

[0055] Also shown in FIG. 3 are the plurality slot reels 68 that are independently rotatable, with each of the reels 68 having a plurality of reel images disposed thereon. Each mechanical reel 68 may further include a light element (not shown), such as an electroluminescent light element, to illuminate the reel images or other portions of the mechanical reels 68. The mechanical reels 68 may comprise a reel strip manufactured from a translucent material, such as plastic, with a light element disposed behind the reel strip. When activated, the light element illuminates the reel strip from behind, allowing all or part of the mechanical reel to be illuminated. An example of a mechanical reel having a light element is disclosed in U.S. Pat. No. 6,027,115 which is expressly incorporated by reference herein.

[0056] While shown in FIG. 2, but not shown here, one or more electronic display units 70 may be disposed behind the panel 67 and the light valve 69 so that the electronic display units line up with and are visible through the light valve 69, as well as the openings 86a and 86b. The one or more electronic display units may be, for example, a cathode ray tube (CRT) display, a flat panel display (FPD), a front projection display, or a rear projection display. Moreover, additional mechanically moveable members may also be disposed behind the light valve 69, proximate the slot reels 68.

[0057] The light valve 69 may be disposed between the transparent display 67 and the slot reels 68. Various devices may be utilized for the light valve 69, including, but not limited to, suspended particle devices (SPD), electrochromic devices, polymer dispersed liquid crystal (PDLC) devices, etc. Generally, the light valve 69 may switch between being transparent, and being opaque (or translucent), depending on whether a current is applied or not. For example, SPDs and PDLC devices become transparent when applied with a first voltage and become opaque or translucent when a second voltage is applied, with the second voltage being very low or approximately zero. On the other hand, electrochromic devices become opaque when applied with a voltage, and transparent when little or no voltage is applied. Additionally, the light valve 69 may attain varying levels of translucency and opaqueness. For example, while a PDLC device is generally either transparent or opaque, suspended particle devices and electrochromic devices allow for varying degrees of transparency, opaqueness or translucency, depending on the applied voltage level.

[0058] When the light valve 69 is opaque, or substantially opaque, a player's view of the slot reels 68 may be obscured (or blocked). The light valve 69 may also be translucent and provide varying degrees of visibility of the slot reels 68 through the openings 87a, 87b, and 87c, thereby varying the visibility of the slot reels 68 (e.g., gradually "dimming" or "brightening" the visibility of the slot reels 68). Varying the translucency of the light valve 69 may cause the visibility of the slot reels 68 to range from allowing the player to view and recognize the images on the slot reels 68 to merely allowing light and color through without being able to distinguish the images.

#### Gaming Unit Electronics

[0059] FIG. 4 is an exemplary schematic diagram of the light valve 69. The light valve 69 is controlled with the use of a controller 100 that is coupled to a solid state relay device

88. The controller 100 causes the relay device 88 to turn on and off as needed by the gaming apparatus 20. In doing so, the AC voltage is turned on and off the light valve 69. A transformer 89 is used to isolate a 120 VAC input voltage from the light valve 69 and to change the potential from 120 VAC to about 50 VAC. The controller 100 causes the relay device 88 to turn on and off. A high level sent from the controller 100 on line 90 turns on the relay device 88, causing the light valve 69 to become substantially transparent. A low level sent from the controller 100 on line 90 turns off the relay device 88, causing the light valve 69 to become opaque. The relay device 88 may be solid state optronic SP646 and the light valve 69 may be a SPD, model APD-Gray that is manufactured by InspecTech Aeroservice, Inc. from Ft. Lauderdale, Fla.

[0060] It should be noted that while the light valve 69 shown in FIG. 4 is operatively coupled to the controller 100, the light valve 69 may be coupled directly to a power source so that the function of the light valve 69 is based solely on the presence of power applied to the light valve 69. In other words, whenever the gaming unit 20 has power, the light valve 69 could be made transparent. But when power to the light valve 69 is interrupted, the light valve 69 would become opaque and block the view of any components disposed within the housing 50 that are behind the light valve 69.

[0061] FIG. 5 is a block diagram of a number of components that may be incorporated in the gaming unit 20. Referring to FIG. 5, the gaming unit 20 may include a controller 100 that may comprise a program memory 102, a microcontroller or microprocessor (MP) 104, a random-access memory (RAM) 106 and an input/output (I/O) circuit 108, all of which may be interconnected via an address/data bus 110. It should be appreciated that although only one microprocessor 104 is shown, the controller 100 may include multiple microprocessors 104. Similarly, the memory of the controller 100 may include multiple RAMs 106 and multiple program memories 102. Although the I/O circuit 108 is shown as a single block, it should be appreciated that the I/O circuit 108 may include a number of different types of I/O circuits. The RAM(s) 104 and program memories 102 may be implemented as semiconductor memories, magnetically readable memories, and/or optically readable memories, for example.

[0062] Although the program memory 102 is shown in FIG. 5 as a read-only memory (ROM) 102, the program memory of the controller 100 may be a read/write or alterable memory, such as a hard disk. In the event a hard disk is used as a program memory, the address/data bus 110 shown schematically in FIG. 5 may comprise multiple address/data buses, which may be of different types, and there may be an I/O circuit disposed between the address/data buses.

[0063] FIG. 5 illustrates that the control panel 66, the electronic display unit 70, the coin acceptor 52, the bill acceptor 54, the card reader 58, the ticket reader/printer 56, the mechanically rotatable reels 68, the mechanically moveable member 71, and the light valve 69 may be operatively coupled to the I/O circuit 108, each of those components being so coupled by either a unidirectional or bidirectional, single-line or multiple-line data link, which may depend on the design of the component that is used. The speaker(s) 62