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D E C I S I O N
of 2 December 1993

Case Number: T 0353/92 - 3.4.1

Application Number: 84307880.9

Publication Number: 0142371

IPC: G07F 17/34

Language of the proceedings: EN

Title of invention:
Slot machine

Patentee:
Kabushiki Kaisha Universal

Opponent:
Bally Wulff Automaten GmbH

Headword:
Slot machine/UNIVERSAL

Relevant legal norms:
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
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Case Number: T 0353/92 - 3.4.1

D E C I S I O N
of the Technical Board of Appeal 3.4.1
of 2 December 1993

Appellant: (Opponent)
Bally Wulff Automaten GmbH
Maybachufer 48-51
D - 12045 Berlin (DE)

Representative:
Butenschön, Antje, Dr.
Pfenning, Meinig & Partner
Kurfürstendamm 170
D - 10707 Berlin (DE)

Respondent: (Proprietor of the patent)
Kabushiki Kaisha Universal
561, Oaza Arai
Oyama-shi, Tochigi-ken (JP)

Representative:
Nicholls, Michael John
J.A. Kemp & Co.
14 South Square
Gray's Inn
London WC1R 5LX (GB)

Decision under appeal: **Decision of the Opposition Division of the European Patent Office dated 20 February 1992 rejecting the opposition filed against European patent No. 0 142 371 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: G.D. Paterson
Members: Y. van Henden
R.K. Shukla

Summary of Facts and Submissions

I. The Respondent is Proprietor of European patent No. 0 142 371.

Claims 1 and 5 of this patent read:

"1. A slot machine of a type that the presence or absence of a win is judged for each game based upon a combination of symbols stopped on a winning line, characterized by:

means (50) for cumulatively storing the number of games played;

means (51) for cumulatively storing the number of wins every time a game is played and a win is generated;

comparison means (55) for comparing said stored number of wins with a preset standard number of wins every time said stored number of games reach a predetermined number; and

control means (30) for controlling the stop positions of said symbols on said winning line in such a manner that when said comparison means (55) detects that said stored number of wins is larger than said standard number of wins a win is harder to get, and when said comparison means (55) detects that said stored number of wins is smaller than said standard number of wins, a win is easier to get.

5. A slot machine of a type that the presence or absence of a win is judged at each game based upon a combination of symbols stopped on a winning line, characterised by:

a game number setting section (52) for storing a preset number of games;

a game number counter (50) for storing cumulatively the number of games played;

a winning number setting section (54) for storing a standard number of wins set in accordance with said preset number of games;

a winning number counter (51) for cumulatively storing the number of wins generated while games are played as many times as said preset number of games;

first comparison means (53) for outputting a coincidence signal by detecting that the number of games cumulatively counted by said game number counter reaches said preset number of games;

second comparison means (55) for comparing upon reception of said coincidence signal said standard number of wins with the number of wins cumulatively counted by said winning number counter (51) and outputting a signal in correspondence with the comparison result; and

control means (30) for adjusting the stop positions of symbols on said winning line in response to said signal from said second comparison means (55),"

a minor clerical error in Claim 1 being here corrected.

The remaining Claims 2 to 4 are appended to Claim 1.

II. The Appellant gave notice of opposition to the European patent on the grounds mentioned in Article 100(a) EPC, referring to the state of the art which can be derived from documents:

D1: GB-A-1 591 001, and
D2: GB-A-2 119 990.

III. The Opposition Division rejected the opposition.

IV. The Opponent lodged an appeal against the decision of the Opposition Division.

V. The Respondent commented on the grounds of appeal in a letter received on 18 September 1992 with an annexed set of claims (alternative submission No. 1).

VI. The Board summoned the parties to oral proceedings which were held on 2 December 1993.

During the oral proceedings, the Respondent handed over a further set of claims (alternative submission No. 2).

VII. The Appellant requested that the decision under appeal be set aside and that the patent in suit be revoked.

In support of these requests, the Appellant argued substantially as follows:

Document (D1) describes a fruit machine comprising a microswitch (10) which delivers an impulse to a counter (18) each time a coin or a token is inserted in the machine. Microswitches (12, 14, 16) deliver impulses fed to a further counter (20) for cumulating the moneys paid. After 100 games, a comparator (32-38) checks whether the cash paid out lies between two predetermined limits and generates one or more impulses which are fed to a step unit, which unit acts so upon the machine as to vary the frequency of winning configurations.

Counting the coins or tokens inserted into the slot of a gaming machine is, however, equivalent to counting the number of games played, as actually confirmed by the sentence on page 4 of (D1), lines 32 to 34. Therefore, the only difference that can be perceived with respect to (D1) is that the claimed slot machine takes into account the number of winning games instead of the cash paid out. Yet, in both cases, the final purpose of the invention is to give a satisfaction to the player by keeping the favourable results at a constant level

during each run of a predetermined number of games. According to (D1), said level is defined by the total amount of cash paid out during a predetermined number of games. Nevertheless, no inventiveness is required from the skilled person to define it by the percentage of successful games.

No inventive step, therefore, can be perceived in Claim 1. Furthermore, the same reasoning applies to Claim 5 for the game number setting section (52) corresponds to the commutator (28) of (D1); the winning number setting section (54) corresponds to the commutator (30) of (D1); the first comparator (53) corresponds to the combination of the counter (18b), commutator (28) and impulse generator (26) of (D1); the second comparator (55) corresponds to the combination of counter (20), commutator (30) and gates (32, 34); and the control means (30) correspond to the combination of step unit (50) and the random feature unit (62).

VIII. The Respondent requested that the appeal be dismissed and that the patent be maintained as granted, or in accordance with the first auxiliary request filed on 18 September 1992, or in accordance with the second auxiliary request filed during the oral proceedings.

The Respondent's argumentation in support of these requests may be summarised as follows:

Document (D1) was cited against the European patent for the simple reason that it discloses the maximum number of features of the claimed machine. Nevertheless, there is no apparent relation between the respective technical problems solved by the present invention and by the one disclosed in (D1).

The invention disclosed in (D1) aims at reducing the difference in pay-out ratio between skilled and unskilled players by adjusting the number of times a win-enhancement feature is offered. The pay-out ratio is the ratio between the amount of money paid out and the amount of money paid in, regardless of distribution of the pay-out over a cycle of games played. There is consequently no simple equivalence between the amount of money awarded as prize and the number of winning games achieved. In particular, the whole pay-out ratio could be achieved by only one pay-out whereby the interest in the subsequent games would be so reduced that nobody would then play with the machine.

The problem which the present invention addresses is that, if the pay-out ratio is set, a win becomes less likely after a high number of wins. It is thus to make the average time between won games, i.e. the win distribution, more uniform. This problem arises with both random stop machines and player-stop machines. Under given conditions, the present invention aims to control the initial stopping positions of the reels. Thereby, the chance of an initial win is reduced. This does not happen with a machine of the kind known from (D1), where the basic randomly determined stop position is not affected and with which a run of wins can still occur. The present invention and the one disclosed in (D1) are thus concerned with different parts of the play. This difference is reflected in the independent claims of the European patent, both of which refer to "controlling the stop position of the reels". A further difference is that, in a machine according to (D1), numbers of coins rather than amounts of money paid out are compared every time the stored number of games reaches a predetermined number.

IX. After deliberation by the Board, the decision was announced that the appeal is dismissed and that the patent is maintained as granted.

Reasons for the Decision

1. *State of the art*

1.1 The Board has no reason to doubt that, when filing the European application on the basis of which the patent in suit was granted, the Respondent validly claimed the priority of the Japanese patent application No. 212547/83. Document (D2) which was published after the priority date of the patent in suit, therefore, may not be taken into consideration while assessing the patentability of the subject-matter claimed in the European patent.

1.2 The Board agrees with the Respondent that the gaming machine described in document (D1) exhibits more features in common with the claimed slot machines than any other prior art documents cited in the European Search Report. The Board agrees with the Respondent regarding this point. Document (D1) therefore represents the closest state of the art.

1.3 The prior art machine described in document (D1) comprises microswitches (12, 14, 16) which monitor the paying-out respectively of five, ten and fifty pence coins, a pulse multiplier (22) for doubling the pulses from microswitch (14), a pulse multiplier (24) for multiplying by ten the pulses from microswitch (16), and counters (20a, 20b) which count pulses applied from the switch (12) and the pulse multipliers (22, 24), each such pulse representing a five pence unit - see the

Figure and page 2, lines 48 to 50 and 52 to 56. An AND gate (32) is connected to the counters (20a, 20b) and provides an output when - by way of example - a count of 75 is reached - see page 2, line 63 to page 3, line 1. A latch circuit (36) is set by a pulse from gate (32) once the count of 75 has been reached or exceeded, and the output of said latch circuit is inverted in an inverter (40) - see page 3, lines 1 to 4. A further AND gate (42) receives the output of inverter (40) and that provided by a pulse generator (26) as the game counter (18b) reaches a selected count - see Figure and from page 2, line 57 to page 3, line 7. The gate (42) thus outputs a signal when less than 75 x 5 pence have been paid out during the completed game cycle. Likewise, a similar arrangement comprising an AND gate (34), a latch circuit (38), the pulse generator (26) and an AND gate (44) provides a signal outputted by gate (44) when - again by way of example - more than 85 x 5 pence have been paid out during the game cycle.

Therefore, the gaming machine described in (D1) comprises comparison means for comparing the amount of money paid out with a preset amount of money every time the number of games played reached a predetermined number.

1.4 The gates (42, 44) of the prior art machine are connected respectively to "increase" and "decrease" solenoids (46, 48) acting upon a switch arm (52) of a step unit (50), whereby the frequency of occurrence of a "Hold" facility is changed in the direction required to tend to maintain the mean pay out rate between 75% and 85% - see page 3, lines 7 to 11 and from page 3, line 59 to page 4, line 17. The gaming machine described in (D1) thus comprises "control means for controlling a hold facility of the symbols on the winning line in such a manner that, when the comparison means detect that the

stored amount of money paid out is larger than the preset amount of money, a win is harder to get, and when the comparison means detect that the stored amount of money paid out is smaller than the preset amount of money, a win is easier to get".

1.5 The gaming machine described in (D1) comprises a microswitch (10) which monitors insertion of 5 pence pieces, and counters (18a, 18b) which count pulses applied from the input microswitch (10) - see page 2, lines 48 to 52. Furthermore, it is stated on page 2, lines 30 to 32, that, "at the end of each 100-game cycle, the device compares the total value of moneys inserted for plays (100 x price of one game) with the total value of the prizes paid out during that 100-game cycle...". The function of the counter (18) is thus to cumulatively store the money inserted into the machine, even in the case of the alternative mentioned on page 4 of (D1), lines 33 to 35.

In the Board's judgment, therefore, it may not be asserted that the gaming machine described in (D1) comprises "means for cumulatively storing the number of games played".

1.6 In the Board's judgment, therefore, the claimed slot machine is distinguished over the prior art disclosed in (D1) in that

- instead of a total amount of money paid in during a game cycle, it is the number of games which is cumulatively stored;

- instead of a total amount of money paid out during a game cycle, it is the number of wins which is cumulatively stored;

- the comparison to a preset standard is performed on the basis of said number of wins;

- the stop position of the symbols instead of a "Hold" facility of said symbols is controlled;

- the quantity to be varied during the next game cycle is not the total amount of money paid out but the likelihood of a win, and in that

- the range of values in which no adjustment is performed is reduced to only one value.

2. *Inventive step*

The object of the invention disclosed in (D1) is to keep constant the pay-out ratio of a slot machine by offering the player "win enhancement" features enabling him to hold one or more symbols or to nudge one or more reels, i.e. to move them by one or two symbol positions.

The Appellant argued that, if the pay-out criterion is not chosen, it is nonetheless obvious to replace amounts of money by numbers of games, because both concepts are strictly equivalent. This, however, may not be agreed to, for document (D1) does not suggest to replace the criterion of pay-out ratio by that of win probability. Furthermore, (D1) does not disclose how the amount of a prize could be converted into a winning event.

As an alternative to the "hold" feature, (D1) suggests the provision of "gamble" and "jackpot" features. Nevertheless, in these cases, the stop control means mentioned in the European patent do not exist. Therefore, no account may be taken of the statement in (D1) that the control means control the stop position in accordance with the signal of the comparison means.

The object of the present invention is to stabilise the win probability of a machine in order that users remain interested in playing, even if large prize amounts have been generated during a small number of wins. This problem, the solution thereof by means of the novel features of the claimed machine and the advantages the latter provides are not suggested by document (D1), so that the novel features of Claims 1 and 5 cannot be regarded as obvious to the skilled person.

In the Board's judgment, therefore, independent Claims 1 and 5 of the patent in suit involve an inventive step within the meaning of Article 56 EPC.

3. Therefore, the grounds mentioned in Article 100(a) EPC do not represent a bar to the maintenance of the European patent as granted.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Beer G.D. Paterson