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(54) **Gaming machine**

(57) The invention relates to a device for playing a game, at least comprising player credit storage means for storing a player's credit, starting means for starting a new game session, determining means for determining the quality of prizes to be won by playing the game, display means for displaying, each time a game session has ended, the quality of the prize that has been won as determined by said determining means, as well as pay-out means for paying out the prize that the player may have won.

The known gaming devices are set or adjusted in such a manner as regards their playing behaviour that the prize to be paid out by the device will at all times represent a certain percentage of the amount of money inserted by the players. Said percentage is also called the payout factor, which is always lower than 1 and which generally ranges from 0.7 to 0.99. Furthermore, said payout factor has a fixed value for a specific gaming device, so that the playing behaviour or the payout behaviour of the gaming device is likewise fixed for all players.

The object of the present invention is to increase the versatility of the prior art gaming device and make it more attractive for the player to play. According to the invention, the gaming device is to that end incorporated in a system consisting of two or more gaming devices being in communication with each other, the determining means being arranged for determining the quality of the prizes to be won in dependence on the number of gaming devices being in use.

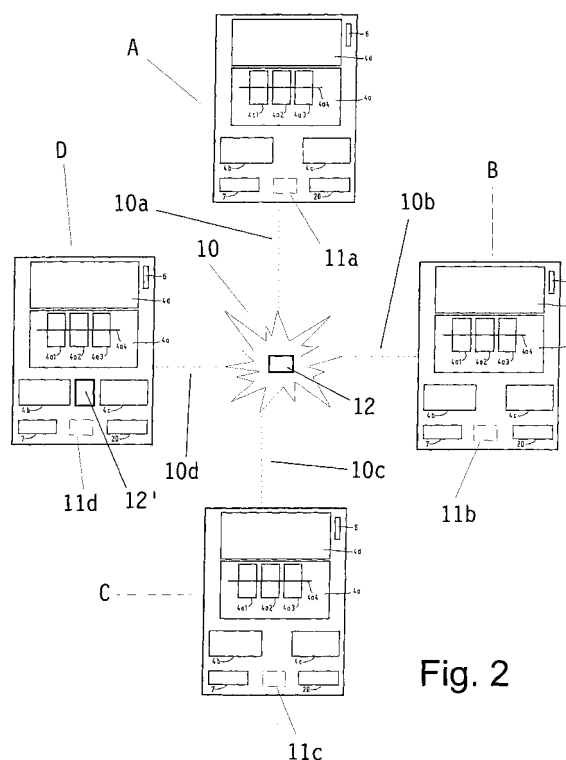


Fig. 2

Description

[0001] The invention relates to a device for playing a game, at least comprising player credit storage means for storing a player's credit, starting means for starting a new game session, determining means for determining the quality of prizes to be won by playing the game, display means for displaying, each time a game session has ended, the quality of the prize that has been won as determined by said determining means, as well as payout means for paying out the prize that the player may have won.

[0002] Such a generally known device is for example described in Dutch patent application No. 1015125. Such a device is for example embodied as a fruit machine comprising fruit rolls and a control unit comprising a random number generator. Stepping motors for rotating and stopping the fruit rolls are controlled on the basis of a number generated by said random number generator.

[0003] The determining means in that case comprise the random number generator, and the display means comprise the fruit rolls in combination with a win scheme. The prior art device furthermore comprises starting means including a start button for starting a single session of the game, after which the determining means determine the quality (points) to be won by playing said single session of the game, and the display means display the quality (points) as determined by the determining means of the prize that has been won after said single session, which may or may not take place in the form of a combination of fruits on the fruit rolls. When the player presses the start button again, the above procedure is repeated, etc.

[0004] The prior art device may furthermore include player credit storage means for storing a player's credit, for example in the form of the total quality (points) of the prizes won by a player, which can be increased by inserting money and which can be decreased or increased each time a game session is played. When the player's credit reaches value zero, money will have to be inserted first before the game can be played again one or more times.

[0005] In addition to that, the known gaming device comprises payout means, which are arranged for paying out the player's credit stored in the player credit storage means to said player in the form of a prize associated with said credit (for example in the form of tokens or money).

[0006] The known gaming devices are set or adjusted in such a manner as regards their playing behaviour that the prize to be paid out by the device will at all times represent a certain percentage of the amount of money inserted by the players. Said percentage is also called the payout factor, which is always lower than 1 and which generally ranges from 0.7 to 0.99. Furthermore, said payout factor has a fixed value for a specific gaming device, so that the playing behaviour or the payout behaviour of the gaming device is likewise fixed for all players.

[0007] The object of the present invention is to increase the versatility of the prior art gaming device and make it more attractive for the player to play.

[0008] According to the invention, the gaming device is to that end incorporated in a system consisting of two or more gaming devices being in communication with each other, the determining means being arranged for determining the quality of the prizes to be won in dependence on the number of gaming devices being in use.

[0009] As a result of this aspect of the invention, the gaming device will no longer exhibit a fixed playing or payout behaviour, but its behaviour will vary in dependence on the number of gaming devices that are active within the system. The player thus operates a gaming device which - depending on the number of gaming devices that are active within the system - exhibits a variable playing behaviour and a variable associated payout behaviour.

[0010] In a special embodiment, the determining means are arranged for increasing or decreasing said quality in dependence on the number of active gaming devices being in use.

[0011] Thus the player may be confronted with a gaming device exhibiting a playing behaviour and an associated payout behaviour of higher or lower prizes to be won.

[0012] More specifically, in another embodiment of the gaming device according to the invention, wherein the playing behaviour and consequently the payout behaviour is variable or adjustable, the determining means determine the quality of prizes to be won by playing the game partially on the basis of a payout factor, whose value forms the percentage of the amount of the prizes to be paid out to the players in proportion to the player credit as inserted by the players, and wherein the determining means are arranged for increasing or decreasing the value of the payout factor in dependence on the number of gaming devices being in use.

[0013] In a very functional embodiment, all the gaming devices are interconnected by means of telecommunication links.

[0014] In order to be able to determine in a simple manner which ones of the interconnected gaming devices incorporated in the system are being actively played, the system comprises establishing means arranged for establishing the number of gaming devices in the system that are active.

[0015] Said establishing means may be arranged for establishing the activity of a gaming device on the basis of the amount of a player's credit and/or (the frequency of) the number of times the player has activated the starting means.

[0016] In another embodiment according to the invention, said establishing means are arranged for adjusting the determining means of each active gaming device as regards the determination of the quality of prizes to be won by

playing the game on the basis of the number of active gaming devices.

[0017] More particularly, said establishing means are arranged for adjusting the determining means of each active gaming device as regards the increasing or decreasing of the value of the payout factor on the basis of the number of active gaming devices.

[0018] In another embodiment, the establishing means may be incorporated in a gaming device.

[0019] In another special embodiment of the invention, each gaming device is further arranged for indicating to the player the value of or the change in the payout factor, for example by means of light and/or sound.

[0020] The display means may be arranged for displaying the value of or the change in the payout factor to the player.

[0021] The invention furthermore relates to a system consisting of two or more gaming devices according to the invention, which are in communication with each other.

[0022] The invention will now be explained in more detail with reference to a drawing, in which:

Fig. 1 shows a device according to the prior art;

Fig. 2 shows an embodiment according to the invention, which is composed of a system comprising several gaming devices according to the invention.

[0023] In Fig. 1 a concrete example of a known gaming device according to the prior art in the form of a slot machine is shown. The hardware is controlled by means of a control unit. Said unit also processes the inputs from, for example, the start button 20. The control software, among which the buffer means (not shown), runs on said control unit. The slot machine that is shown in Fig. 1 comprises a money slot 6, a payout button 7, a start button 20 and display means 4a, 4d for displaying the prize that has been won each time a game session has ended. In this case, the prize that has been won is indicated by the combination of the fruits on the three fruit rolls 4a1, 4a2 and 4a3 that are aligned on the win line 4a4.

[0024] The known gaming device furthermore comprises player credit storage means 5 for storing a player's credit T in the form of a total amount of money or points. Said player's credit is displayed to the player and continuously updated, with the player's credit on the one hand decreasing when the player starts a game session by pressing the start button 20 and on the other hand increasing when the started game session yields a prize > 0, which prize, at least the quality associated therewith, is added to the player's credit. The moment the player's credit becomes zero, playing the gaming device is no longer possible. The player (or another player) can play the gaming device again by increasing the credit by inserting money into the money slot 6.

[0025] By pressing the start button 20, a single game session is started. The player's credit decreases. The fruit rolls 4a1-4a3 of the display means 4a start to rotate. The rolls 4a1-4a3 stop on the basis of the quality determined by the determining means and show a combination of fruits on the win line 4a4, which combination may be a losing combination or a winning combination. The prize associated with the winning combination lights up on the win scheme 4d and is added to the player's credit, whilst the applicable total for the player's credit is displayed by display means 4c.

[0026] The quality of a prize may be the amount, for example the amount of money or the number of points, zero included, or the nature of the prize, for example a feature or a physical product.

[0027] The known gaming devices are set or adjusted in such a manner as regards their playing behaviour that the prize to be paid out by the device will at all times represent a percentage of the amount of money inserted by the players. Said percentage is also called the payout factor, which is always lower than 1 and may generally range from 0.7 to 0.99. Furthermore, said payout factor has a fixed value for a specific gaming device, so that the playing behaviour or the payout behaviour of the gaming device is likewise fixed for all players.

[0028] Fig. 2 shows an embodiment of a gaming device according to the invention forming part of a system 10 comprising two or more, four in this case, gaming devices indicated A-D. The gaming devices of this embodiment are identical to each other, viz. fruit machines as shown in Fig. 1. For a clear understanding of the invention it is noted that it is also possible to incorporate different types of gaming devices in the system 10.

[0029] The various gaming devices A-D are interconnected in the system 10 by means of suitable telecommunication links 10a-10d. Said communication links may be telephone links or network links. In the former case, each gaming device may comprise a suitable modem adapter 11a-11d, whilst in the latter case the communication between the various gaming devices takes place via a network adapter 11a-11d.

[0030] The communication between the various devices can take place via a Unix or Novell-based network protocol, or via the TCP/IP protocol, for example, which is related to the Internet.

[0031] According to the invention, each gaming device A-D is arranged in such a manner that the determining means determine the quality of the prizes to be won in dependence on the number of gaming devices A-D that are active within the system. More in particular, the determining means are arranged for increasing or decreasing said quality.

[0032] Unlike the known gaming devices, in which the playing or payout behaviour is of a fixed, unvarying nature, it is possible to change said playing or payout behaviour when using a gaming device according to the invention. This gives the player an opportunity to play a game in which the payout is higher or in which there is a greater chance of

winning a high prize.

[0033] The playing and/or behaviour of a specific gaming device, for example gaming device A, depends on or is determined by the total number of gaming devices in the system 10 that are being actively operated by a player.

[0034] More in particular, the determining means determine the quality of prizes to be won by playing the game partially on the basis of the payout factor, which payout factor represents the total amount of the prizes to be paid out to the players in proportion to the player credit as inserted by the players. The determining means are arranged to increase or decrease the value of said payout factor in dependence on the number of gaming devices that are active. This is shown purely by way of illustration in the table below.

Table 1

Payout factor versus number of active gaming devices.

# active devices	payout factor	proceeds per hour
1	88 %	€ 25
2	90 %	€ 34
3	92 %	€ 41
..	..	..
10	98 %	€ 65

[0035] If only one gaming device, for example gaming device B, is being used by a player, said gaming device will function in a manner similar to a gaming device according to the prior art as shown in Fig. 1. That is, the gaming device B gears its playing and/or payout behaviour to a payout factor of 88%, i.e. only 88% of the currency unit value being inserted as money via the money slot 6 is available in the form of prizes that may be paid out to the player (or future players).

[0036] If more gaming devices (in this case A, C and D) in the system 10 are activated and played by players, the payout factor will increase to 90% in the case of two gaming devices being active within the system, the payout factor will be 92% in the case of three gaming devices being active and if the system comprises a total of ten gaming devices, the payout factor will increase to 98% for each gaming device if all ten gaming devices of the system are being played simultaneously.

[0037] Likewise, the payout factor will decrease correspondingly when a gaming device that was first active within the system becomes inactive, for example because the player credit of the gaming device in question is reduced to zero and is not further increased by the player in question, for example because the player wishes to stop playing.

[0038] The system comprises establishing means for establishing if and how many gaming devices in the system 10 are being actively used by players, which establishing means are arranged for establishing the number of gaming devices A-D that are active within the system. Said establishing means, which are schematically indicated at 12 in Fig. 2, may be incorporated in the system 10 as a separate unit 12, for example, which separate unit 12 is in communication with all the gaming devices A-D that are incorporated in the system 10. In another embodiment (likewise shown in Fig. 2) the establishing means 12 may be incorporated in a gaming device, gaming device D in this case, in which the establishing means are indicated by numeral 12'.

[0039] The establishing means establish the activity of a gaming device A-D on the basis of, for example, the amount of a player's credit and/or the number of times or the frequency (during a particular time unit) the player in question activates the starting means 20 of the gaming device in question.

[0040] The display means 4 can suitably pass on the amount of the player's credit to the establishing means (embodied as a central unit 12 in the system 10, or as a unit 12' incorporated in the gaming device D) in the form of control signals via the communication links 10a-10d. Likewise, the number of times that the starting means 20 are activated by a player during a particular period can be established in a simple manner and be passed on to the establishing means 12 (12') in the form of a control signal.

[0041] On the basis of said control signals, the establishing means establish how many gaming devices are active.

Based on Table 1, for example, the determining means of each gaming device A-D are set or reprogrammed via the various communication links 10a-10d as regards the manner in which the determining means determine the quality of the prizes to be won. For example, the establishing means 12 (or 12') can adjust the determining means so that said determining means generate higher or lower prizes in dependence on the number of active gaming devices.

[0042] More in particular, the establishing means 12 (or 12') can adjust the determining means so that said determining means increase or decrease the payout factor, again in dependence on the number of active gaming devices as established by the establishing means 12 (12').

[0043] Thus the payout factor can be increased or decreased by a fixed value, for example by $\pm 1\%$ or $\pm 2\%$ for each gaming device that is activated or deactivated within the system. On the other hand, the payout factor may increase or decrease proportionally in dependence on the number of active/inactive gaming devices.

[0044] To enhance the players' perception of the game in the system of several gaming devices according to the invention, each gaming device may furthermore be arranged for indicating the value or the change in the payout factor to the player, for example by means of light and/or sound. The display means may in that case be arranged for displaying the value or the change in the payout factor to the player.

[0045] It will be understood that the attraction and the challenge to the players will increase significantly when this game concept is used, because more prizes can be won (read: more frequent payouts or higher prizes) if several players simultaneously play the gaming devices A-D that are incorporated in the system 10.

[0046] It will be understood that the embodiment described in the present application is not limited to a number of four gaming devices, but that the system 10 may comprise ten or more gaming devices, possibly of different types, as long as said gaming devices are interconnected via suitable communication links and are furthermore capable of communicating with each other via said communication links.

[0047] Although the invention (see the figures) is disclosed herein on the basis of a more or less mechanical embodiment of a slot machine comprising fruit rolls that rotate with each game session, thus displaying a specific combination of fruits to the player, the invention can also be implemented very well with a slot machines in which the rotation of the fruit rolls is simulated on a display screen and in which also the obtained combination of fruits is disclosed via said display screen.

[0048] Also other types of slot machines (i.e. not specifically of the fruit machine type), in which the outcome of the game is "simulated" on a display screen to the player are considered to fall within the scope of the invention.

Claims

1. A device for playing a game, at least comprising player credit storage means for storing a player's credit, starting means for starting a new game session, determining means for determining the quality of prizes to be won by playing the game, display means for displaying, each time a game session has ended, the quality of the prize that has been won as determined by said determining means, as well as payout means for paying out the prize that the player may have won, **characterized in that** the gaming device is incorporated in a system consisting of two or more gaming devices being in communication with each other, the determining means being arranged for determining the quality of the prizes to be won in dependence on the number of gaming devices being in use.
2. A device according to claim 1, **characterized in that** the determining means are arranged for increasing or decreasing said quality in dependence on the number of active gaming devices being in use.
3. A device according to claim 1 or 2, **characterized in that** the determining means determine the quality of prizes to be won by playing the game partially on the basis of a payout factor, whose value forms the percentage of the amount of the prizes to be paid out to the players in proportion to the player credit as inserted by the players, the determining means being arranged for increasing or decreasing the value of the payout factor in dependence on the number of gaming devices being in use.
4. A device according to any one or more of the preceding claims, **characterized in that** all the gaming devices are interconnected by means of telecommunication links.
5. A device according to any one or more of the preceding claims, **characterized in that** the system comprises establishing means arranged for establishing the number of gaming devices in the system that are active.
6. A device according to claim 5, **characterized in that** said establishing means are arranged for establishing the activity of a gaming device on the basis of the amount of a player's credit and/or (the frequency of) the number of times the player has activated the starting means.

7. A device according to claim 5 or 6, **characterized in that** said establishing means are arranged for adjusting the determining means of each active gaming device as regards the determination of the quality of prizes to be won by playing the game on the basis of the number of active gaming devices.

8. A device according to claim 5 or 6, **characterized in that** said establishing means are arranged for adjusting the determining means of each active gaming device as regards the increasing or decreasing of the value of the payout factor on the basis of the number of active gaming devices.

9. A device according to any one or more of the claims 5-8, **characterized in that** said establishing means are incorporated in a gaming device.

10. A device according to any one or more of the claims 3-9, **characterized in that** each gaming device is further arranged for indicating to the player the value of or the change in the payout factor, for example by means of light and/or sound.

11. A device according to claim 1, **characterized in that** the display means may be arranged for displaying the value of or the change in the payout factor to the player.

12. A system consisting of two or more gaming devices according to any one or more of the preceding claims, which are in communication with each other.

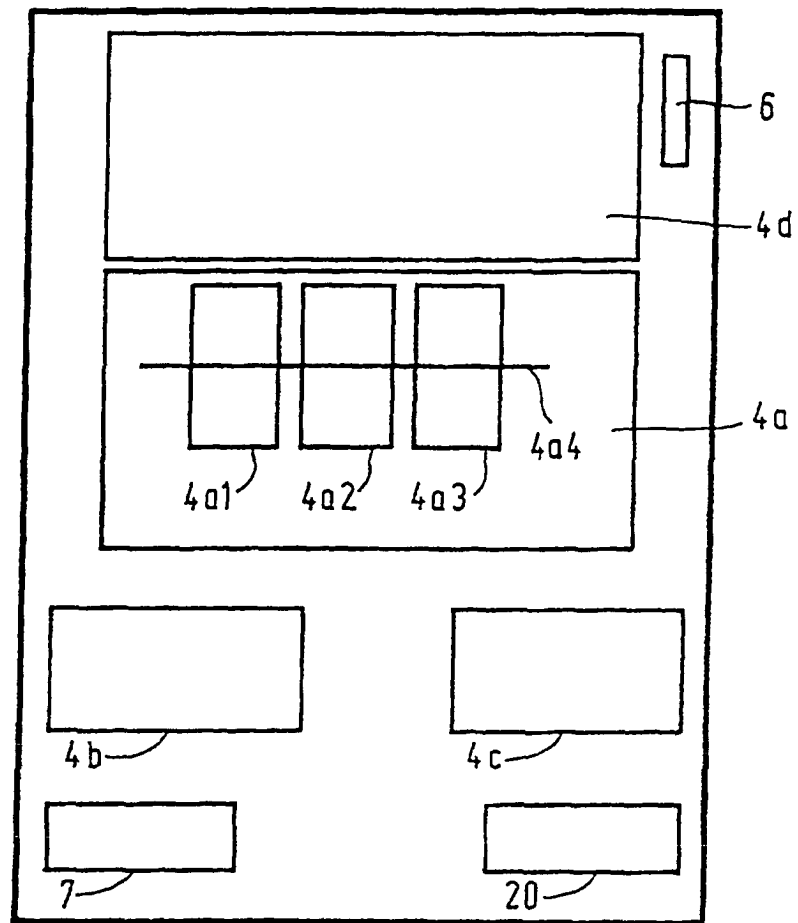


Fig. 1

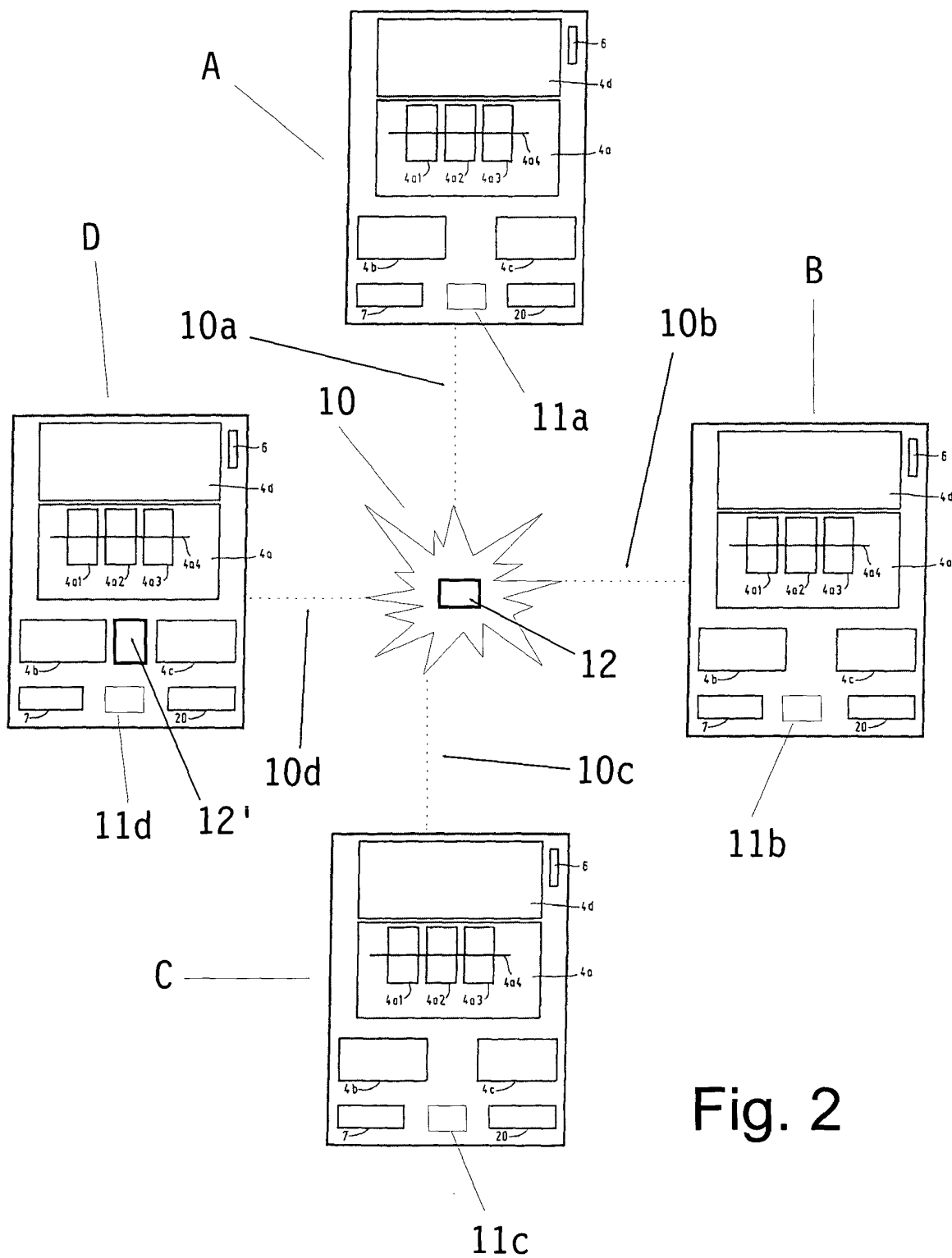


Fig. 2



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 07 7022

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	GB 2 201 279 A (BELL FRUIT MFG CO LTD) 24 August 1988 (1988-08-24) * abstract * * page 5, line 31 - page 6, line 2 * -----	1-12	G07F17/32
X	US 2002/045473 A1 (JORASCH JAMES A ET AL) 18 April 2002 (2002-04-18) * abstract * * page 5, paragraph 51 - paragraph 53 * * figures 6,7,9 * * tables 1,2 * -----	1-12	
A	DE 198 40 089 A (BALLY WULFF AUTOMATEN GMBH) 9 March 2000 (2000-03-09) * the whole document * -----	1-12	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G07F
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		20 September 2004	Van Dop, E
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 07 7022

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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20-09-2004

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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