

[0019] FIGS. 3, 4 and 5 are front views illustrating an example of a first, a second and a third display plates, respectively;

[0020] FIG. 6 is a front view illustrating an example of a symbol sheet attached to a periphery of a sub reel;

[0021] FIGS. 7 and 8 are partial cross sections illustrating a composition of the symbols display device;

[0022] FIG. 9 is a functional block view illustrating a part of an electrical composition of the slot machine;

[0023] FIG. 10 is a flow chart showing the process of a sub game;

[0024] FIG. 11 is a front view illustrating an example of a winning symbol combination of first-third display parts;

[0025] FIG. 12 is a front view illustrating an example of a losing symbol combination of the first-third display parts;

[0026] FIG. 13 is a front view illustrating an example wherein blank symbols are arranged in line on a winning line;

[0027] FIG. 14 is a front view illustrating an example wherein a reel mounting plate is rotated to shift the sub reel behind the blank symbols;

[0028] FIG. 15 is a front view illustrating an example wherein a winning symbol is displayed when the sub reel stops;

[0029] FIG. 16 is a front view illustrating an example wherein a losing symbol is displayed when the sub reel stops;

[0030] FIG. 17 is a front view illustrating an example wherein a re-rotation symbol is displayed when the sub reel stops;

[0031] FIG. 18 is a front view illustrating an example wherein the sub reel is displayed behind the second display part;

[0032] FIG. 19 is a front view illustrating an example wherein the blank symbols and the losing symbol stop in line on a winning line when the first-third display plates stop rotating.

[0033] FIG. 20 is a front view illustrating an example wherein the symbols of the sub reel and the second display part compose a composite symbol when the sub reel stops;

[0034] FIG. 21 is a partial cross section illustrating plural reel mounting plates on which the sub reels are mounted; and

[0035] FIG. 22 is a front view illustrating an example of a Pachinko game machine wherein the symbol display device is mounted.

PREFERRED EMBODIMENTS OF THE INVENTION

[0036] As shown in FIG. 1, a slot game machine 2 has a front panel 11, wherein display windows 10 are arranged in a matrix of 3 lines and 3 rows. Reel units (not shown) are disposed behind the display windows 10 of the front panel 11, and three symbols in lengthwise direction disposed on each reel 12 may be observed through the display window 10 when reel 12 of the reel unit stops rotating. The result of

the game (win or loss) is determined in accordance with symbol combinations on eight winning lines running vertically, horizontally and diagonally, or a symbol stopped in the display window 10. Indicators 13 are provided in the front panel 11 to indicate the winning lines. A coin slot 14, an operation panel 15, a coin tray 16 are provided below the front panel 11, while a start lever 17 is provided at the lateral side of the slot game machine 2.

[0037] The operation panel 15 has buttons such as a bet button 18 and a payout button. When the bet button 18 is operated to select the number of coins to be bet, the winning line to be validated is determined. For example, one winning line is validated when one coin is bet, and eight winning lines are validated in maximum betting. Then, the game is started by the operation of the start lever 17, and each reel automatically stops at stop positions to display the symbols determined in accordance with random numbers sampled in advance. If a winning symbol combination stops on the winning line or a winning symbol is displayed, dividend coins are dispensed to the coin tray 16. The amount of the dividend coins is determined based on the type of the win.

[0038] A symbol display device 20 mounted in the slot game machine 2 is disposed above the front panel 11. The symbol display device 20 executes the roulette game (sub game) if the player wins in the slot game (main game) using the reels. As shown in FIG. 2, the symbol display device 20 is a unit composed of first, second and third display plates 21, 22 and 23, a reel mounting plate (rotator) 24, a sub reel 25, a display driver 26 and a support plate 27. The symbol display device 20 is covered with a front door 30 (see FIG. 1). Besides the sub game device, the symbol display device 20 may be utilized as means to determine the amount of the dividend coins, for instance.

[0039] As shown in from FIG. 3 to FIG. 5, each of the first, second and third display plates 21, 22 and 23 are respectively composed of transparent circular plate having the same diameter. A first, second and third display parts 21a, 22a and 23a are provided in the first, second and third display plates 21, 22 and 23, respectively. The first display part 21a in the first display plate 21 is the smallest while the third display part 23a in the third display plate 23 is the largest. The outer diameter D1 of the first display part 21a has the same length as the inner diameter D2 of the second display part 22a, while the outer diameter D3 of the second display part 22a has the same length as the inner diameter D4 of the third display part 23a.

[0040] The second display plate 22 is disposed in front of the third display plate 23, and the first display plate 21 is disposed in front of the second display plate 22. The third display plate 23 is disposed in front of a sub reel 25. The first, second and third display plates 21, 22 and 23 are concentrically attached to the display driver 26. Note that the display part 22a of the second display plate 22 is observable through the transparent part 21b of the first display plate 21, and the display part 23a of the third display plate 23 is observable through the transparent part 21b of the first display plate 21 and the transparent part 22b of the second display plate 22. Thereby, the first, second and third display parts 21a, 22a and 23a are disposed concentrically and adjacent to each other (see FIG. 11). The first, second and third display plates 21, 22 and 23 operate as main display means.