

radius of curvature that approximates the radius of a typical mechanical reel such that the curved end section **38a** is a simulated mechanical reel **40** having symbols **42** that are separated from a player by a glass pane **44**. The flat second end sections **38a** can be provided various bits of information (i.e., alphanumeric or symbolic) to the player of the game. Such information can be the amount of credits the player has, the time of day, advertisements, etc. In essence, the flat second end section **38b** can serve the place of other graphical outputs that are commonly used on a gaming machine. While the flat second end section **38b** is "flat" compared to the curved second end section **38a**, the flat second end section **38b** may also have some curvature, as well. Further, while the two flat second end sections **38b** are shown as being contiguous with the curved second end section **38a**, there can be a space that divides each of the two flat second end sections **38b** from the curved second end section **38a** so that the information displayed by the two flat second end sections **38b** is separated from the curved second end section **38a**.

[0034] In FIGS. 2 and 3, the image display device **12, 32** may create additional animation when a certain event occurs. For example, the image display device **12, 32** may display animation when a win occurs, or the image display device **12, 32** may provide some type of bonus game when a certain outcome is achieved.

[0035] FIG. 4 illustrates a mechanical reel **50** having an outer surface **52** with a plurality of symbols **54**. In one of the symbol locations, a transparent window **56** is located on the outer surface **52**. A video display **60** is located at a fixed position behind the mechanical reel **50** for displaying a video symbol through the transparent window **56**. In the embodiment of FIG. 4, the video display **60** is slightly larger than the size of the window **56** and is located as close to the window **56** as possible. The transparent window **56** preferably is clear polymeric window, but can be glass, as well.

[0036] The player views a display region **62** of the mechanical reel **50**. The display region **62** typically has several symbols **54** that are visible to the player, with the visible symbols **54** dictating the outcome of the game when they stop along a pay line or pay lines of the slot machine. Because the transparent window **56** rotates with the reel **50**, it passes over the video display **60** that is located within the display region **62** with each rotation. When the window **56** passes over the video display **60**, the player sees the video display **60**. If the transparent window **56** stops on one of the play lines within the display region **62**, then the video symbol (shown in FIG. 4 as a triple bar) is visible through the stationary transparent window **56** and dictates the outcome of the game.

[0037] The video display **60** need not be displaying a video symbol when the reel **50** is spinning at a high rate of speed since the symbols **54** are imperceptible to the human eye in this condition. The video symbol in the window **56** will be seen when the reel **50** is moving slowly and is preferably displayed for viewing in this condition. Further, because the lower edge of the transparent window **56** sweeps upwardly across the video symbol (assuming upward rotation of the reel **52**), it is desirable to slightly alter the tilt angle of the video symbol (i.e., simulate tilting of the top of the video symbol in the rear direction) as the transparent window moves across the symbol. As will be described

below with respect to FIGS. 9A and 9B, the video symbol in the window may be changed in each rotation of the reel **50** and, thus, the video display **60** may be toggling between various video symbols based on the number of rotations of the reel **50**.

[0038] The video display **60** may be located at the general position where traditional reel backlighting would be located. The video display **60** can be a CRT display, liquid crystal display (LCD), dot matrix, vacuum fluorescence display, organic liquid crystal display (OLCD), LED array, Electronic paper, or any other display device capable of producing images.

[0039] Further, one larger video display **60** could provide the video symbols and backlighting for several reels. For example, the video display **60** may have three distinct sections, one for each reel in a three-reel slot machine, that provide backlighting or video symbols.

[0040] FIG. 5 illustrates a system **80**, similar to that of FIG. 4, including a mechanical reel **82** having a display region **84**. The display region **84** has a width allowing for viewing of three symbols in a first symbol region **86**, a second symbol region **88**, and a third symbol region **90**. The first symbol region **86** and the third symbol region **90** are shown in FIG. 5 as having normal symbols displayed thereon. On the other hand, the second symbol region **88** has a transparent window (i.e., dashed lines) through which a video symbol is displayed via a video display **94**.

[0041] The video display **94** is large enough to cover the entire display region **84**. Thus, it can be used for providing multiple video symbols if adjacent transparent windows are present on the reel **82**. Further, the video display can be used as a light source for the backlighting that is provided to normal symbols. Moreover, the larger video display **94** can display the video symbol moving across its surface (with tilt angle simulation if desired on the video symbol) as the transparent window moves from the region **86** to the region **88** to the region **90**. In the state shown in FIG. 5, the video display **94** is providing light, usually white light, to the first and third symbol regions **86, 90**, while displaying the video symbol in the second symbol region **88**. Thus, the video display **94** serves multiple functions. As discussed below with respect to FIG. 12, the video display **94** may provide varying wavelengths of light to allow one symbol region to provide different symbols (i.e., a compound symbol) depending on the wavelength of light that the video display **94** transmits.

[0042] FIG. 6 depicts a system **100** having a mechanical reel **102** with a display region **104**. The display region **104** is of a width allowing for viewing of three symbols in a first symbol region **106**, a second symbol region **108**, and a third symbol region **110**. In FIG. 6, the first symbol region **106** and the third symbol region **110** have normal symbols displayed thereon. On the other hand, the second symbol region **108** has a transparent window (dashed lines).

[0043] A display device **112** develops images that are transmitted through a plurality of optical fibers **114** (e.g., a light pipe). The optical fibers **114** have an end region **116** that projects the image through the transparent window in the second window region. While shown as flat, the end region **116** may be rounded, preferably at a radius that approximates the radius of the mechanical reel **102**. The