

the position detecting segments **75**, **76** and **77** are detected by each photo interrupter **80** (see FIGS. **3**, **4** and **5**). The sub reel **25** is on the standard line **88** when the position detecting segment **78** is detected by the photo interrupter **80** (see FIG. **11**).

[0051] The fifth drive motor **48** is fixed to the reel mounting plate **24** by brackets **81** and **82**. The sub reel **25** is fixed to the drive shaft of the fifth drive motor **48** by a flange **83**. Thereby, drive force of the fifth drive motor **48** is transmitted to the sub reel **25**. The photo interrupter **85** detects the position detecting segment **84**, which is fixed to the flange **83**, so as to detect the rotation of the sub reel **25**. Note that, in the present embodiment, the winning symbol **34** in the sub reel **25** is displayed behind the third display plate **23** when the position detecting segment **84** is detected by the photo interrupter **85**.

[0052] Since the display driver **26** is fixed to the support plate **27** as one unit, the symbol display device **20** becomes small. Moreover, it is possible to improve workability, because the symbol display device **20** is easily mounted in the slot game machine **2** just by mounting the support plate **27** to a predetermined position and it improves the workability as well. Note that the composition of the display driver **26** is not limited in the above embodiment but other mechanism may be utilized. For example, a pulley and a toothed belt may be used instead of the gears.

[0053] FIG. **9** is a functional block diagram showing an electrical configuration of a part of the slot game machine **2** for executing roulette game. Note that an explanation and drawing of a part for executing slot game are omitted. A CPU **90** controls each section in accordance with a roulette game program stored in a ROM **91** when the player wins in the slot game.

[0054] The ROM **91** stores pulse number data to specify the number of the drive pulse of the drive motors **44**, **45** and **46** to rotate the first to third display plates **21**, **22** and **23** by predetermined angle. On receiving a game start signal from the CPU **90**, a random number generator **93** samples a random number and outputs it to a stop symbol determining section **94**. The stop symbol determining section **94** determines the stop positions for the blank symbols **31a**, **31c** and **31e** in the first to third display parts **21a**, **22a** and **23a** with reference to a stop position table **95**. The stop symbol determining section **94** obtains pulse number data for the first, second and third display plates **21**, **22** and **23** from the ROM **91** such that the blank symbols **31a**, **31c** and **31e** reach the respective stop positions.

[0055] A motor controller **96**, operated in response to the game start signal from the CPU **90**, drives the first to third drive motors **44**, **45** and **46** through the drivers **97**, **98** and **99**. Each of counters **100**, **101** and **102** counts the number of each of the drive pulse inputted to the first to third drive motors **44**, **45** and **46**. By monitoring the number of the drive pulses, the motor controller **96** specifies the positions of the blank symbols **31a**, **31c** and **31e**. The CPU **90** outputs a rotation stop signal to the motor controller **96** when the counters **100**, **101** and **102** count the same pulse numbers as the ones stored in the RAM **92**. In response to the rotation stop signal, the motor controller **96** stops driving of the first to third drive motors **44**, **45** and **46**. Note that the count values of the counters **100**, **101** and **102** is reset respectively at the time when the photo interrupters **80** detect the position detecting segments **75**, **76**, **77**.

[0056] Referring to the count values of the counters **100**, **101** and **102**, a stop position checking section **105** checks whether the blank symbols on the first to third display parts **21a**, **22a** and **23a** stop in line on any of winning lines **120** to **131**. If the stop position checking section **105** recognizes that the blank symbols stop in line on any of the winning lines **120** to **131**, the motor controller **96** drives the fourth drive motor **47** through a driver **106**.

[0057] The sub reel **24** is located at a position in which the rotary shaft of the sub reel **25** is overlapped with one of the winning lines **120** to **131**. The ROM **91** stores pulse number data for the fourth drive motor **47** to rotate the sub reel **24** by predetermined angle. The motor controller **96** stops the fourth drive motor **47** when the count value of the counter **107** reaches the pulse number for the winning line with three blank symbols in line. Note that the count value of the counter **107** is reset at the time when the photo interrupter **80** detects the position detecting segment **78**.

[0058] Then, the motor controller **96** drives the fifth drive motor **48** through a driver **108** to start rotating the sub reel **25**. The CPU **90** reads pulse number data for the fifth drive motor **48**, stored in the ROM **91**, to rotate the sub reel **25** by predetermined angle. The motor controller **96** stops the fifth drive motor **48** when the count value counted by a counter **109** reaches the pulse number. Note that the count value of the counter **109** is reset at the time when the photo interrupter **85** detects the position detecting segment **84**.

[0059] A winning judging section **110** judges whether there is a winning symbol combination in a radial direction when the first to third displays **21**, **22** and **23** stop rotation. The ROM **91** stores winning count value data for the counters **81**, **82** and **83** at the time when winning symbol combinations are appeared on the winning lines **120** to **131**. The winning judging section **110** refers the count value of the counters **81**, **82** and **83** to judge whether there is a winning symbol combination. In addition, the winning judging section **110** judges the win or the loss based on the count value of the counter **109** when the sub reel **25** stops rotation. If the winning judging section **110** judges that the re-rotation symbol **36** is displayed, the CPU **90** operates a random number generator **93** again. If the winning judging section **110** judges the win, the CPU **90** operates a coin dispenser **112** to dispense dividend coins, whose amount is determined based on the type of the win.

[0060] The function of the slot game machine, wherein the symbol display device structured as described above is mounted, is explained with reference to the flow chart of FIG. **10**. Note that the explanation about the slot game as the main game is omitted so that only the roulette game as the sub game is explained.

[0061] If the player wins in the main game, the CPU **90** operates the random number generator **93** to sample a random number. Based on the sampled random number, the stop symbol determining section **94** determines the stop positions of the blank symbols **31a**, **31c** and **31e** and the symbol **34** of the sub reel **24**, which are temporarily stored in the RAM **92**. Simultaneously, the CPU **90** operates the motor controller **96** to rotate the first to third display plates **21**, **22** and **23** through the first to third drive motors **44**, **45** and **46**.

[0062] After the first to third display plates **21**, **22** and **23** start rotating, the CPU **90** stops the first display plate **21** first,