodiment of a reel set including an inner rotatable display and a plurality of outer reels positioned adjacent to the inner rotatable display.

Fig. 11A is a front perspective view of another alternative embodiment of a reel set including an inner reel and an outer reel which are on different axes of rotation.

Fig. 11B a side view of the alternative embodiment of Fig. 11A.

#### DETAILED DESCRIPTION OF THE INVENTION

#### Gaming Device and Electronics

Referring now to the drawings, two alternative embodiments of the gaming device of the present invention are illustrated in Figs. 1A and 1B as gaming device 10a and gaming device 10b, respectively. Gaming device 10a and/or gaming device 10b are generally referred to herein as gaming device 10.

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In one embodiment, as illustrated in Figs. 1A and 1B, gaming device 10 has a support structure, housing or cabinet which provides support for a plurality of displays, inputs, controls and other features of a conventional gaming machine. It is configured so that a player can operate it while standing or sitting. The gaming device may be positioned on a base or stand or can be configured as a pub-style table-top game (not shown) which a player can operate preferably while sitting. As illustrated by the different configurations shown in Figs. 1A and 1B, the gaming device can be constructed with varying cabinet and display configurations.

In one embodiment, as illustrated in Fig. 2A, the gaming device preferably includes at least one processor 12, such as a microprocessor, a microcontroller-based platform, a suitable integrated circuit or one or more application-specific integrated circuits (ASIC's). The processor is in communication with or operable to access or to exchange signals with at least one data storage or memory device 14. In one embodiment, the processor and the memory device reside within the cabinet of the gaming device. The memory device stores program code and instructions, executable by the

processor, to control the gaming device. The memory device also stores other data such as image data, event data, player input data, random or pseudorandom number generators, pay-table data or information and applicable game rules that relate to the play of the gaming device. In one embodiment, the memory device includes random access memory (RAM). In one embodiment, the memory device includes read only memory (ROM). In one embodiment, the memory device includes flash memory and/or EEPROM (electrically erasable programmable read only memory). Any other suitable magnetic, optical and/or semiconductor memory may be implemented in conjunction with the gaming device of the present invention.

In one embodiment where the reels are in a video format, part or all of the program code and/or operating data described above can be stored in a detachable or removable memory device, including, but not limited to, a suitable cartridge, disk or CD ROM. A player can use such a removable memory device in a desktop, a laptop personal computer, a personal digital assistant (PDA) or other computerized platform. The processor and memory device may be collectively referred to herein as a "computer" or "controller."

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In one embodiment, as discussed in more detail below, the gaming device randomly generates awards and/or other game outcomes based on probability data. That is, each award or other game outcome is associated with a probability and the gaming device generates the award or other game outcome to be provided to the player based on the associated probabilities. In this embodiment, since the gaming device generates outcomes randomly or based upon a probability calculation, there is no certainty that the gaming device will ever provide the player with any specific award or other game outcome.

In another embodiment, as discussed in more detail below, the gaming device employs a predetermined or finite set or pool of awards or other game outcomes. In this embodiment, as each award or other game outcome is provided to the player, the gaming device removes the provided award or other game outcome from the predetermined set or pool. Once removed from the set or pool, the specific provided award or other game outcome cannot be

provided to the player again. This type of gaming device provides players with all of the available awards or other game outcomes over the course of the play cycle and guarantees the amount of actual wins and losses.

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In one embodiment, as illustrated in Fig. 2A, the gaming device includes one or more display devices controlled by the processor. The display devices are preferably connected to or mounted to the cabinet of the gaming device. The embodiment shown in Fig. 1A includes a central display device 16 which displays a primary game. This display device may also display any secondary game associated with the primary game as well as information relating to the primary or secondary game. The alternative embodiment shown in Fig. 1B includes a central display device 16 and an upper display device 18. The upper display device may display the primary game, any suitable secondary game associated with the primary game and/or information relating to the primary or secondary game. As seen in Figs. 1A and 1B, in one embodiment, gaming device includes a credit display 20 which displays a player's current number of credits, cash, account balance or the equivalent. In one embodiment, gaming device includes a bet display 22 which displays a player's amount wagered.

The display devices may include, without limitation, a monitor, a television display, a plasma display, a liquid crystal display (LCD) a display based on light emitting diodes (LED) or any other suitable electronic device or display mechanism. In one embodiment, as described in more detail below, the display device includes a touch-screen with an associated touch-screen controller. The display devices may be of any suitable configuration, such as a square, rectangle, elongated rectangle.

The display devices of the gaming device are configured to display at least one and preferably a plurality of game or other suitable images, symbols and indicia such as any visual representation or exhibition of the movement of objects such as mechanical, virtual or video reels and wheels, dynamic lighting, video images, images of people, characters, places, things and faces of cards, tournament advertisements and the like.

In one alternative embodiment, the symbols, images and indicia displayed on or of the display device may be in mechanical form. That is, the display device may include any electromechanical device, such as one or more mechanical objects, such as one or more rotatable wheels, reels or dice, configured to display at least one and preferably a plurality of game or other suitable images, symbols or indicia.

As illustrated in Fig. 2A, in one embodiment, the gaming device includes at least one payment acceptor 24 in communication with the processor. As seen in Figs. 1A and 1B, the payment acceptor may include a coin slot 26 and a payment, note or bill acceptor 28, where the player inserts money, coins or tokens. The player can place coins in the coin slot or paper money, ticket or voucher into the payment, note or bill acceptor. In other embodiments, devices such as readers or validators for credit cards, debit cards or credit slips could be used for accepting payment. In one embodiment, a player may insert an identification card into a card reader of the gaming device. In one embodiment, the identification card is a smart card having a programmed microchip or a magnetic strip coded with a player's identification, credit totals and other relevant information. In one embodiment, money may be transferred to a gaming device through electronic funds transfer. When a player funds the gaming device, the processor determines the amount of funds entered and the corresponding amount is shown on the credit or other suitable display as described above.

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As seen in Figs. 1A, 1B and 2A, in one embodiment the gaming device includes at least one and preferably a plurality of input devices 30 in communication with the processor. The input devices can include any suitable device which enables the player to produce an input signal which is read by the processor. In one embodiment, after appropriate funding of the gaming device, the input device is a game activation device, such as a pull arm 32 or a play button 34 which is used by the player to start any primary game or sequence of events in the gaming device. The play button can be any suitable play activator such as a bet one button, a max bet button or a repeat the bet button. In one embodiment, upon appropriate funding, the gaming device

begins the game play automatically. In another embodiment, upon the player engaging one of the play buttons, the gaming device automatically activates game play.

In one embodiment, as shown in Figs. 1A and 1B, one input device is a bet one button 36. The player places a bet by pushing the bet one button. The player can increase the bet by one credit each time the player pushes the bet one button. When the player pushes the bet one button, the number of credits shown in the credit display preferably decreases by one, and the number of credits shown in the bet display preferably increases by one. In another embodiment, one input device is a bet max button (not shown) which enables the player to bet the maximum wager permitted for a game of the gaming device.

In one embodiment, one input device is a cash out button 38. The player may push the cash out button and cash out to receive a cash payment or other suitable form of payment corresponding to the number of remaining credits. In one embodiment, when the player cashes out, the player receives the coins or tokens in a coin payout tray 40. In one embodiment, when the player cashes out, the player may receive other payout mechanisms such as tickets or credit slips redeemable by a cashier or funding to the player's electronically recordable identification card.

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In one embodiment, as mentioned above and seen in Fig. 2A, one input device is a touch-screen 42 coupled with a touch-screen controller 44, or some other touch-sensitive display overlay to allow for player interaction with the images on the display. The touch-screen and the touch-screen controller are connected to a video controller 46. A player can make decisions and input signals into the gaming device by touching touch-screen at the appropriate places.

The gaming device may further include a plurality of communication ports for enabling communication of the processor with external peripherals, such as external video sources, expansion buses, game or other displays, an SCSI port or a key pad.

In one embodiment, as seen in Fig. 2A, the gaming device includes a sound generating device controlled by one or more sounds cards 48 which function in conjunction with the processor. In one embodiment, the sound generating device includes at least one and preferably a plurality of speakers 50 or other sound generating hardware and/or software for generating sounds, such as playing music for the primary and/or secondary game or for other modes of the gaming device, such as an attract mode. In one embodiment, the gaming device provides dynamic sounds coupled with attractive multimedia images displayed on one or more of the display devices to provide an audio-visual representation or to otherwise display full-motion video with sound to attract players to the gaming device. During idle periods, the gaming device may display a sequence of audio and/or visual attraction messages to attract potential players to the gaming device. The videos may also be customized for or to provide any appropriate information.

In one embodiment, the gaming machine may include a player or other sensor, such as a camera in communication with the processor (and possibly controlled by the processor) that is selectively positioned to acquire an image of a player actively using the gaming device and/or the surrounding area of the gaming device. In one embodiment, the camera may be configured to selectively acquire still or moving (e.g., video) images and may be configured to acquire the images in either an analog, digital or other suitable format. The display devices may be configured to display the image acquired by the camera as well as display the visible manifestation of the game in split screen or picture-in-picture fashion. For example, the camera may acquire an image of the player and that image can be incorporated into the primary and/or secondary game as a game image, symbol or indicia.

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Gaming device 10 can incorporate any suitable wagering primary or base game. The gaming machine or device of the present invention may include some or all of the features of conventional gaming machines or devices. The primary or base game may comprise any suitable reel-type game, card game, number game or other game of chance susceptible to representation in an electronic or electromechanical form which produces a

random outcome based on probability data upon activation from a wager. That is, different primary wagering games, such as video poker games, video blackjack games, video Keno, video bingo or any other suitable primary or base game may be implemented into the present invention.

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In one embodiment, as illustrated in Figs. 1A and 1B, a base or primary game may be a slot game with one or more paylines 52. The paylines may be horizontal, vertical, circular, diagonal, angled or any combination thereof. In this embodiment, the gaming device displays at least one and preferably a plurality of reels 54, such as three to five reels 54 in either electromechanical form with mechanical rotating reels or video form with simulated reels and movement thereof. In one embodiment, an electromechanical slot machine includes a plurality of adjacent, rotatable wheels which may be combined and operably coupled with an electronic display of any suitable type. In another embodiment, if the reels 54 are in video form, the plurality of simulated video reels 54 are displayed on one or more of the display devices as described above. Each reel 54 displays a plurality of indicia such as bells, hearts, fruits, numbers, letters, bars or other images which preferably correspond to a theme associated with the gaming device. In this embodiment, the gaming device awards prizes when the reels of the primary game stop spinning if specified types and/or configurations of indicia or symbols occur on an active pay line or otherwise occur in a winning pattern.

In one embodiment, a base or primary game may be a keno game wherein the gaming device displays a plurality of selectable indicia or numbers on at least one of the display devices. In this embodiment, the player selects at least one and preferable a plurality of the selectable indicia or numbers via an input device or via the touch screen. The gaming device then displays a series of drawn numbers to determine an amount of matches, if any, between the player's selected numbers and the gaming device's drawn numbers. The player is provided an award based on the amount of matches, if any, based on the amount of determined matches.

In one embodiment, in addition to winning credits in a base or primary game, the gaming device may also give players the opportunity to win credits

in a bonus or secondary game or bonus or secondary round. The bonus or secondary game enables the player to obtain a prize or payout in addition to the prize or payout, if any, obtained from the base or primary game. In general, a bonus or secondary game produces a significantly higher level of player excitement than the base or primary game because it provides a greater expectation of winning than the base or primary game and is accompanied with more attractive or unusual features than the base or primary game.

In one embodiment, the bonus or secondary game may be any type of suitable game, either similar to or completely different from the base or primary game. In one embodiment, the gaming device includes a program which will automatically begin a bonus round when the player has achieved a triggering event or qualifying condition in the base or primary game. In one embodiment, the triggering event or qualifying condition may be a selected outcome in the primary game or a particular arrangement of one or more indicia on a display device in the primary game, such as the number seven appearing on three adjacent reels along a payline in the primary slot game embodiment seen in Figs. 1A and 1B. In another embodiment, the triggering event or qualifying condition may be by exceeding a certain amount of game play (number of games, number of credits, amount of time), reaching a specified number of points earned during game play or as a random award.

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In one embodiment, once a player has qualified for a bonus game, the player may subsequently enhance his/her bonus game participation through continued play on the base or primary game. Thus, for each bonus qualifying event, such as a bonus symbol, that the player obtains, a given number of bonus game wagering points or credits may be accumulated in a "bonus meter" programmed to accrue the bonus wagering credits or entries toward eventual participation in a bonus game. The occurrence of multiple such bonus qualifying events in the primary game may result in an arithmetic or geometric increase in the number of bonus wagering credits awarded. In one embodiment, extra bonus wagering credits may be redeemed during the bonus game to extend play of the bonus game.

In one embodiment, no separate entry fee or buy in for a bonus game need be employed. That is, a player may not purchase an entry into a bonus game; he must win or earn entry through play of the primary game and, thus, play of the primary game is encouraged. In another embodiment, qualification of the bonus or secondary game could be accomplished through a simple "buy in" by the player if, for example, the player has been unsuccessful at qualifying through other specified activities.

In one embodiment, as illustrated in Fig. 2B, one or more of the gaming devices 10 of the present invention may be connected to each other through a data network or a remote communication link 58 with some or all of the functions of each gaming device provided at a central location such as a central server or central controller 56. More specifically, the processor of each gaming device may be designed to facilitate transmission of signals between the individual gaming device and the central server or controller.

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In one embodiment, the game outcome provided to the player is determined by a central server or controller and provided to the player at the gaming device of the present invention. In this embodiment, each of a plurality of such gaming devices are in communication with the central server or controller. Upon a player initiating game play at one of the gaming devices, the initiated gaming device communicates a game outcome request to the central server or controller.

In one embodiment, the central server or controller receives the game outcome request and randomly generates a game outcome for the primary game based on probability data. In another embodiment, the central server or controller randomly generates a game outcome for the secondary game based on probability data. In another embodiment, the central server or controller randomly generates a game outcome for both the primary game and the secondary game based on probability data. In this embodiment, the central server or controller is capable of storing and utilizing program code or other data similar to the processor and memory device of the gaming device.

In an alternative embodiment, the central server or controller maintains one or more predetermined pools or sets of predetermined game outcomes.

In this embodiment, the central server or controller receives the game outcome request and independently selects a predetermined game outcome from a set or pool of game outcomes. The central server or controller flags or marks the selected game outcome as used. Once a game outcome is flagged as used, it is prevented from further selection from the set or pool and cannot be selected by the central controller or server upon another wager. The provided game outcome can include a primary game outcome, a secondary game outcome, primary and secondary game outcomes, or a series of game outcomes such a free games.

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The central server or controller communicates the generated or selected game outcome to the initiated gaming device. The gaming device receives the generated or selected game outcome and provides the game outcome to the player. In an alternative embodiment, how the generated or selected game outcome is to be presented or displayed to the player, such as a reel symbol combination of a slot machine or a hand of cards dealt in a card game, is also determined by the central server or controller and communicated to the initiated gaming device to be presented or displayed to the player. Central production or control can assist a gaming establishment or other entity in maintaining appropriate records, controlling gaming, reducing and preventing cheating or electronic or other errors, reducing or eliminating winloss volatility and the like.

In another embodiment, one or more of the gaming devices of the present invention are in communication with a central server or controller for monitoring purposes only. That is, each individual gaming device randomly generates the game outcomes to be provided to the player and the central server or controller monitors the activities and events occurring on the plurality of gaming devices. In one embodiment, the gaming network includes a real-time or on-line accounting and gaming information system operably coupled to the central server or controller. The accounting and gaming information system of this embodiment includes a player database for storing player profiles, a player tracking module for tracking players and a credit system for providing automated casino transactions.

A plurality of the gaming devices of the present invention are capable of being connected together through a data network. In one embodiment, the data network is a local area network (LAN), in which one or more of the gaming devices are substantially proximate to each other and an on-site central server or controller as in, for example, a gaming establishment or a portion of a gaming establishment. In another embodiment, the data network is a wide area network (WAN) in which one or more of the gaming devices are in communication with at least one off-site central server or controller. In this embodiment, the plurality of gaming devices may be located in a different part of the gaming establishment or within a different gaming establishment than the off-site central server or controller. Thus, the WAN may include an off-site central server or controller and an off-site gaming device located within gaming establishments in the same geographic area, such as a city or state. The WAN gaming system of the present invention may be substantially identical to the LAN gaming system described above, although the number of gaming devices in each system may vary relative to each other.

In another embodiment, the data network is an internet or intranet. In this embodiment, the operation of the gaming device can be viewed at the gaming device with at least one internet browser. In this embodiment, operation of the gaming device and accumulation of credits may be accomplished with only a connection to the central server or controller (the internet/intranet server) through a conventional phone or other data transmission line, digital signal line (DSL), T-1 line, coaxial cable, fiber optic cable, or other suitable connection. In this embodiment, players may access an Internet game page from any location where an internet connection and computer, or other internet facilitator are available. The expansion in the number of computers and number and speed of internet connections in recent years increases opportunities for players to play from an ever-increasing number of remote sites. It should be appreciated that enhanced bandwidth of digital wireless communications may render such technology suitable for some or all communications according to the present invention, particularly if such communications are encrypted. Higher data transmission speeds may be

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useful for enhancing the sophistication and response of the display and interaction with the player.

In another embodiment, a plurality of gaming devices at one or more gaming sites may be networked to a central server in a progressive configuration, as known in the art, wherein a portion of each wager to initiate a base or primary game may be allocated to bonus or secondary event awards. In one embodiment, a host site computer is coupled to a plurality of the central servers at a variety of mutually remote gaming sites for providing a multi-site linked progressive automated gaming system. In one embodiment, a host site computer may serve gaming devices distributed throughout a number of properties at different geographical locations including, for example, different locations within a city or different cities within a state.

In one embodiment, the host site computer is maintained for the overall operation and control of the system. In this embodiment, a host site computer oversees the entire progressive gaming system and is the master for computing all progressive jackpots. All participating gaming sites report to, and receive information from, the host site computer. Each central server computer is responsible for all data communication between the gaming device hardware and software and the host site computer.

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### Concentric Reels Including a Nudge Symbol

Referring to Figs. 1A, 1B and 3, in one embodiment, the present invention is directed to a gaming device including a plurality of symbol generators or reel sets 54 where at least one of the reel sets includes concentric reels such as a nudge symbol display or inner reel 100 and a viewable area symbol display or outer reel 102. In this embodiment, the nudge symbol display or inner reel 100 includes at least one nudge symbol and preferably a plurality of nudge symbols such as nudge symbols 108a, 108b, 108c, 108d and 108e shown in Fig. 3. Each nudge symbol 108 of the inner reel 100 indicates a direction of movement for the outer reel 102. For example, if the viewable area displays the nudge symbol 108a, which indicates an upward direction (such as an arrow pointing upward), the processor moves the outer reel 102 in the upward direction by one symbol position. It should be

appreciated that the nudge symbol may indicate any suitable direction of movement for moving the outer reel 102 of the reel set by one or a plurality of symbol positions.

In one embodiment, the symbol display or outer reel includes a plurality of conventional symbols such as a cherry symbol 106a, a bell symbol 106b, a seven symbol 106c, a money bag symbol or money symbol 106d, and an orange symbol 106e, and at least one viewable area or window 104. The viewable area 104 enables a player to view one or more of the symbols of the inner reel 100 through the outer reel 102. The viewable area or window 104 is cut out or otherwise suitably defined by the outer reel 102. In the illustrated embodiment, the window 104 extends completely through the thickness or width of the outer reel 102, where the window 104 is open or uncovered. In another embodiment, a see-through material, such as glass or a clear plastic, is positioned in an opening in the outer reel and attached to the outer reel 102 to form the window 104 and enable a player to see through the window 104. It should be appreciated that any suitable material may be used to form the window 104. It should also be appreciated that the window 104 may be any suitable size or shape. In the illustrated embodiment, the outer reel 102 includes one viewable area or window 104. In another embodiment, the outer reel 102 includes a plurality of the viewable areas or windows 104.

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In a play of a game, the processor causes the outer reel 102 to move based on the direction associated with an indicated nudge symbol on the inner reel to indicate one of the symbols of the outer reel. In one embodiment, the nudge symbol causes the outer reel to move one symbol position. A symbol position is the location or position of a symbol or blank space (i.e., blank symbol) on the inner and outer reels. In another embodiment described in more detail below, the nudge symbol causes the outer reel to move a plurality of symbol positions. The movement of the outer reel 102 causes a different symbol combination to be indicated by the reels sets. The gaming device provides a losing outcome or a winning outcome (which results in an award) to a player based on the indicated symbol combination. It should be appreciated

that one of the reel sets, a plurality of the reel sets or all of the reel sets may include an inner reel and an outer reel according to the above embodiment.

As described above, the combination of the viewable area of the outer reel and the nudge symbol of the inner reel provides excitement and enjoyment for players because an initial non-winning symbol combination can become a winning symbol combination in a game. The gaming device therefore provides more opportunities for players to obtain awards in a game.

In one example of the above embodiment illustrated in Fig. 3, the viewable area or window 104 is located in a symbol position between symbols 106b and 106c on the outer reel 102. Typically, the symbol position or position between the symbols is a blank symbol or empty space. Therefore, in this embodiment, at least one of the blank symbols or empty spaces between the symbols is replaced with the viewable area or window 104. As described above, the viewable area or window 104 enables a player to view or see one of the nudge symbols 108 displayed by the inner reel 100 as illustrated in Figs. 1A and 1B.

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In this example, the nudge symbols 108a, 108b, 108c, 108d and 108e indicate or display either upward or downward directions of movement for the outer reel 102. The nudge symbols 108 are in the form of upward pointing arrows and a plurality of downward pointing arrows to indicate the direction of movement for the outer reel 102. It should be appreciated that the inner reel may include any suitable number of upward or downward-pointing arrows. It should also be appreciated that the nudge symbols may be any suitable images, characters or other symbols that indicate a direction of movement of the outer reel. In this example, the upward or upwardly pointing arrows such as nudge symbols 108a or 108d cause the outer reel 102 to move upward when the viewable area is indicated and one of the upwardly pointing arrows is visible or viewable through the viewable area or window 104. The downward or downwardly pointing arrows or nudge symbols such as nudge symbols 108b, 108c and 108e cause the outer reel 102 to move downward when the viewable area is indicated and one of the downwardly pointing arrows is viewable through the indicated viewable area or window 104.

Referring now to Figs. 4A and 4B, an example of a gaming device employing the embodiment of Fig. 3 is illustrated where the gaming device includes three reel sets 54a, 54b and 54c, where the middle reel set 54b includes at least one viewable area or window 104. A plurality of paylines 52a, 52b and 52c are associated with the reels to indicate symbol combinations on the reels. In this example, the gaming device provides an outcome such as an award to a player when at least three identical symbols 106 are indicated on one of the paylines 52a, 52b or 52c. An award display 110 indicates the award provided to the player in a play of the game including the reel set.

Referring to Fig. 4A, the gaming device or player activates the reel sets 54a, 54b and 54c. In one embodiment, the inner reel and the outer reel of each reel set move in the same direction. In another embodiment, the inner reel and the outer reel of each reel set move in different directions. It should be appreciated that the inner reels and outer reels of the reel sets may move in the same direction, different directions or in any suitable combination of directions. It should further be appreciated that inner and outer reels of the reel sets may move at the same rate or at different rates.

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In this example, the reel sets 54a, 54b and 54c stop spinning and indicate symbols on paylines 52a, 52b and 52c. Specifically, payline 52a indicates a seven symbol 106f, a viewable area or window 104, and another seven symbol 106h. The indicated viewable area or window 104 enables the player to view or see one of the nudge symbols on the inner reel. In this example, the nudge symbol 108b viewable or visible through the viewable area indicated on payline 52a is a downwardly pointing arrow. As described above, the nudge symbol or downwardly pointing arrow 108b causes the outer reel of reel set 54b to move downward one symbol position. It should also be appreciated that the nudge symbol may cause the outer reel to move any suitable number of symbols positions as further described below.

Referring to Fig. 4B, the gaming device causes the outer reel of reel set 54b to move one symbol position. Therefore, reel set 54b now indicates a seven symbol on payline 52a. Accordingly, payline 52a indicates the seven symbol 106f, a seven symbol 106g and the seven symbol 106h or three seven

symbols on payline 52a. A symbol combination including three seven symbols provides an award of five hundred in this example. The award of five hundred is provided to the player as indicated by the award display 110. Thus, the combination of the window 104 and the nudge symbol 108b enables the player to obtain a winning combination of symbols as shown in Fig. 4B where they originally did not obtain a winning combination of symbols as indicated in Fig. 4A.

In another embodiment, the gaming device evaluate the symbols indicated on payline 52A before moving the outer reel in the direction of movement associated with the indicated nudge symbol. For example, in Figs. 4A and 4B, the gaming device or player activates the reel sets 54A, 54B and 54C in a play of the game, as shown in Fig. 4A, after the reel sets stop rotating or spinning, payline 52A indicates the seven symbols 106f, the viewable area or window 104 and another seven symbol 106h. In this embodiment, the gaming device then evaluates the symbol combination indicated by payline 52A before moving the outer reel of reel set 54B in the direction of movement associated with the viewable nudge symbol 108b. In one aspect of this embodiment, if one or two seven symbols provide an award in the game, the gaming device provides the award associated with that winning symbol combination to the player. The gaming device then moves or rotates the outer reel of reel set 54B in the direction of movement of the indicated nudge symbol 108b (i.e., downward) to indicate a different symbol combination on payline 52A. As described above and as shown in Fig. 4B, the outer reel set 54B moves downward one symbol position to indicate a third seven symbol on payline 52A. The gaming device evaluates this symbol combination, which is a winning symbol combination, and provides another award to the player in that play of the game. It should be appreciated that the gaming device may provide one award, a plurality of awards, the largest award or any designated award for the symbol combinations indicated on the paylines in the play of the game. It should also be appreciated that the gaming device may evaluate the symbols indicated by one or more of the paylines associated with the reel sets

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at any designated point in the game before or after a nudge symbol or nudge symbols are indicated on the reel sets.

In one embodiment, each nudge symbol indicates a direction of movement for the outer reel which moves the outer reel one symbol position. Therefore, the nudge symbol causes the outer reel to move one symbol position in the indicated direction. In another embodiment, the inner reel includes at least one nudge symbol which causes the outer reel to move a designated number of symbol positions. Therefore, when the viewable area on the outer reels is indicated and the nudge symbol (including the designated number of symbol positions) is visible or viewable through the viewable area, the gaming device causes the outer reel to move the designated number of symbol positions in the direction of movement associated with the nudge symbol. For example, the nudge symbol may cause the outer reel to move upward three symbol positions. It should be appreciated that the designated number of symbol positions may be one or a plurality of symbol positions. In a further embodiment, the nudge symbol causes the outer reel to move a random number of symbol positions. It should be appreciated that the number of symbol positions associated with the nudge symbol may be randomly determined, predetermined or determined in any suitable manner. It should also be appreciated that the number of movements or symbol position moves may be determined separately from the determination of the nudge symbol.

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In another embodiment, at least one of the nudge symbols includes a direction of movement which causes the outer reel to move any direction which will provide a winning symbol combination or move the outer reel or reels closer to a winning symbol combination in a play of a game. For example, if a nudge symbol is visible through an indicated viewable area, the nudge symbol causes the outer reel to move any direction which would provide a winning symbol combination in the play of the game. In another embodiment, the nudge symbol causes the outer reel to move to indicate the best winning symbol combination in a play of the game. For example, the nudge symbol causes the outer reel to move to indicate the winning symbol combination which provides the largest award to the player. In a further embodiment, the

gaming device moves an outer reel to the best or optimum symbol position of the outer reel when the viewable area is indicated and a nudge symbol is visible through the viewable area on that outer reel. The gaming device therefore provides the player with the best or optimum symbol combination on the reel sets when the nudge symbol is viewable through the viewable area and the viewable area is indicated on that reel set. For example, three reel sets are activated in a game. Two of the reel sets each indicate a bar symbol. The third reel set indicates a viewable area where a nudge symbol is viewable through that viewable area. The gaming device causes the outer reel of the third reel set to move to a symbol position including a bar symbol to provide a winning symbol combination including three bar symbols in that player of the game. It should be appreciated that the nudge symbol may include a direction of movement which causes the outer reel to move to indicate a winning symbol combination, a better winning symbol combination, a losing symbol combination or any suitable symbol combination on the reel sets.

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Referring now to Fig. 5A, another embodiment of the present invention is illustrated where the gaming device includes a plurality of reel sets 54 where each of the reel sets includes an inner reel 200 and an outer reel 202 which are concentrically arranged reels. In this embodiment, at least one of the reel sets includes an outer reel 202 having a first or left window 204a which is positioned on the left side of the outer reel 202 (as a player views the outer reel) and a second or right window 204b which is positioned on the right side of the outer reel 202 (as a player views the outer reel). The left window 204a and the right window 204b are sized to each display at least one symbol of the inner reel 200. It should be appreciated that the outer reel 202 may define or include any suitable number of the left windows 204a and/or the right windows 204b. It should also be appreciated that the left window 204a and the right window 204b may be any suitable size and shape to display one or more of the symbols on the inner reel 200. In this embodiment, the outer reel includes a plurality of conventional symbols 206 as described above in addition to the left window 204a and the right window 204b. The inner reel 200 of the reel set includes one symbol such as the downward pointing arrow 208b or a plurality

of nudge symbols such as the upward and downward pointing arrows 208a at each symbol position on the inner reel 200. It should be appreciated that the pair of nudge symbols 208a may include oppositely pointing arrows, or arrows pointing in the same direction. The direction indicated by the nudge symbols may be randomly determined or pre-determined in a game.

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Additionally, the inner reel 200 includes at least one downwardly pointing arrow 208b which is positioned on the left side or the right side of the inner reel 200. The inner reel 200 also includes at least one nudge symbol in the shape of an upwardly pointing arrow 208c which may be positioned on the left side or the right side of the inner reel 200. It should be appreciated that the inner reel 200 may include one or a plurality of pairs of nudge symbols 208a, left nudge symbols 208b and/or right nudge symbols 208c. It should be appreciated that the each nudge symbol in the pairs of nudge symbols 208a, the left nudge symbols 208b and/or the right nudge symbols 208c may be any suitable size or shape.

In this embodiment, the symbol positions between the symbols 206 may include a blank symbol or blank space 203 or a viewable area or window such as the left window 204a or the right window 204a or the right window 204b is indicated on the reel sets, the left window 204a or the right window 204b display or indicate one of the nudge symbols on inner reel 200, such as one of the nudge symbols in the pair of the nudge symbols 208a, the left nudge symbol 208b or the right nudge symbol 208c. The nudge symbol which is indicated by or viewable through the left or right windows therefore depends on the position of the windows on the outer reel.

The viewable area or window 204a may also display or indicate a blank symbol or empty space 207, depending on the position of the window 204 and the position of the nudge symbols on the inner reel 200. Therefore, the viewable areas or windows 204a or 204b may indicate a blank symbol 207, a nudge symbol in the shape of a downwardly pointing arrow, such as the downwardly pointing arrow in the pair of nudge symbols 208a or the downwardly pointing arrow 208b. One of the viewable areas may also indicate an upwardly pointing arrow such as the upwardly pointing arrow in the pair of

nudge symbols 208a or the upwardly pointing arrow 208c. Any subsequent movement or rotation of the outer reel 202 after the initial activation of the reel sets is therefore dependent on the positioning of the windows 204a and 204b and also on the positioning of the nudge symbols on inner reel 200. The different positions of the viewable areas further increases the excitement and enjoyment of the game by the player.

Referring to Figs. 5B and 5C, an example of the embodiment of Fig. 5A is illustrated where the gaming device includes a plurality of reels 54a, 54b and 54c. Each of the reels 54a, 54b and 54c includes an inner reel and an outer reel as described above, where the outer reel includes at least one left window such as the left window 204e or the left window 204c and at least one right window such as the right window 204d on reel 54a. The viewable areas or windows 204c, 204d and 204e indicate or display blank symbols or blank spaces, or a nudge symbol such as the nudge symbol 208d or 208e. The total award display 210 indicates the total award accumulated by the player in the game.

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In a play of the game, the gaming device or player activates or spins the reel sets 54a, 54b and 54c to indicate symbols and/or windows such as windows 204c, 204d and 204e on the reel sets. After the reel sets stop, none of the paylines 52a, 52b and 52c indicate winning symbol combinations (i.e., symbol combinations including three or more of the same symbols). Payline 52a, however, indicates a right window 204d, a cherry symbol 206b and a left window 204c. The right window 204d displays a nudge symbol in the form of an upwardly pointing arrow 208e. The window 204c displays a nudge symbol in the form of a downwardly pointing arrow 208d. Therefore, the upwardly pointing arrow or nudge symbol 208e causes reel set 54a (i.e., the outer reel of reel set 54a) to move upward one symbol position. Similarly, the downwardly pointing arrow 208d causes reel set 54c to move downward one symbol position.

Referring to Fig. 5C, after the outer reel of reel set 54a moves upward one symbol position based on nudge symbol 208e, cherry symbol 206a is now indicated on payline 52a. Similarly, after the outer reel of reel set 54c moves

downward one symbol position based on nudge symbol 208d, cherry symbol 206c is now indicated on payline 52a. After the movement of the outer reels of reel sets 54a and 54b, payline 52a indicates the cherry symbol 206a, the cherry symbol 206b, and the cherry symbol 206c. A symbol combination including three cherry symbols is a winning symbol combination and provides an award of one hundred to the player. The gaming device transfers the award of one hundred to the player as indicated by the total award display 210. Accordingly, the combination of the windows 204c and 204d, and the nudge symbols 208d and 208e visible through those windows, enables the player to obtain a winning symbol combination on the reel sets where the player initially did not obtain a winning symbol combination after the initial spin of the reel sets.

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Referring now to Figs. 6A and 6B, another embodiment of the present invention is illustrated where the gaming device includes a plurality of reels 54a, 54b and 54c each having an inner reel and an outer reel similar to the embodiment shown in Fig. 3, where the outer reel of one of the reel sets includes at least one viewable area or window 304a which is sized to display one or a plurality of the nudge symbols 308 of the inner reel. For example in Fig. 6A, the viewable areas or windows 304a and 304b are sized to display two nudge symbols of the inner reel. For example, window 304a displays the nudge symbols 308a and 308b which are in the form of an upwardly pointing arrow and a downwardly pointing arrow, respectively. In this embodiment, the inner reel may include a pair of nudge symbols such as the pair of the nudge symbols 308a and 308b or a single nudge symbol such as nudge symbol 308c displayed by window 304b. When one nudge symbol is in a particular symbol position on the inner reel, the nudge symbol causes the reel set 54 associated with the nudge symbol to move in the direction indicated by that symbol. If the window 304a indicates a pair of nudge symbols, such as nudge symbols 308a and 308b, the gaming device enables the player to choose which nudge symbol the player wishes to employ in that play of the game. In this player selection embodiment, the gaming device includes two selectors such as the left arrow button 312 and the right arrow button 314. Alternatively, the gaming

device automatically selects one of the nudge symbols when the pair of nudge symbols is indicated on a payline. In one such embodiment, the gaming device will choose the movement that will provide the best outcome for the player. In another embodiment, this is randomly determined.

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In one embodiment, the left arrow input or selector 312 causes the gaming device to activate the left positioned nudge symbol or arrow such as nudge symbol 308a in the game. The right input or selector 314 enables the player to activate the right arrow or right nudge symbol such as nudge symbol 308b in the play of the game. If the plurality of windows 304 on the reel sets all indicate pairs of nudge symbols such as nudge symbols 308a and 308b, the gaming device automatically activates or employs the same nudge symbol in each pair such as the right nudge symbol when the player presses the corresponding input or selector 312 or 314. In another embodiment, the gaming device highlights or otherwise indicates each of the windows 304 separately and enables a player to activate one of the nudge symbols in each of the pairs of nudge symbols displayed by the windows in the play of the game. In this example, only window 304a indicates or displays a pair of nudge symbols 308a and 308b.

As shown in Fig. 6A, the player presses or activates the right input or button 314 to activate the right nudge symbol or right positioned arrow 308b of the pair of nudge symbols displayed by window 304a. The gaming device then causes the movement of the outer reel of reel set 54a downward one symbol position. Because window 304b does not display a pair of nudge symbols, the gaming device automatically causes the outer reel of reel set 54c to move upward based on the upwardly pointing arrow 308c visible or viewable through window 304b. In this embodiment, the gaming device enables the player to pick which one of the nudge symbols 308a or 308b the player wishes to activate in this play of the game. This adds a further element of strategy and decision making for the player which increases the player's excitement and enjoyment with the game.

Referring to Fig. 6B, the gaming device causes the movement of the outer reels of reel sets 54a and 54c based on the direction of movement

identified by the nudge symbol indicated on that reel or the nudge symbol activated by the player. After the outer reels of reel sets 54a and 54c move, the seven symbol 306a, the seven symbol 306b and the seven symbol 306c are indicated by payline 52a. A symbol combination including three seven symbols is a winning symbol combination in the game and the gaming device provides the player with an award of five hundred. The award of five hundred is provided to the player as indicated by the total award display 310.

As shown in Fig. 6A and 6B, if the player chose the upwardly pointing arrow or nudge symbol 308a instead of the downwardly pointing arrow 308b, money bag symbol 306d would have been indicated on payline 52a. The money bag symbol symbol does not provide a winning symbol combination on payline 52a. Therefore, this embodiment causes the player to think about which nudge symbol the player wishes to activate to provide the player with an award or to increase the player's award depending on the symbols indicated by the reels.

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In one embodiment, the gaming device enables the player to pick and activate one of the nudge symbols displayed by the window 304 when a plurality of nudge symbols are displayed or indicated by the window. In another embodiment the gaming device randomly picks one of the nudge symbols and the plurality of nudge symbols displayed by the window 304 to activate that nudge symbol in that play of the game. It should be appreciated that the gaming device may enable the player to pick, or the gaming device may randomly pick the nudge symbols displayed by the windows.

Referring now to Fig. 7, a further embodiment of the present invention is illustrated where at least one of the reels includes an inner reel 400 and an outer reel 402 which are concentrically arranged reels. In this embodiment, the inner reel 400 includes or generates a plurality of nudge symbols where one or more nudge symbols may be displayed or generated at a single symbol position on the inner reel. For example, the inner reel 400 may include a pair of nudge symbols 410 at a single symbol position or a single nudge symbol 412 at that symbol position. It should be appreciated that the nudge symbols may be any suitable size or shape and may cause the outer reel 402 to move

upwardly, downwardly or in any combination of upward or downward movements. The outer reel 402 includes a plurality of conventional symbols 406, at least one viewable area or window 404 and at least one nudge symbol 408. The nudge symbol 408 may be any suitable size or shape and may indicate any suitable directions such as an upward or downward directions. By including a nudge symbol on the outer reel 402, the gaming device provides additional opportunities to obtain a winning symbol combination on the reels. It should be appreciated that the outer reel may include one or a plurality of nudge symbols.

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Referring now to Fig. 8, another embodiment of the present invention is indicated where the inner and outer reels of a reel set including the concentric reels are rotatable displays or belts which are positioned adjacent to each other. In this embodiment, the inner reel or rotatable display 500 includes a belt 504 which moves or rotates about a plurality of rollers 506a, 506b, 506c and 506d. The rollers or axles are rotatably connected to the cabinet of the gaming device and provide enough resistance or friction to the inside of the belt to hold the belt in place while moving the belt in a clockwise or counterclockwise direction. At least one of the rollers or axles 506 is a drive roller connected to a suitable motor or other actuator which rotates or moves the drive roller to correspondingly move or rotate the belt 504. The belt 504 may be made of any suitable material and includes one or more nudge symbols such as nudge symbols 508a, 508b, 508c, 508d and 508e. The outer reel or rotatable display 502 includes a movable surface or belt 510, which moves or rotates about rollers 512a, 512b, 512c and 512d. At least one of the rollers 512 is a drive roller which is connected to the same or a different motor as the inner rotatable display 500. The motor causes the drive roller to move or rotate and correspondingly move or rotate the belt 510. The outer rotatable display or belt includes at least one viewable area or window 514 which enables a player to view the outer surface of the inner rotatable display 500. Specifically, the viewable area window 514 enables a player to view one or more of the nudge symbols 508 on the inner rotatable display 500. Additionally, the outer rotatable display includes a plurality of symbols such as

symbols 516a, 516b, 516c, 516d, 516e, 516f, 516g, 516h, 516i and 516j. As illustrated in Fig. 8, the outer rotatable display 502 is positioned adjacent to the inner rotatable display 500 such that at least a portion of the belt 510 of the outer rotatable display overlaps the belt 504 of the inner rotatable display 500. The combination of the outer rotatable display 502 and the inner rotatable display 500 forms a reel set 54. It should be appreciated that a gaming device may include one or more of the reel sets 54 illustrated in Fig. 8.

Referring now to Fig. 9, a further embodiment of the present invention is illustrated where the present invention includes an inner display such as a video display 600 and an outer reel 602. The combination of the inner display 600 and the outer reel 602 form a reel set 54. Specifically, the inner display 600 is a video display which is positioned adjacent to the outer reel 602. The inner display or video display 600 includes a video screen or display 604 which displays one or more nudge symbols, such as a pair of nudge symbols 606a at a symbol position or single nudge symbols 606b or 606c in a play of the game. The outer reel 602 rotates about the inner display or inner video display 600. The outer reel includes or defines at least one viewable area or window 610 which enables a player to view one or more of the nudge symbols 606 of inner display 600. The outer reel also includes one or more symbols such as symbols 612a, 612b, 612c and 612d. It should be appreciated that at least one, a plurality or each of the reel sets in a game may include the concentric displays including the inner video display 600 and the outer display or reel 602.

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Referring now to Fig. 10, another embodiment of the present invention is illustrated where the gaming device includes a plurality of reel sets which are movably connected to a cabinet of the gaming device and each include an outer reel such as outer reel 702a, 702b and 702c and at least one inner display or inner rotatable display 700. In this embodiment, the inner rotatable display 700 includes a movable surface or belt 704 which moves or rotates about rollers or axles 706a and 706b. At least one of the rollers or axles 706a and 706b is a drive roller connected to a suitable motor or other actuator which moves or rotates the drive roller and correspondingly moves or rotates the belt 704. The drive roller may move the belt 704 in any suitable direction such as a

clockwise or counterclockwise direction. In this embodiment, the belt 704 includes a plurality of nudge symbols, such as nudge symbols 708a, 708b, 708c, 708d and 708e. The inner rotatable display 700 rotates or moves the belt 704 so that the nudge symbols 708 are adjacent to and moving behind each of the outer reels 702a, 702b and 702c. The outer reels 702a, 702b and 702c each include at least one viewable area or window such as viewable areas or windows 710a and 710b and a plurality of symbols. For example, outer reel 702a includes symbols 712a, 712b and 712c. Outer reel 702b includes symbols 712d, 712e and 712f. Outer reel 702c includes symbols 712g, 712h, 712i and 712j. In a play of the game, when one or more of the viewable areas or windows are indicated on a payline, the gaming device causes the outer reel to move in the direction of movement associated with any nudge symbol viewable through one or more of the viewable areas or windows.

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Referring now to Figs. 11A and 11B, a further embodiment of the present invention is illustrated where the concentric reels in one or more reel sets each include an inner reel 800 and an outer reel 802 which are positioned on different axes of rotation such as an axis of rotation 803a associated with inner reel 800 and an axis of rotation 803b associated with outer reel 802. In this embodiment, the inner reel is a relatively smaller reel including a plurality of nudge symbols 804a, 804b and 804c. The inner reel 800 in this embodiment displays less nudge symbols than the nudge symbols displayed by the inner reel 100 shown in Fig. 3. Therefore, one or more of the relatively small inner reels 800 may be positioned adjacent to the inside surface of the outer reel 802. The outer reel 802 includes at least one viewable area or window 806 which enables a player to view or see through the viewable area window to see symbols on the inner reel 800. The outer reel also includes a plurality of symbols such as symbols 808a, 808b, 808c and 808d. The combination of the inner reel 800 and the outer reel 802 form a reel set 54.

It should be understood that various changes and modifications to the presently preferred embodiments described herein will be apparent to those skilled in the art. Such changes and modifications can be made without

departing from the spirit and scope of the present invention and without diminishing its intended advantages. It is therefore intended that such changes and modifications be covered by the appended claims.

## **CLAIMS**

The invention is claimed as follows:

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A gaming device controlled by a processor, said gaming device
comprising:

an inner reel including at least one nudge symbol, wherein a direction of movement is associated with each nudge symbol; and

an outer reel including a plurality of symbols and at least one viewable area, wherein the viewable area is positionable to enable a player to view through the viewable area said at least one nudge symbol of the inner reel,

and wherein the processor is operable to cause the inner reel to move to indicate said nudge symbol, cause the outer reel to move and indicate one of the symbols or the viewable area, move the outer reel based on the direction of movement associated with the nudge symbol when the viewable area is indicated on the outer reel and provide an outcome to a player based in part on the symbol indicated by the outer reel.

- 2. The gaming device of Claim 1, wherein the inner reel includes at least one symbol, wherein the processor provides an outcome to the player when the viewable area is indicated on the outer reel and the symbol is viewable through the viewable area.
- 3. The gaming device of Claim 1, wherein the inner reel includes a plurality of symbol positions, each of the symbol positions including one of the nudge symbols.
  - 4. The gaming device of Claim 1, wherein the inner reel includes a plurality of symbol positions, at least one of the symbol positions including a plurality of the nudge symbols.
  - 5. The gaming device of Claim 4, which includes a selector, said selector adapted to enable the player to select one of the plurality of nudge symbols at

said symbol position when the plurality of nudge symbols are viewable through the viewable area.

- 6. The gaming device of Claim 1, wherein the inner reel includes a plurality of symbol positions, a plurality of the symbol positions including a plurality of the nudge symbols.
- The gaming device of Claim 6, which includes a selector, said selector adapted to enable the player to select one of the plurality of nudge symbols at one of the plurality of symbol positions when the plurality of nudge symbols at said symbol position are viewable through the viewable area.
  - 8. The gaming device of Claim 1, wherein the outer reel includes at least one nudge symbol.

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- 9. The gaming device of Claim 1, wherein at least one of the inner and outer reels includes a mechanical reel.
- 10. The gaming device of Claim 1, wherein the inner reel includes a video reel.
  - 11. The gaming device of Claim 1, which includes at least one payline associated with the outer reel.
- 25 12. The gaming device of Claim 11, wherein the outcome is based on the symbol of the outer reel indicated by the payline.
  - 13. The gaming device of Claim 1, which includes a plurality of paylines associated with the outer reel.

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14. The gaming device of Claim 13, wherein the outcome is based on the symbol of the outer reel indicated by one of the paylines.

15. The gaming device of Claim 1, which includes a plurality of reel sets, wherein at least one of said sets includes the inner reel and the outer reel.

- 5 16. The gaming device of Claim 1, which includes a plurality of reel sets, wherein a plurality of said reel sets include the inner reel and the outer reel.
  - 17. The gaming device of Claim 1, which includes a plurality of reel sets, wherein each of said reel sets include the inner reel and the outer reel.

18. The gaming device of Claim 1, wherein the processor is operable to move the outer reel a designated number of symbol positions when the viewable area is indicated and one of the nudge symbols is viewable through the viewable area.

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19. The gaming device of Claim 1, wherein the processor is operable to move the outer reel a random number of symbol positions when the viewable area is indicated and one of the nudge symbols is viewable through the viewable area.

20. The gaming device of Claim 1, wherein the processor is operable to move the outer reel at least one symbol position when the viewable area is indicated and one of the nudge symbols is viewable through the viewable area.

- 25 21. The gaming device of Claim 1, wherein the processor is operable to move the outer reel for a plurality of symbol positions when the viewable area is indicated and one of the nudge symbols is viewable through the viewable area.
- 30 22. The gaming device of Claim 1, wherein the processor is operable to move the outer reel to an optimum symbol position when the viewable area is indicated and one of the nudge symbols is viewable through the viewable area.

23. The gaming device of Claim 1, wherein the processor is operable to move the outer reel to indicate a winning symbol combination on the reel sets when the viewable area is indicated and one of the nudge symbols is viewable through the viewable area.

- 24. A gaming device comprising:
  - a game operable upon a wager by a player;
  - a cabinet;

- a housing connected to the cabinet;
  - a symbol display connected to said housing, said symbol display including a plurality of first symbols, said first symbols including at least one nudge symbol;
- a symbol indicator connected to said housing, said symbol indicator overlapping at least a portion of the symbol display, said symbol indicator including a plurality of second symbols and defining at least one viewable area, wherein the symbol indicator is positionable to enable a player to view through the viewable area at least one of the first symbols displayed by the symbol display, and wherein each nudge symbol identifies a direction to move the symbol indicator; and
  - a processor operable to cause the symbol display to generate a plurality of the first symbols, cause the symbol indicator to move to indicate at least one of the second symbols and the viewable area, move the symbol indicator in a direction identified by the nudge symbol viewable through the viewable area when the nudge symbol is viewable through the indicated viewable area and provide any outcome to the player, wherein the outcome is based on the second symbol indicated by the symbol indicator.
- 25. The gaming device of Claim 24, wherein said first symbols include a 30 plurality of nudge symbols.

25. The gaming device of Claim 24, wherein the symbol display includes a plurality of symbol positions.

- 26. The gaming device of Claim 25, wherein the symbol display includes atIeast two different nudge symbols at a single symbol position.
  - 27. The gaming device of Claim 26, which includes a selector, said selector adapted to enable the player to select one of the nudge symbols when the nudge symbols are viewable through the viewable area of the symbol display.

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- 28. The gaming device of Claim 24, wherein the symbol display includes at least one reel.
- 29. The gaming device of Claim 24, which includes at least one payline associated with the symbol indicator.
  - 30. The gaming device of Claim 29, wherein the outcome is based on the second symbol and any first symbols indicated by the payline associated with the symbol indicator.

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- 31. The gaming device of Claim 24, which includes a plurality of paylines associated with the symbol indicator.
- 32. The gaming device of Claim 31, wherein the outcome is based on the second symbol indicated by at least one of the paylines associated with the symbol indicator.
  - 33. The gaming device of Claim 24, wherein the second symbols include at least one nudge symbol.

34. The gaming device of Claim 24, which includes a plurality of the symbol displays and a plurality of the symbol indicators connected to the housing, wherein each of the symbol indicators overlap at least a portion of a different one of the symbol displays.

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- 34. The gaming device of Claim 24, wherein the symbol display includes at least one reel.
- 35. The gaming device of Claim 24, wherein the symbol display includes a 10 plurality of reels.
  - 36. A gaming device controlled by a processor comprising:
    - a game operable upon a wager by a player;
    - a cabinet;
- a housing connected to the cabinet; and
  - a plurality of reel sets rotatably connected to the housing, said reel sets each including an inner reel and an outer reel, wherein in each of said reel sets, the inner reel and the outer reel are aligned along substantially the same axis of rotation, the outer reel overlaps at least a portion of the inner reel, the inner reel includes a plurality of nudge symbols and the outer reel includes a plurality of symbols and defines at least one viewable area,

wherein in each of said reel sets, the outer reel is positionable to enable a player to view through the viewable area at least one of the nudge symbols of the inner reel, and wherein each nudge symbol identifies a direction to move at least one of the outer reels;

wherein the processor is operable to activate the reel sets, cause each of the inner reels to generate the nudge symbols in each of the reel sets, cause each of the outer reels to move to indicate one of the symbols or the viewable area in each of the reel sets, move the outer reel in the direction identified by the nudge symbol viewable through the viewable area when one of the nudge symbols is viewable through the indicated viewable area and

provide an outcome to the player based on the symbols indicated by the reel sets.

- 37. The gaming device of Claim 36, wherein the inner reel of each of the reel sets includes a plurality of symbol positions.
  - 38. The gaming device of Claim 37, wherein at least one of the symbol positions on one of the reel sets includes a plurality of different nudge symbols.
  - 39. The gaming device of Claim 38, which includes a selector, said selector adapted to enable the player to select one of the different nudge symbols when the different nudge symbols are viewable through the viewable area.
    - 40. The gaming device of Claim 36, which includes at least one payline associated with the reel sets.

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- 41. The gaming device of Claim 40, wherein the outcome is based on any symbols indicated by the payline associated with the reel sets.
- 42. The gaming device of Claim 36, which includes a plurality of paylines 20 associated with the reel sets.
  - 43. The gaming device of Claim 42, wherein the outcome is based on any symbols indicated by any one of the paylines associated with the reel sets.
- 25 44. The gaming device of Claim 36, wherein at least one of the outer reels includes a nudge symbol.
  - 45. A method for operating a gaming device, said method comprising:
- (a) displaying at least one reel set including an inner reel and an 30 outer reel, said inner reel including at least one nudge symbol, said outer reel including a plurality of symbols and defining at least one viewable area, wherein each nudge symbol identifies a direction of movement;

- (b) activating said reel set;
- (c) causing the inner reel of said reel set to indicate or not to indicate the nudge symbol;
- (d) moving the outer reel to indicate one of the symbols or the 5 viewable area;
  - (e) moving the outer reel to indicate one of the symbols based on the direction of movement identified by the nudge symbol viewable through the viewable area when the nudge symbol is viewable through the indicated viewable area; and
- 10 (f) providing an outcome to the player, wherein the outcome is based on the symbols indicated on the reel sets.
  - 46. The gaming device of Claim 45, wherein the inner reel includes a plurality of nudge symbols.

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- 47. The gaming device of Claim 45 which includes moving the inner reel upon the activation of the reel sets.
- 48. The method of Claim 45, which includes moving the inner reel and the outer reel simultaneously.
  - 49. The method of Claim 45, which includes moving the inner reel and the outer reel sequentially.
- 25 50. The method of Claim 45, which includes moving the inner reel and the outer reel at a same rate of rotation.
  - 51. The method of Claim 45, which includes moving the inner reel and the outer reel at different rates of rotation.

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52. The method of Claim 45, which includes moving the inner reel and the outer reel in the same direction.

53. The method of Claim 45, which includes moving the inner reel and the outer reel in different directions.

- 5 54. The method of Claim 45, which includes displaying at least two nudge symbols at one symbol position on the inner reel.
  - 55. The method of Claim 54, which includes enabling the player to pick one of the nudge symbols using a selector when the viewable area is indicated and the two nudge symbols are viewable through the viewable area.

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- 56. The method of Claim 45, which includes displaying at least two nudge symbols at a plurality of symbol positions on the inner reel.
- 15 57. The method of Claim 56, which includes enabling the player to pick one of the nudge symbols using a selector when the viewable area is indicated and the two nudge symbols in one of the symbol positions are viewable through the viewable area.
- 20 58. The method of Claim 45, which includes associating at least one payline associated with the reel sets.
  - 59. The method of Claim 58, wherein providing the outcome includes providing the outcome based on the award symbols indicated by the payline.
  - 60. The method of Claim 45, which includes associating a plurality of paylines with the reel sets.
- 61. The method of Claim 60, wherein providing the outcome includes providing the outcome based on the symbols indicated by at least one of the paylines.

62. The method of Claim 45, which includes displaying a plurality of reel sets each including the inner reel and the outer reel, wherein steps (c) to (e) are repeated for each of the reel sets.

5 63. The method of Claim 45, wherein moving the outer reel to indicate one of the symbols based on the direction of movement identified by the nudge symbol viewable through the viewable area when the viewable area is indicated includes moving the outer reel for a designated number of symbol positions.

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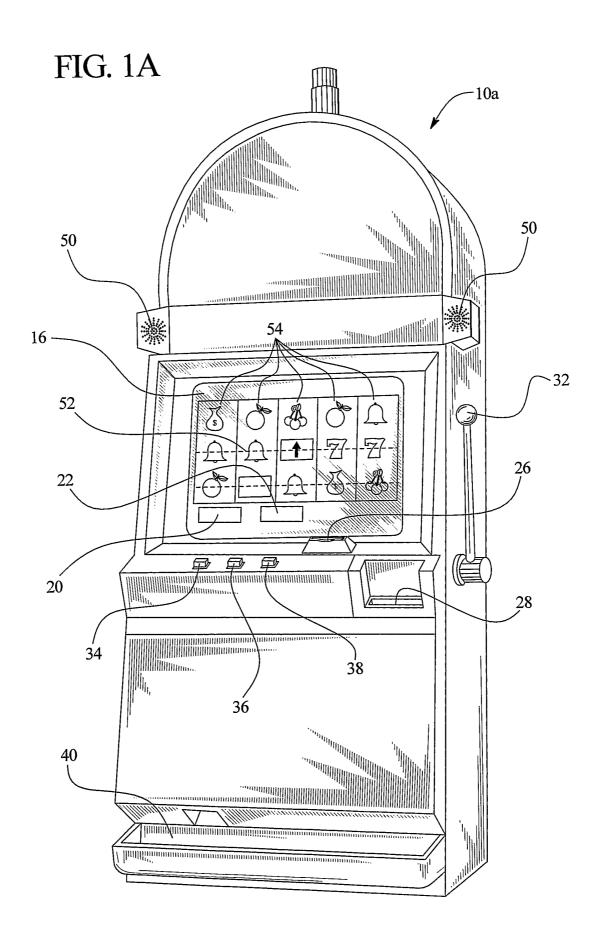
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- 64. The method of Claim 45, wherein moving the outer reel to indicate one of the symbols based on the direction of movement identified by the nudge symbol viewable through the viewable area when the viewable area is indicated includes moving the outer reel for a random number of symbol positions.
- 65. The method of Claim 45, wherein moving the outer reel to indicate one of the symbols based on the direction of movement identified by the nudge symbol viewable through the viewable area when the viewable area is indicated includes moving the outer reel one symbol position.
- 66. The method of Claim 45, wherein moving the outer reel to indicate one of the symbols based on the direction of movement identified by the nudge symbol viewable through the viewable area when the viewable area is indicated includes moving the outer reel for a plurality of symbol positions.
- 67. The method of Claim 45, wherein moving the outer reel to indicate one of the symbols based on the direction of movement identified by the nudge symbol viewable through the viewable area when the viewable area is indicated includes moving the outer reel to an optimum symbol position.

68. The method of Claim 45, wherein moving the outer reel to indicate one of the symbols based on the direction of movement identified by the nudge symbol viewable through the viewable area when the viewable area is indicated includes moving the outer reel to a symbol position which indicates a winning symbol combination on the reel sets.

- 69. The method of Claim 45, which includes operating the gaming device through a data network.
- 10 70. The method of Claim 69, wherein the data network is an internet.



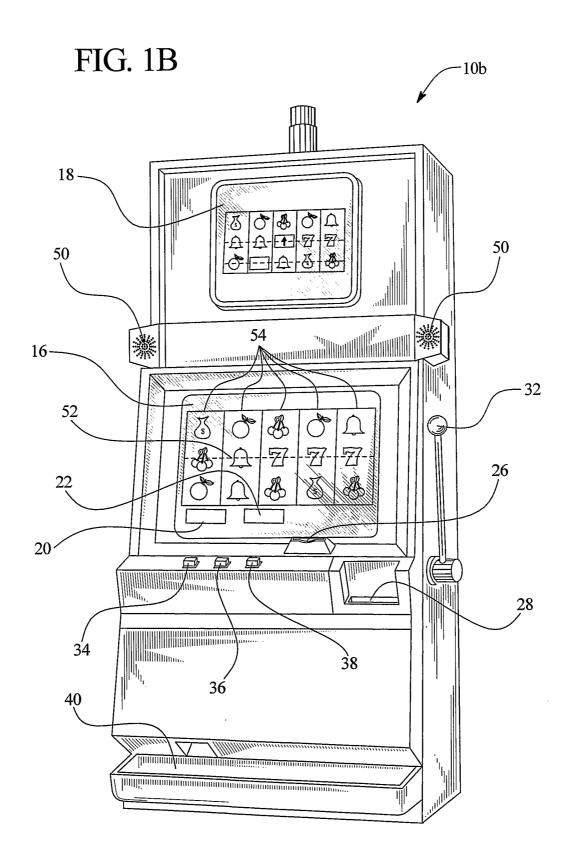
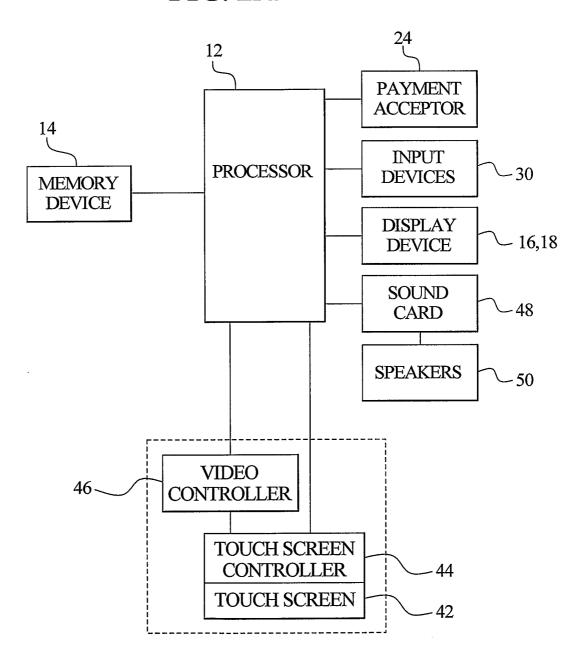
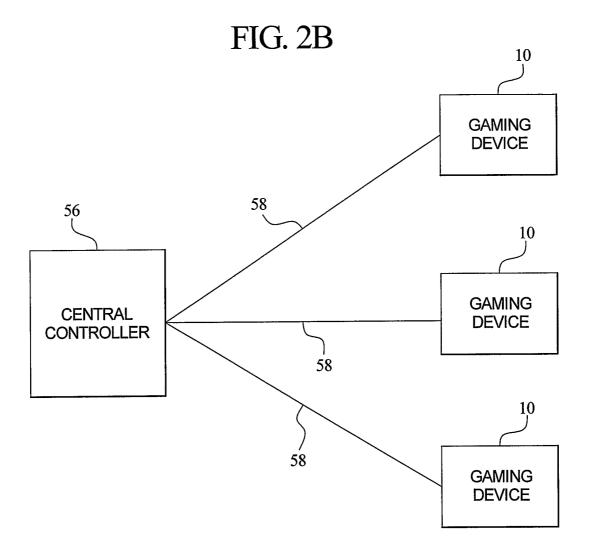


FIG. 2A





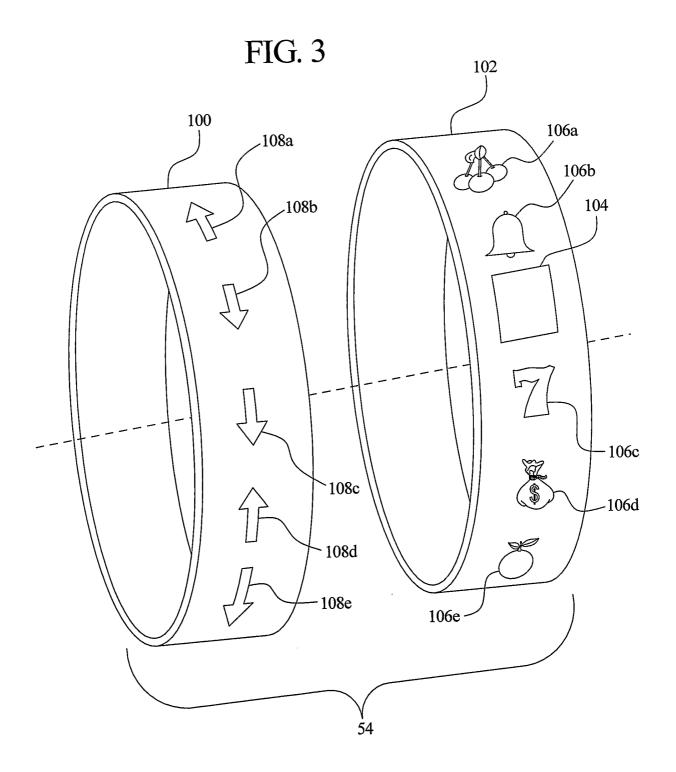


FIG. 4A

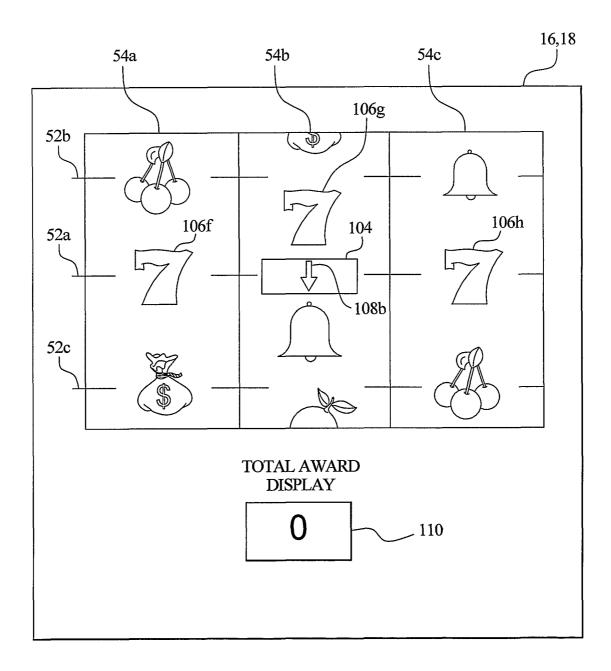
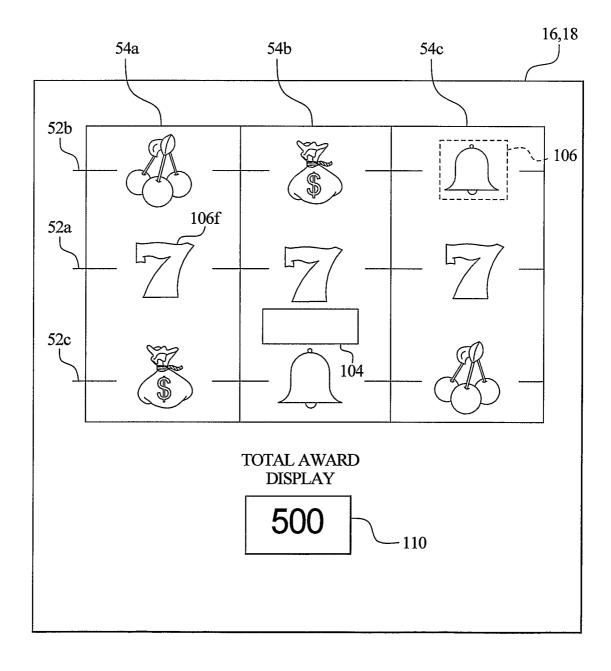


FIG. 4B



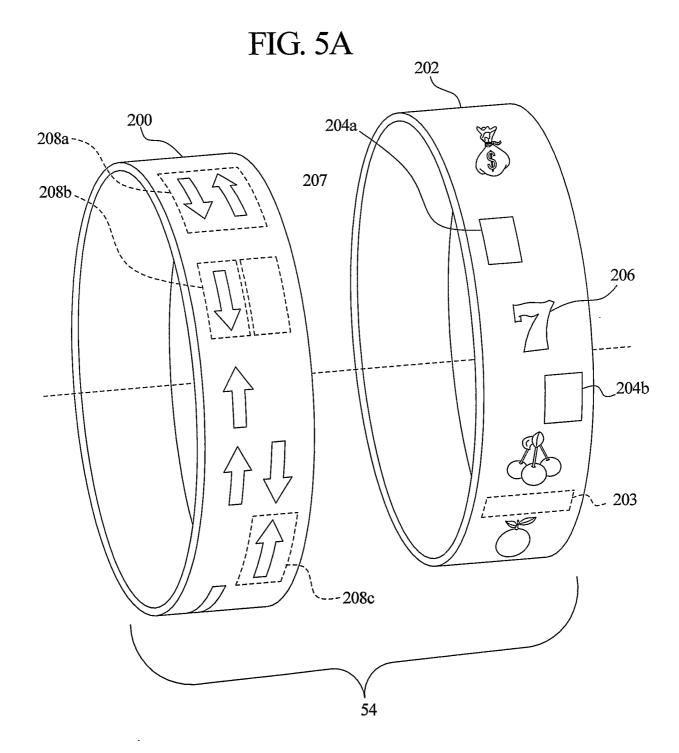


FIG. 5B

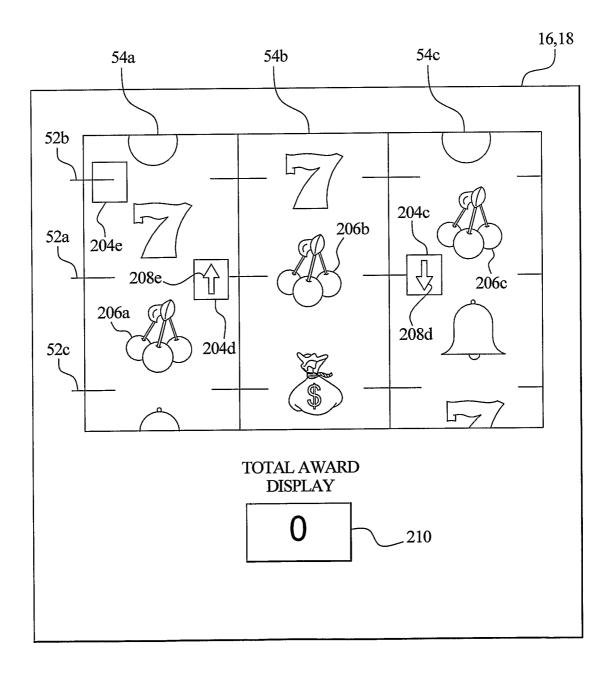


FIG. 5C

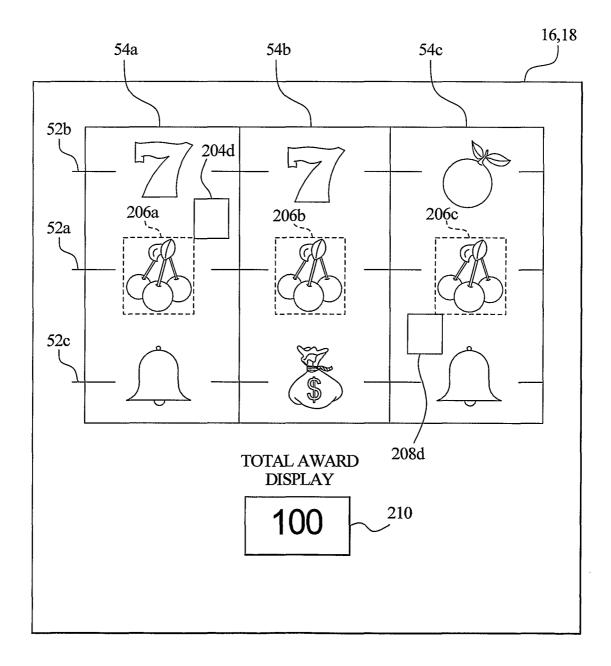


FIG. 6A

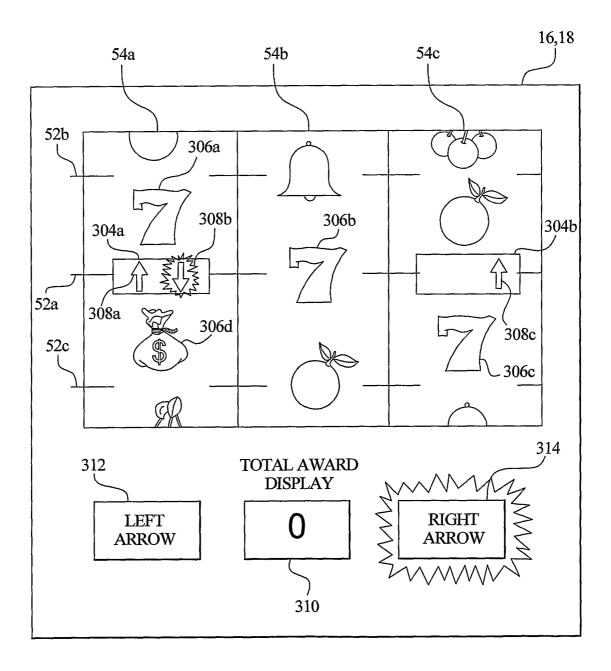
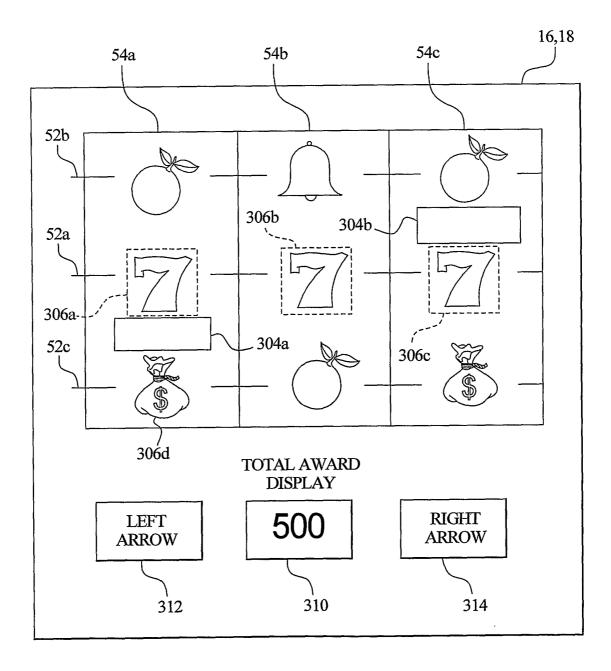
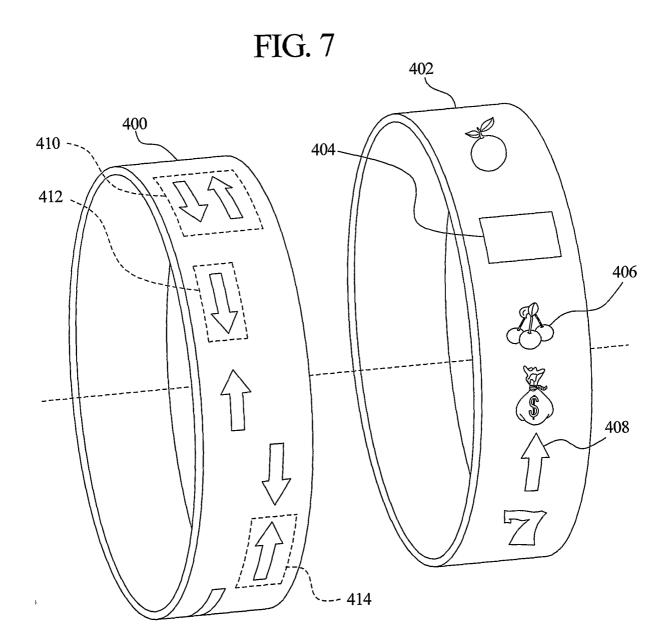


FIG. 6B





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FIG. 8

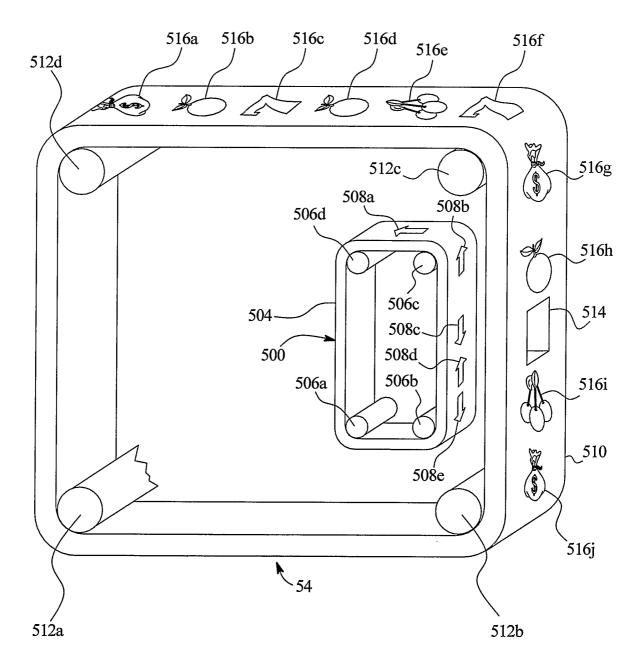
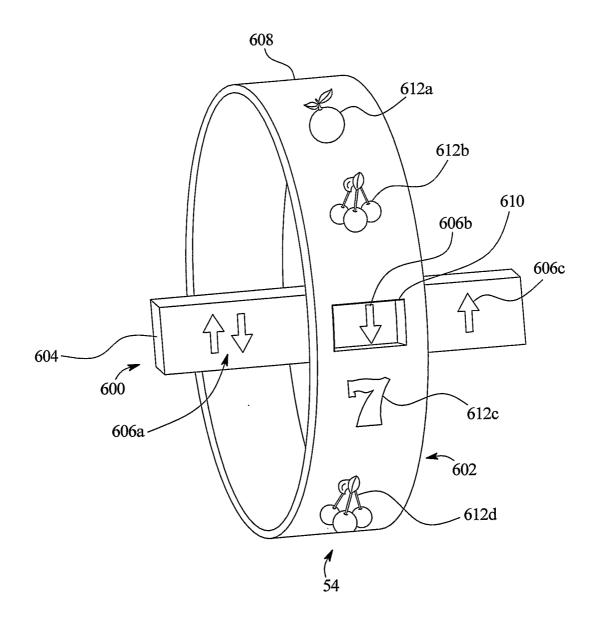


FIG. 9



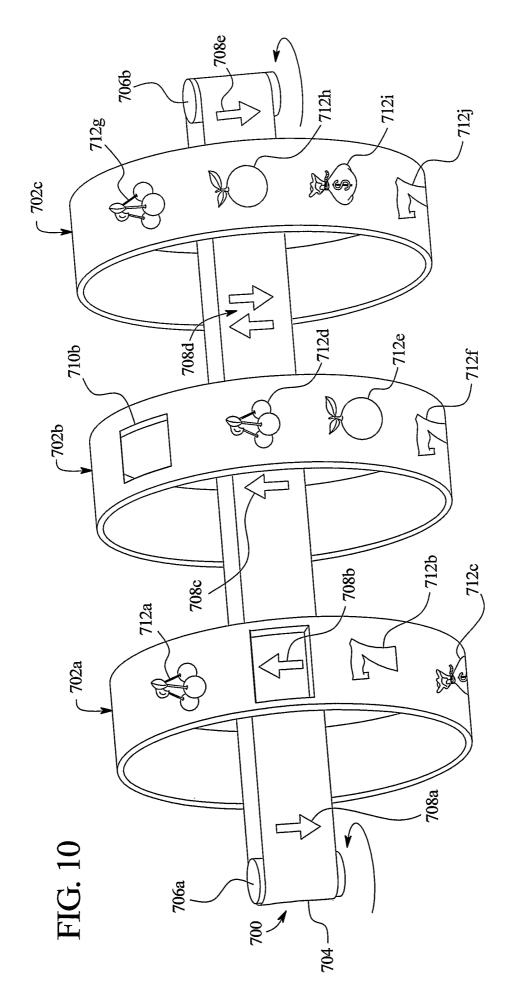


FIG. 11A

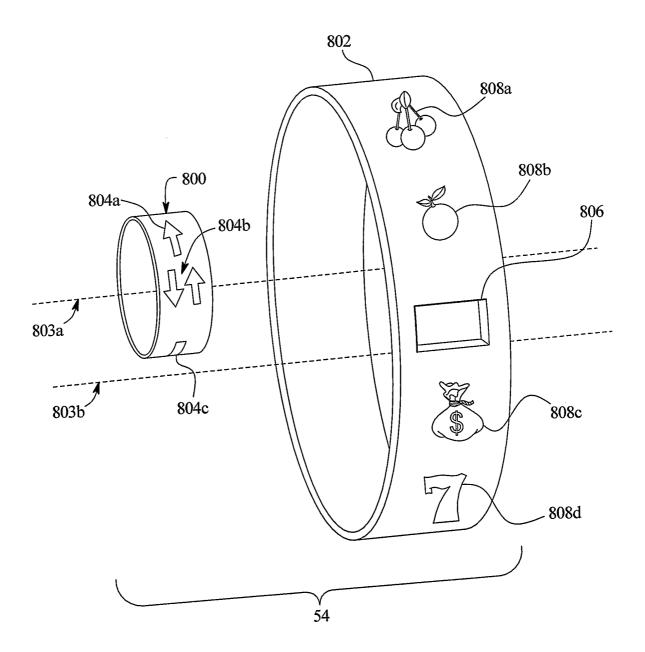


FIG. 11B

