



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 598 790 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
23.11.2005 Bulletin 2005/47

(51) Int Cl.7: **G07F 17/34**

(21) Application number: **05253083.9**

(22) Date of filing: **19.05.2005**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL BA HR LV MK YU

- **Bourenkov, Serge**
Toronto, Ontario, M5N 2X6 (CA)
- **Rozkin, Sergiy**
Toronto, Ontario, M9C 4W2 (CA)

(30) Priority: **19.05.2004 US 848581**

(71) Applicant: **Cryptologic, Inc.**
Toronto, Ontario M4S 1Y5 (CA)

(74) Representative: **Frost, Alex John**
Boult Wade Tennant,
Verulam Gardens
70 Gray's Inn Road
London WC1X 8BT (GB)

(72) Inventors:
• **Dunaevsky, Vladimir**
Toronto, Ontario, M2R 3N7 (CA)

(54) **A gaming device and method for providing a slot machine game incorporating images of currency**

(57) A gaming device, and a method of providing a slot machine game to a user on the gaming device. Reels comprising symbols are displayed, where each symbol is a partial image of a currency object. After a wager from a user to play at least one pay line is received, symbols on the display are rearranged and then

displayed. It is determined whether a whole image of a currency object is displayed within a played pay line, and if so, an award is provided to the user, where the award is associated with the currency object.

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Description

Field of the Invention

[0001] The invention relates generally to gaming devices, and more specifically, in at least one embodiment, to a method for providing on a gaming device a slot machine game that incorporate images of currency for display to users of the gaming device.

Background of the Invention

[0002] Slot machines are gaming devices that were originally designed primarily as mechanical machines that incorporate a number of physical reels that rotate about a central axis, and which are operated by a user inserting coins into a slot and pulling down on a long handle.

[0003] Slot machine-like games of chance are now played on a wide variety of other types of gaming devices, including for example: electro-mechanical machines incorporating physical reels that are operated by the pull of a handle or the push of a button; video terminals comprising a display for simulated virtual reels, and which are operated by the pull of a handle or the push of a button; gaming terminals incorporating a touch screen display providing simulated virtual reels and user-selectable images of buttons or other game initiation mechanisms, operated by selecting a button image or other game initiation mechanism on the screen by a user; and computing devices, possibly connected to a server over a communication network, within which a software application executes that is programmed to display simulated virtual reels to a user, and which is operated by providing user input via an input device coupled to the computing device (e.g. where the application detects certain keystrokes, or a mouse click when a cursor has been placed on an image of a displayed button or other game initiation mechanism, etc.).

[0004] Some of these gaming devices upon which slot machine-like games of chance are played provide means to accept a physical monetary deposit from the user in the form of coins, gaming tokens or paper currency, which can then be converted into playing credits. Other gaming devices permit playing credits to be accrued in other ways, by purchasing credits through an online payment system, for example.

[0005] Slot machine-like games (referred to herein more generally as slot machine games) played on these gaming devices are typically characterized by the display of multiple reels or columns, each upon which different icons (e.g. fruit, "7"s, bars, jackpot icons, etc.) are distributed. The reels are usually displayed adjacent to each other. One or more pay lines that span the individual reels are typically defined, and wagers may be placed by users on either all or a subset of the defined pay lines. After a wager by the user of the gaming device is made, the icons are rearranged on the display (e.g.

by spinning the reels or simulating the spin of reels, or by changing the icons displayed within the columns in some other manner), until a steady-state is achieved in which reels cease to spin or in which the display of icons otherwise stops changing. If a predefined combination of specific icons are distributed along a pay line upon which a wager has been placed, a payout is made to the user in accordance with a payout table. The payout table is a schedule that associates different combinations of icons with a number of credits to be paid out to the user if the specified combination is achieved, and in some cases, a multiplication factor may also be applied in association with particular combinations.

Summary of the Invention

[0006] The invention relates generally to a novel slot machine game, which may provide greater attraction to users of gaming devices as compared to traditional slot machine games.

[0007] In one broad aspect of the invention, there is provided a method of providing a slot machine game to a user on a gaming device, comprising the steps of: displaying a plurality of reels that comprise a plurality of symbols on a display, wherein each symbol is one of a plurality of partial images of a currency object; receiving a wager from the user to play at least one pay line; rearranging symbols on the display; displaying rearranged symbols on the display; determining from the rearranged symbols whether a whole image of a currency object is displayed within a played pay line; and providing an award to the user associated with the currency object for which a whole image thereof is displayed.

Brief Description of the Drawings

[0008] For a better understanding of embodiments of the invention, and to show more clearly how it may be carried into effect, reference will now be made, by way of example, to the accompanying drawings in which:

FIG. 1 is a flowchart illustrating the steps of a method of providing a slot machine game in an embodiment of the invention; and

FIGS. 2 - 5 are example screenshots illustrating various display features in various implementations of an embodiment of the invention.

Detailed Description of Embodiments of the Invention

[0009] In a broad aspect, the invention is directed to a slot machine game where partial images of currency objects such as coins, bills, notes or bank notes, investment certificates, checks, or other monetary instruments, for example, are used as symbols on reels or columns displayed on a gaming device.

[0010] The gaming devices on which methods of providing the slot machine game can be implemented is not limited to traditional mechanical slot machines, but may also include, for example, electro-mechanical machines, video terminals, gaming terminals with touch screens, and computing devices.

[0011] In an embodiment of the invention, the slot machine game is implemented on a personal computer that is coupled to a central gaming server that controls various aspects of the game through a communication network (e.g. the Internet), and that operates in a jurisdiction where such activities are legal. This is an example of an online gaming application of the present invention. In variant embodiments of the invention, other devices may be connected to an online gaming server through the Internet, an Intranet, or other network. Such other devices may include, for example, interactive TV, wireless mobile devices, and any other communication device or gaming device comprising a display for providing a graphical representation of a virtual slot machine to users and processing means for performing the steps for playing a slot machine game in accordance with an embodiment of a method of the present invention.

[0012] In an embodiment of the invention, the currency objects are real coins or bills, or realistic specimens thereof. For example, coins or bills of United States currency, United Kingdom currency, or Euro may be employed, where permission to display whole images and partial images thereof are obtained, where required by law. Use of images of actual currency objects allows users of the gaming device to readily identify symbols being displayed on a gaming device, and in particular, to facilitate ease of recognition of different denominations of the various coins, bills, or notes shown. However, in variant embodiments of the invention, generic depictions of coins, bills or notes may be employed.

[0013] Referring to FIG. 1, a flowchart illustrating the steps of a method of providing a slot machine game in an embodiment of the invention is shown generally as 10.

[0014] At step 20, multiple reels are displayed to the user of a gaming device. The reels may be physical or virtual, depending on the particular type of gaming device. Where virtual reels are displayed to the user on a video display, for example, the reels may be designed to simulate actual reels in shape, or may simply be represented as a field on the display (e.g. typically columns, although rows or other field shapes may be used) upon which symbols are shown.

[0015] The reels comprise multiple symbols, and each symbol is a partial image of a currency object. For instance, a symbol may be the left or right half of a particular coin, or the left or right half of a particular bill or note, for example. The partial images need not be halves of a currency object, but may represent different fractions of a currency object in variant implementations. For example, a currency object may be divided into 3, 4 or 5 parts, with each part being used as a sym-

bol on a reel.

[0016] In one embodiment of the invention, the symbols are provided on the reels in a manner that a whole image of a currency object may be formed if the corresponding partial images are aligned properly. In order to achieve this, the corresponding partial images are provided on adjacent reels so that when they are aligned, the partial images are displayed in order to form the whole image of the currency object.

[0017] For example, the left half of an image of a bill having a particular denomination may be provided on one reel, while the right half of an image of the same bill may be provided on the right-most adjacent reel, so that when the two halves are aligned, the whole image of the bill is substantially formed. This allows the user of the gaming device to very readily identify the completed image. Similarly, a first third, a middle third, and an end third of an image of particular coin may be distributed across three adjacent reels in an ordered fashion, such that when the thirds are aligned, the whole image of the coin is substantially formed. It will be understood by persons skilled in the art that various permutations are possible, and that the foregoing description is provided to illustrate a number of example implementations only.

[0018] At step 22, a wager is received from the user. The amount of the wager typically determines the number of pay lines played, and/or whether the payout that potentially would be associated with a particular pay line may be multiplied by a pre-determined factor.

[0019] At step 24, the symbols on the display are rearranged. In some implementations, this step is triggered by a particular user input (e.g., pulling a lever, pressing a button, or selecting the image of a button), which is provided separately from the action in which a wager is made by the user as received at step 22. In other implementations, however, initiation of this step may be performed automatically upon receipt of the wager from the user at step 22.

[0020] The manner in which symbols on the display are rearranged can depend on the particular gaming device. For example, mechanical reels may be spun to rearrange the display of symbols that are made visible to the user. Where virtual reels are employed, spinning of the reels may be simulated (e.g., by scrolling symbols within a column). In another example implementation, the reels may appear stationary, with the symbols shown as rapidly changing or flashing in preset positions on the display. It will be understood by persons skilled in the art that other techniques for rearranging symbols on the display may be employed.

[0021] At step 26, the rearrangement of symbols performed at step 24 ceases, and at least a subset of the symbols on the reels are then displayed to the user. Each displayed symbol may or may not be aligned within any particular pay line (played or not played).

[0022] At step 28, a determination is made, with regard to the subset of symbols being displayed at step 26, whether a whole image of a currency object is dis-

played within a played pay line. In an embodiment of the invention, where a whole image of a currency object comprises a first partial image and a second partial image which collectively can form the whole image, the whole image of the currency object is determined to be displayed within a played pay line when the first and second partial images are aligned within the played pay line and displayed in the proper order in adjacent reels (e.g., the left part of a bill is shown in one reel, and the right part of the same bill is shown in the right-most adjacent reel, aligned with each other in the played pay line). The use of two partial images may provide some advantages in some implementations, particularly for coins, in that it may be easier for users to identify the denomination of a currency object, even if only a partial image of that object is observable.

[0023] In another embodiment of the invention, use of more than two partial images may be necessary to form a whole image of a currency object, and the whole image of the currency object is determined to be displayed within a played pay line when all the partial images are properly ordered in successive, adjacent reels to form the whole image, aligned within the played pay line.

[0024] In another embodiment of the invention, the whole image of the currency object may be determined to be displayed within a played pay line even if the parts aligned within the played pay line are not displayed in immediately adjacent reels, or if the parts in the played pay line are not properly ordered. In certain implementations, different payouts may be associated with such combinations.

[0025] At step 30, an award is provided to the user associated with the currency object for which a whole image thereof is displayed as determined at step 28. In an embodiment of the invention, the award is equivalent to the monetary value of the whole currency object being displayed. For example, if the whole currency object displayed is a United States \$100 bill, then gaming machine credits equivalent to one hundred United States dollars may be awarded to the user, or that amount might otherwise be provided to the user as cash, or money transferred to an account, for example. One advantage of this embodiment, is that the user can very easily determine the amount of the award directly from the whole currency object being displayed, and therefore the need to provide a separate payout table is eliminated.

[0026] In providing the award, the whole currency object may be animated to provide additional entertainment value. These animation effects may include spinning coins, flip-flop coins, or the bending or rolling of bills, for example. Symbols other than those forming a whole currency object may also be subject to animation effects. Animation effects may be further supported with sound effects, such as the dropping of coins, or the riffling of paper, for example.

[0027] The provision of awards may or may not be based only on whole currency objects displayed on

played pay lines, based only on a single or maximum number of whole currency objects displayed per pay line, or restricted to a certain amount per wager. For example, an award may be provided to the user associated with each and every currency object for which a whole image thereof is displayed in multiple played pay lines, where more than one whole image is simultaneously displayed. As a further example, an award may alternatively be provided to the user only for the whole currency object displayed that represents the highest denomination.

[0028] In variant embodiments of the invention, various payout and/or bonus schemes may be employed, where certain payouts may be multiplied under specified conditions, and/or where bonuses may be awarded. For example, the symbols may also include partial images of a bonus element. If a whole image of the bonus element is displayed within a played pay line, an additional award associated with the bonus element may be provided to the user.

This additional award may take the form of additional credits, or the chance to play a bonus game, for example.

[0029] In one variant embodiment of the invention, images of virtual money or generic depictions of bills, notes, banknotes or other currency object are displayed to the user, and a conversion is made so that the award provided to the user represents real money.

[0030] In another variant embodiment of the invention, conversion between one form of currency into another can be performed. For example, a user may play the slot machine game where Euro are displayed, but where the award provided to the user is in United States dollars (e.g. by updating a United States dollars account) in an amount equivalent to the amount of Euros that the user may otherwise have won.

[0031] In another variant embodiment of the invention, the slot machine game supports the display of images of multiple currency objects of different countries or types (e.g. Euros and U.S. dollars), and where a conversion is made so that awards are provided to a user in a desired currency where required. The desired currency may or may not be the same as one depicted in the images displayed in the slot machine game. In another variant embodiment of the invention, more than one desired currency (e.g. through multiple accounts of different currencies) may be defined, and conversions made so that awards are provided to a user in a selected desired currency where required.

[0032] Referring now to FIGS. 2 - 5, example screenshots illustrating various display features in various implementations of an embodiment of the invention are provided, as shown in screen 100. In these examples, five reels 110 are displayed. Each reel 110 typically comprises multiple symbols that are made visible by the user at a particular time. The symbols can include a partial image of a bill 120, or a partial image of a coin 130. In different implementations, only partial images of bills

120 are provided on reels 110 (e.g. FIG. 2), only partial images of coins 130 are provided on reels 110 (e.g. FIG. 3), or a combination of both types of images may be provided (e.g. FIG. 4).

[0033] These screenshots show images of generic depictions of coins and bills by way of example; however, in another embodiment of the invention, the currency objects for which images are displayed are real coins, bills, notes, bank notes, investment certificates, checks or other monetary instruments.

[0034] With reference to FIGS. 2 - 4, it can be observed that certain partial images have become aligned after rearrangement to form whole images of a bill 140 or whole images of a coin 150. In an embodiment of the invention, these whole images depict real currency, and are used to provide an equivalent award to the user.

[0035] FIG. 5 depicts a whole bonus element 160 that may also be employed in an embodiment of the invention, and used to provide an award associated with that bonus element 160.

[0036] These screenshots depict example displays on a computing device, and it will be understood by persons skilled in the art that other displays for a computing device may be implemented, and other displays modified for other gaming devices may be implemented, without departing from the scope of the present invention.

[0037] Instructions for performing a method of providing a slot machine game in accordance with embodiments of the present invention may be provided on a computer-readable medium.

[0038] The invention has been described with regard to a number of embodiments. However, it will be understood by persons skilled in the art that other variants and modifications may be made without departing from the scope of the invention as defined in the claims appended hereto.

Claims

1. A method of providing a slot machine game to a user on a gaming device, comprising the steps of:

- a) displaying a plurality of reels that comprise a plurality of symbols on a display, wherein each symbol is one of a plurality of partial images of a currency object;
- b) receiving a wager from the user to play at least one pay line;
- c) rearranging symbols on the display;
- d) displaying rearranged symbols on the display;
- e) determining from the rearranged symbols whether a whole image of a currency object is displayed within a played pay line; and
- f) providing an award to the user associated with the currency object for which a whole im-

age thereof is displayed as determined in step (e).

2. The method of claim 1, wherein a whole image of a currency object comprises at least first and second partial images, and where the whole image of the currency object is determined to be displayed within a played pay line when the at least first and second partial images are displayed in order in adjacent reels.
3. The method of claim 1, wherein the award is equivalent to the monetary value of the currency object for which a whole image thereof is displayed as determined in step (e).
4. The method of claim 1, further comprising the step of animating the currency object for which a whole image thereof is displayed as determined in step (e) on the display.
5. The method of claim 4, further comprising the step of generating a sound effect during the animating step.
6. The method of claim 1, the symbols further comprising partial images of a bonus element, wherein the method further comprises the steps of determining from the rearranged symbols whether a whole image of the bonus element is displayed within a played pay line, and providing an award to the user associated with the bonus element.
7. The method of claim 1, wherein the providing step comprises converting between a first currency associated with the currency object for which a whole image thereof is displayed, and a second currency associated with the award provided to the user.
8. A gaming device on which a slot machine game is provided comprising:
 - a) means for displaying a plurality of reels that comprise a plurality of symbols on a display, wherein each symbol is one of a plurality of partial images of a currency object;
 - b) means for receiving a wager from the user to play at least one pay line;
 - c) means for rearranging symbols on the display;
 - d) means for displaying rearranged symbols on the display;
 - e) means for determining from the rearranged symbols whether a whole image of a currency object is displayed within a played pay line; and
 - f) means for providing an award to the user associated with the currency object for which a whole image thereof is displayed.

9. A computer-readable medium upon which a plurality of executable instructions for performing a method of providing a slot machine game to a user on a gaming device are stored, the method comprising the steps of:

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a) displaying a plurality of reels that comprise a plurality of symbols on a display, wherein each symbol is one of a plurality of partial images of a currency object;

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b) receiving a wager from the user to play at least one pay line;

c) rearranging symbols on the display;

d) displaying rearranged symbols on the display;

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e) determining from the rearranged symbols whether a whole image of a currency object is displayed within a played pay line; and

f) providing an award to the user associated with the currency object for which a whole image thereof is displayed as determined in step (e).

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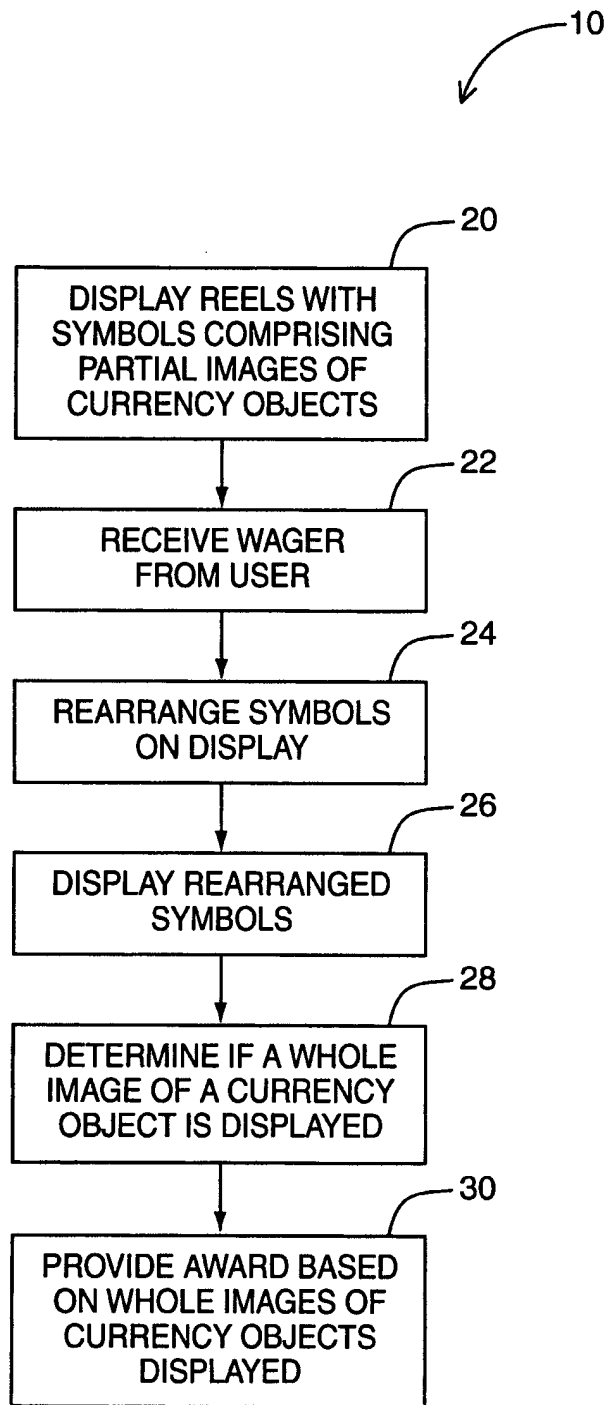


FIG. 1

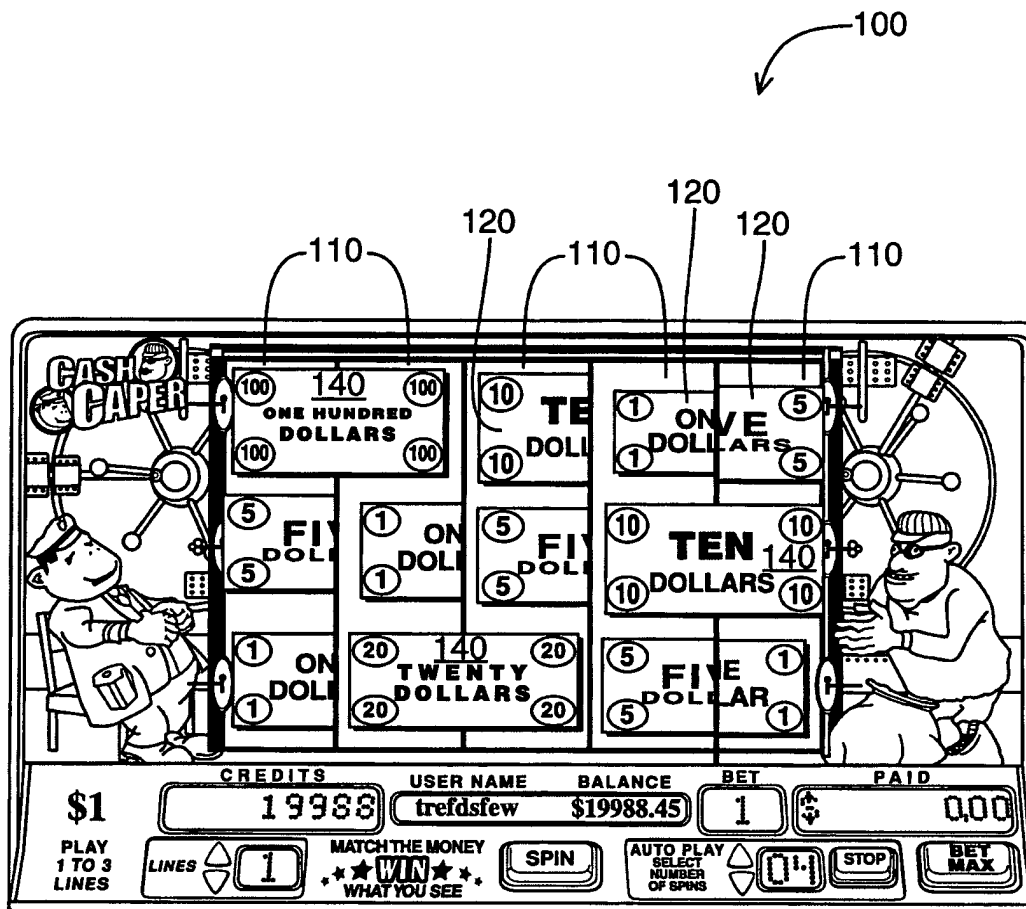


FIG. 2

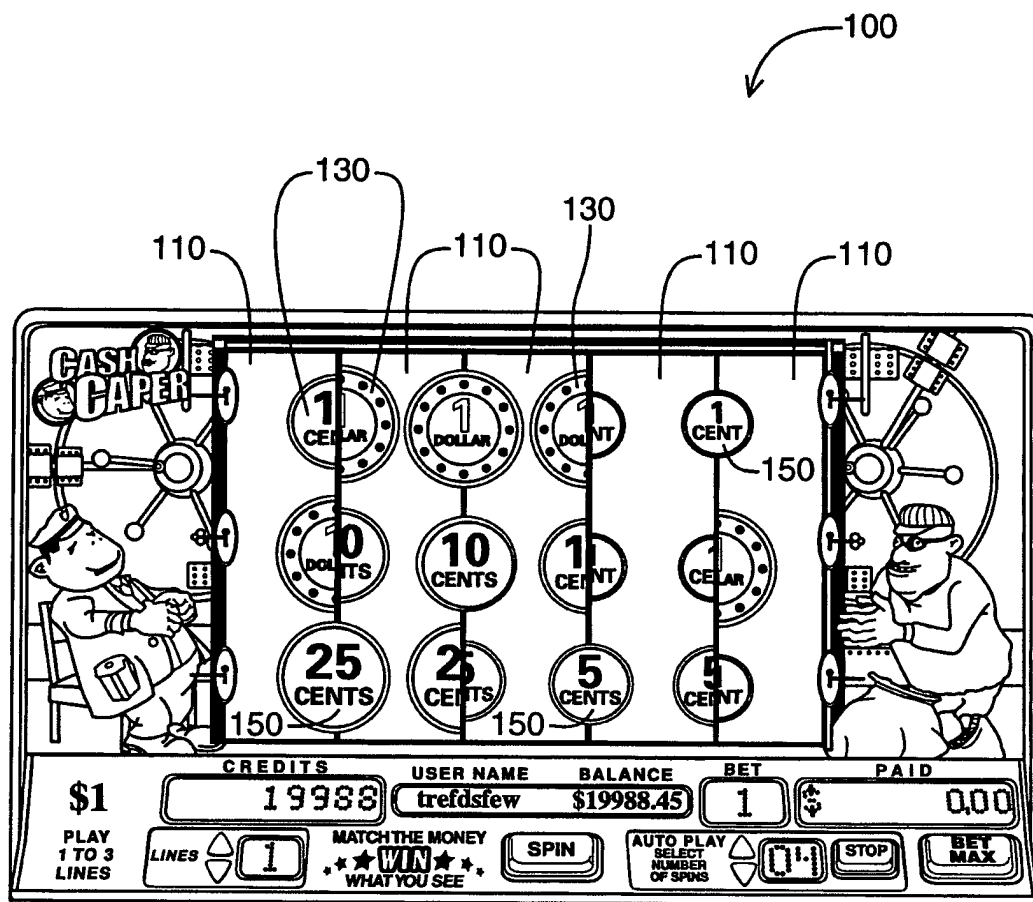


FIG. 3

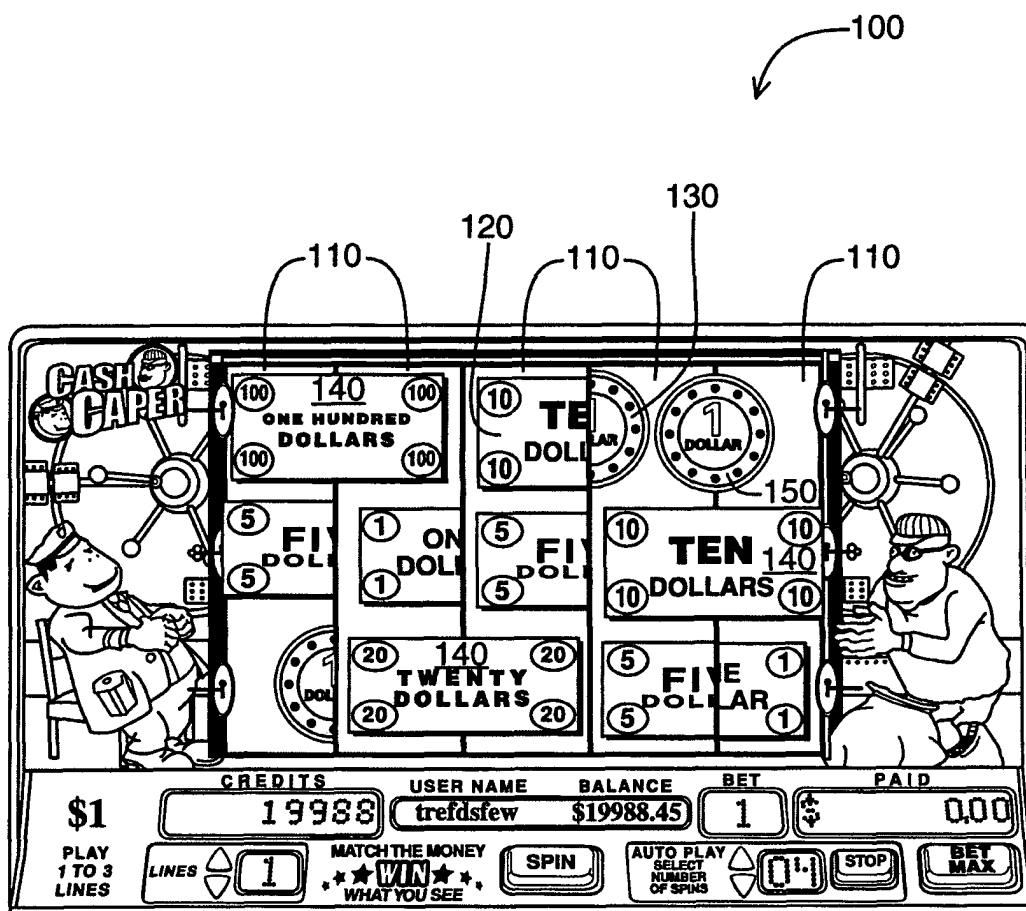


FIG. 4

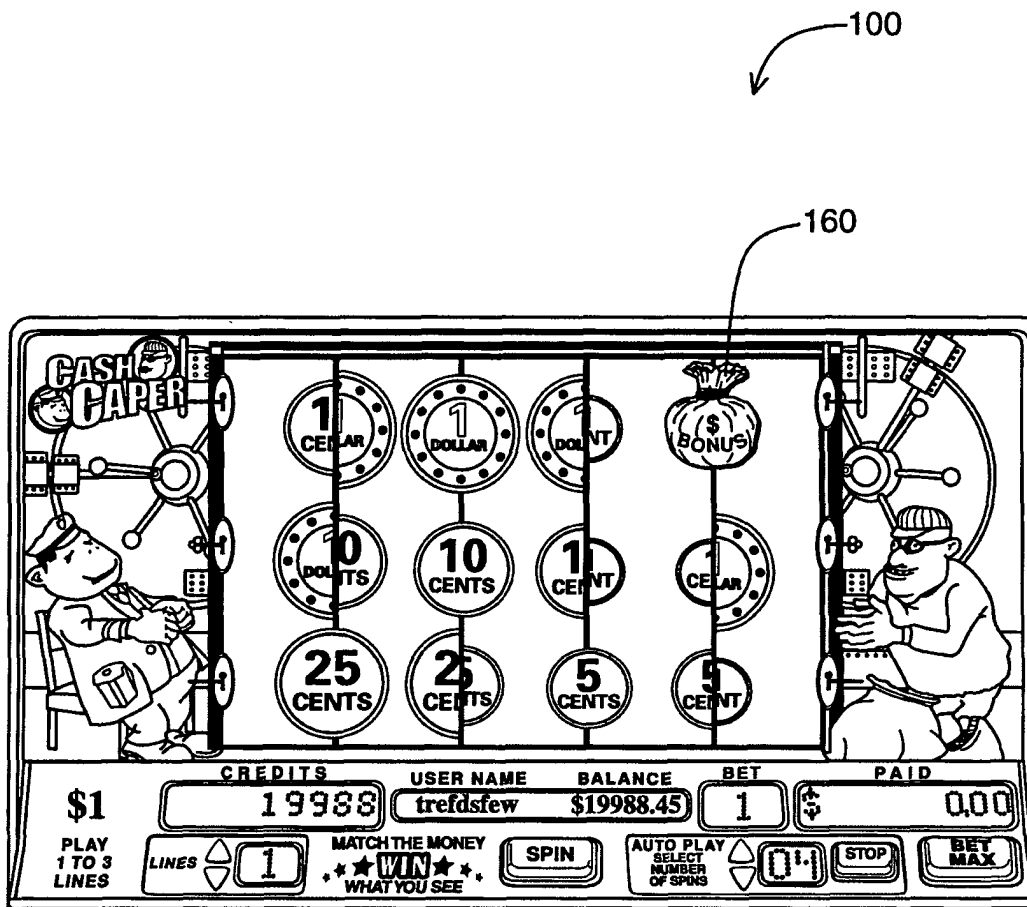


FIG. 5



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 05 25 3083

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	US 5 393 061 A (MANSHIP ET AL) 28 February 1995 (1995-02-28) * the whole document *	1-9	G07F17/34
X	US 2003/190945 A1 (BUSSICK WILLIAM J ET AL) 9 October 2003 (2003-10-09) * paragraph [0018] - paragraph [0024] * * paragraph [0028] - paragraph [0035]; figure 2 *	1-9	G07F
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G07F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 9 August 2005	Examiner Reino, B
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 05 25 3083

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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09-08-2005

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US 2003190945	A1	09-10-2003	US 6554703 B1	29-04-2003