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Brito(10) **Pub. No.: US 2009/0061982 A1**(43) **Pub. Date: Mar. 5, 2009**(54) **SLOT MACHINE GAME WHERE PLAYER
CAN OPTIONALLY PURCHASE A WIN
MULTIPLIER****Publication Classification**(51) **Int. Cl.**
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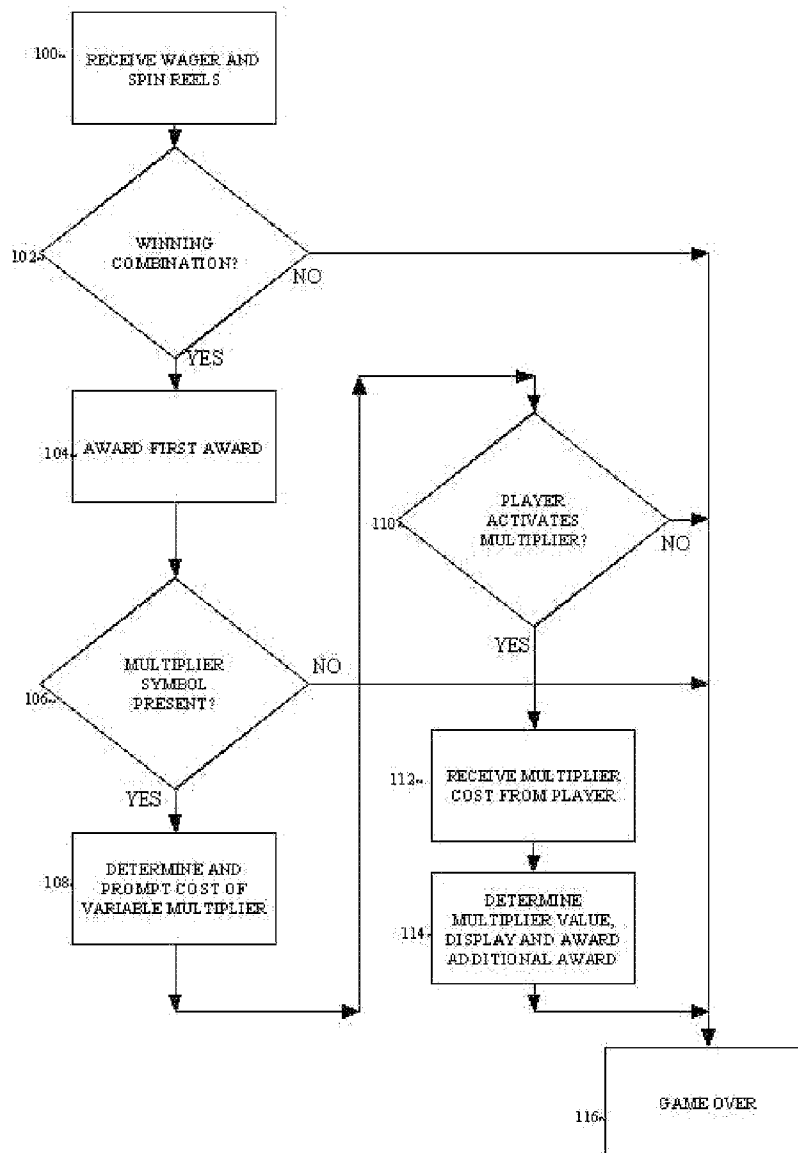
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(52) **U.S. Cl.** **463/20**(57) **ABSTRACT**

A slot machine method, apparatus, and computer readable storage to implement a slot machine game which offers the player a variable multiplier. The value of the multiplier is not known until after the player pays to activate the variable multiplier, upon which the value of the variable multiplier is determined based on predefined criteria for the variable multiplier that is being activated. The cost to activate the variable multiplier is based on the predefined criteria as well as an award amount that a new award (the new award being equal to the award amount multiplied by the determined value of the variable multiplier) is based upon. The award amount can, for example, be the previous overall win.

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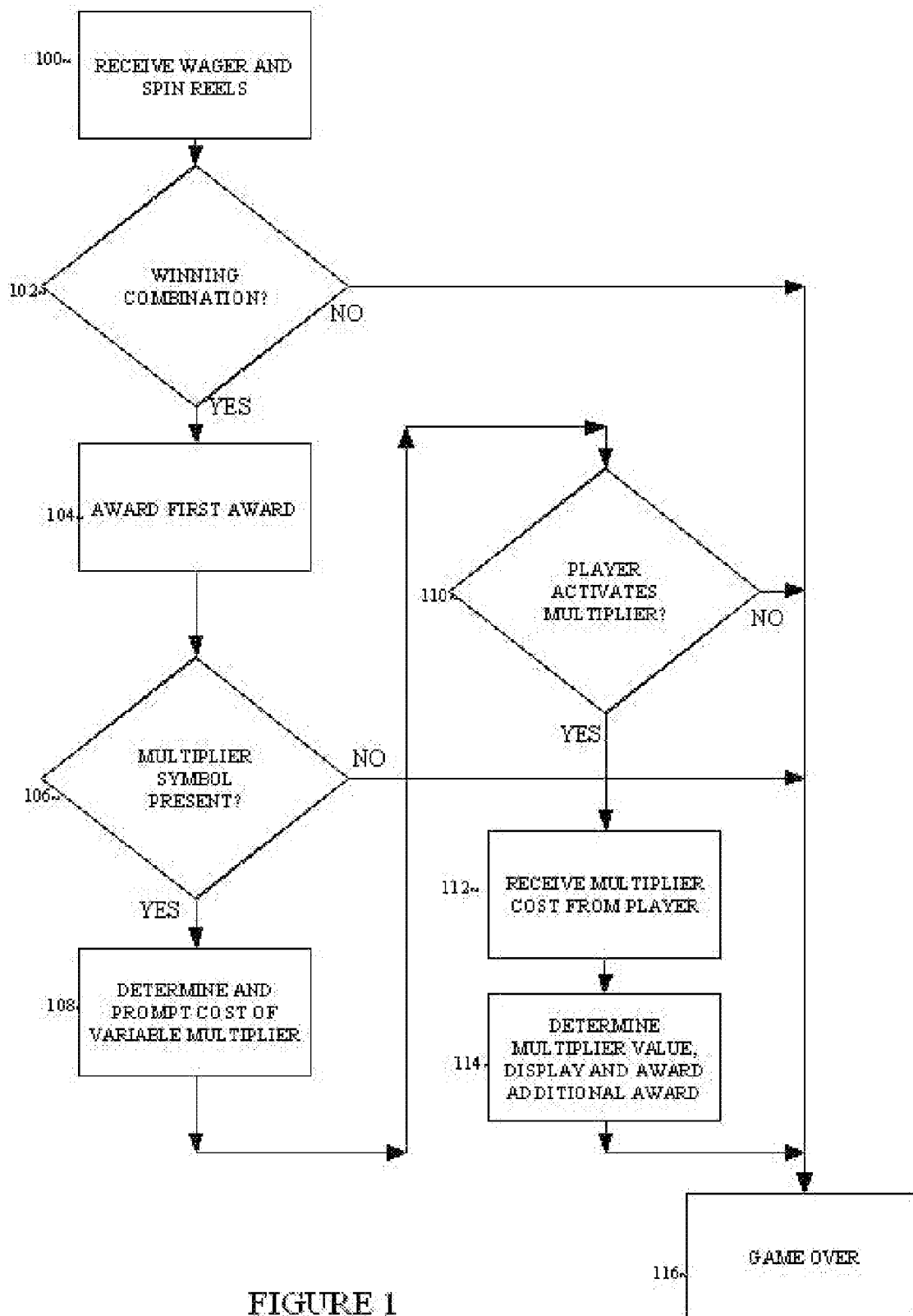




FIGURE 2

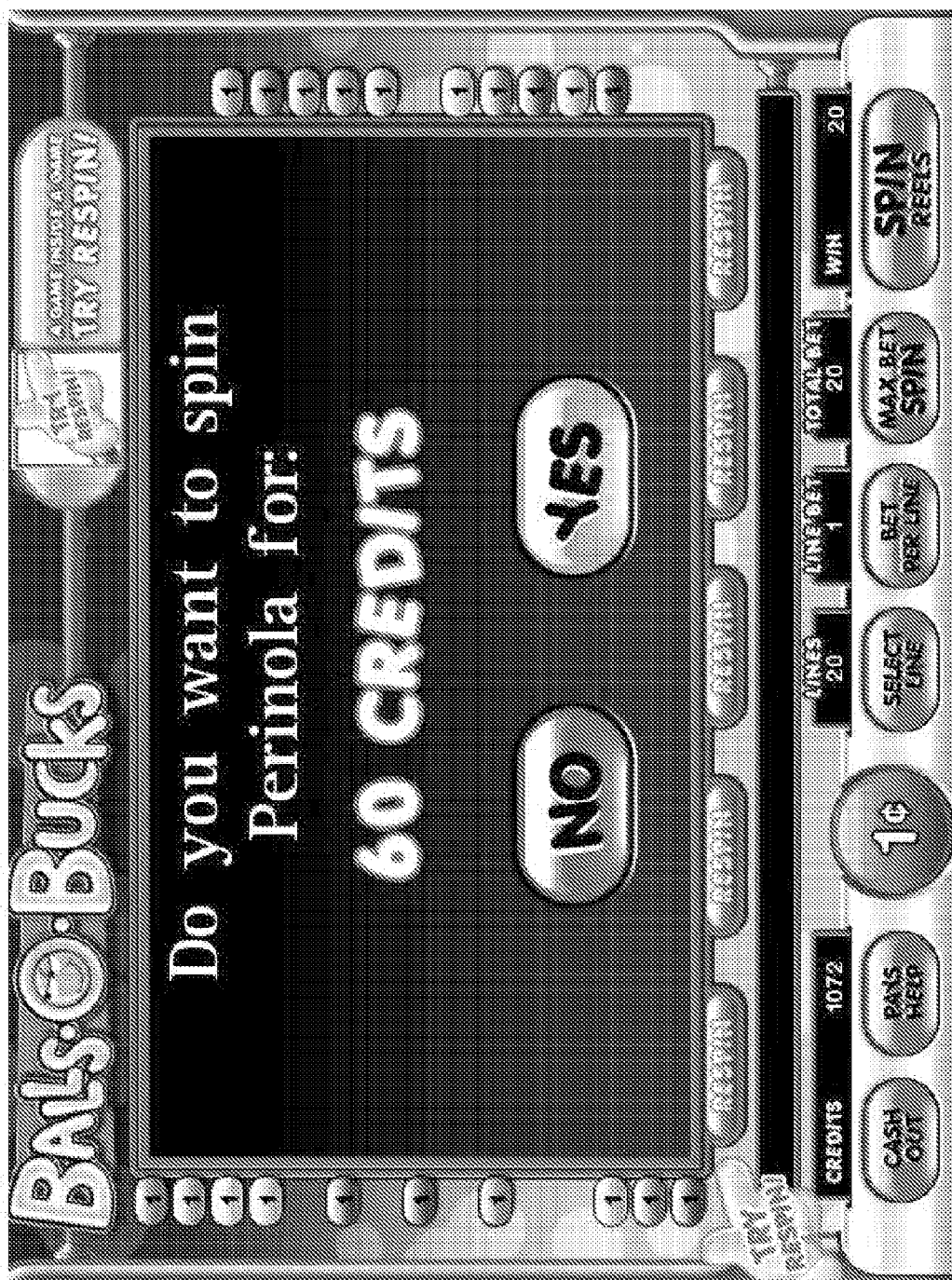


FIGURE 3A

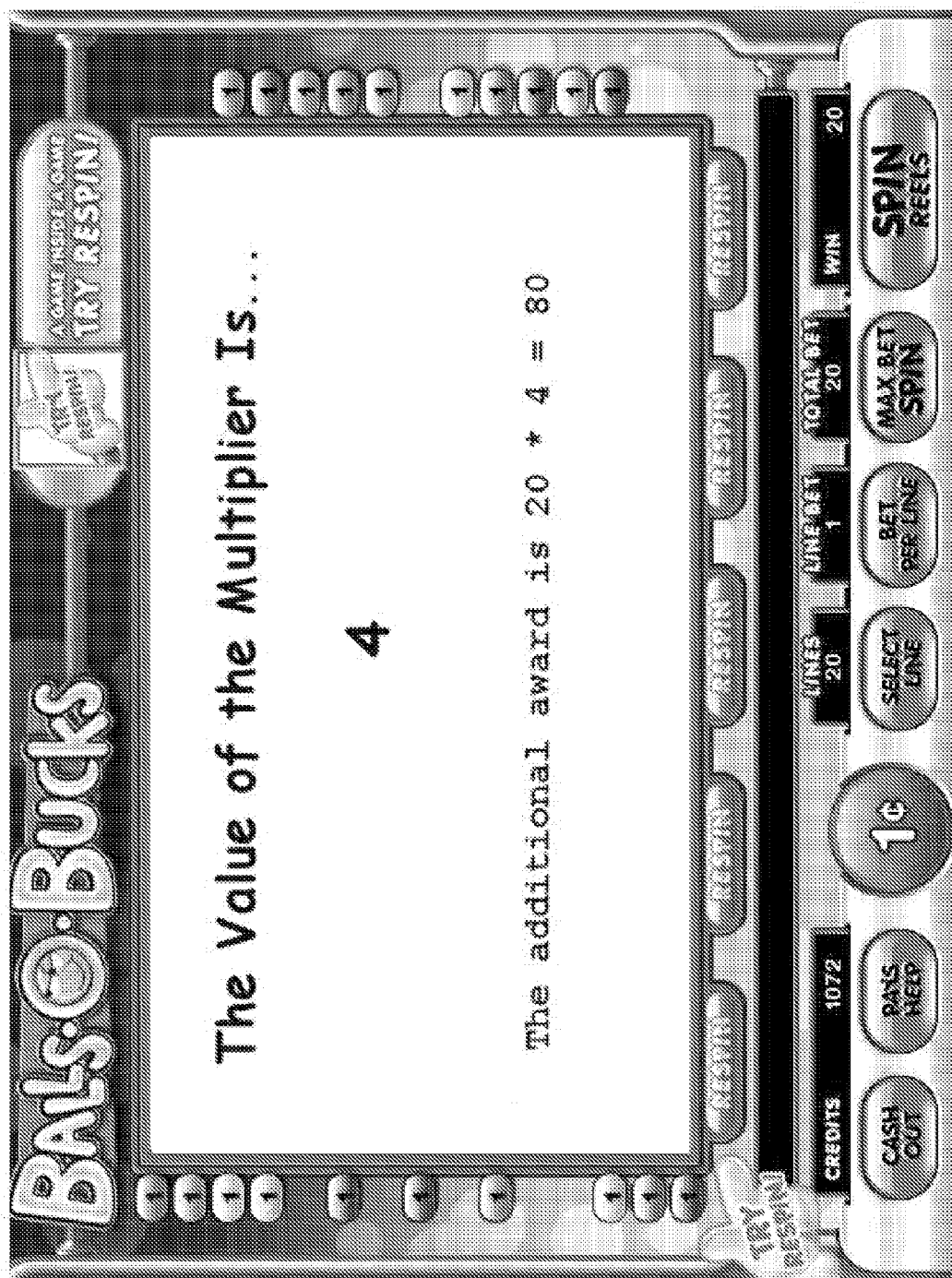
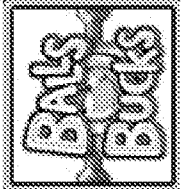
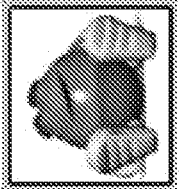
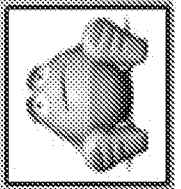
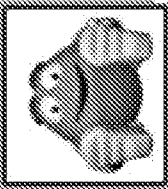
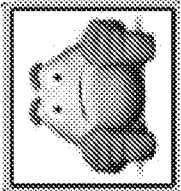
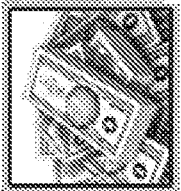
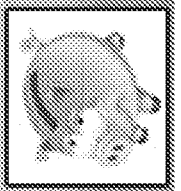
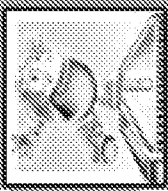




FIGURE 3B

			
5-10000 4-1000 3-100 2-10 1-2	5-300 4-150 3-50 2-5	5-250 4-150 3-35 2-5	5-200 4-100 3-25 2-4
			
5-200 4-100 3-25 2-4	5-125 4-45 3-10	5-125 4-40 3-10	5-100 4-25 3-5
			
5-100 4-25 3-5	5-100 4-25 3-5		

Winning paylines are multiplied by the number of credits bet on the winning payline. Winning symbols must appear on paylines in play and on consecutive reels, beginning with the far left reel. All wins are shown in credits, and only the highest winning combination on a payline will be paid. Only one win per payline.

FIGURE 4

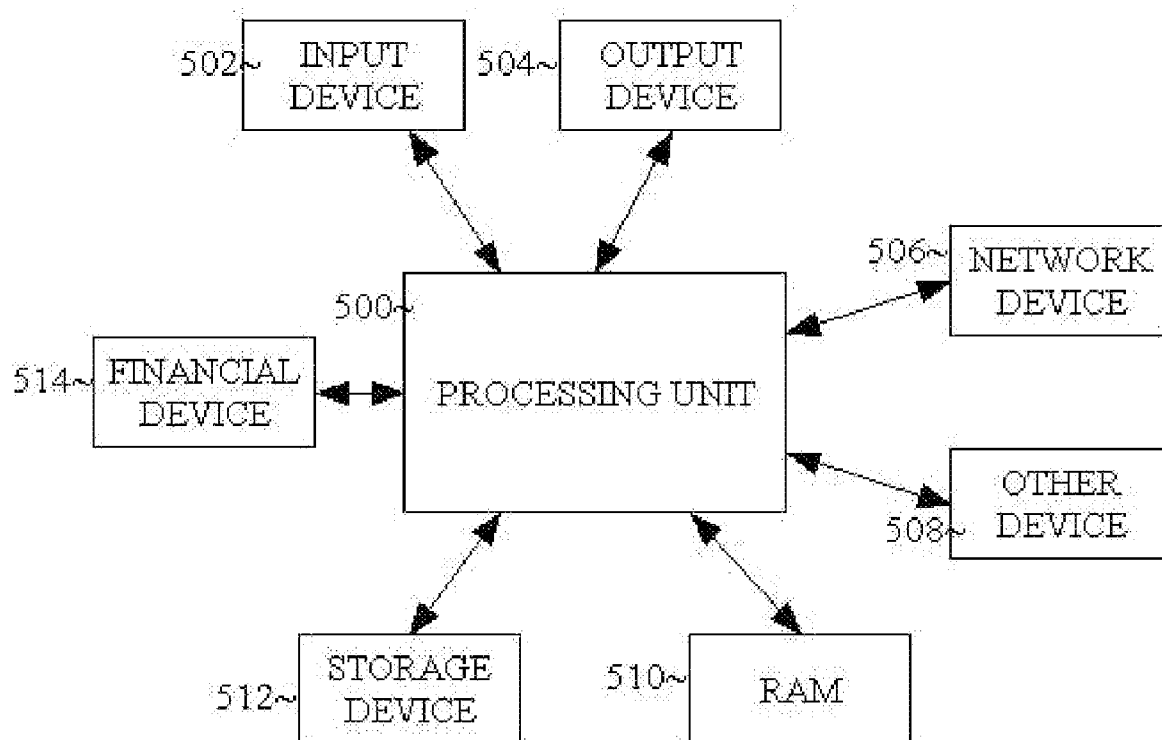


FIGURE 5

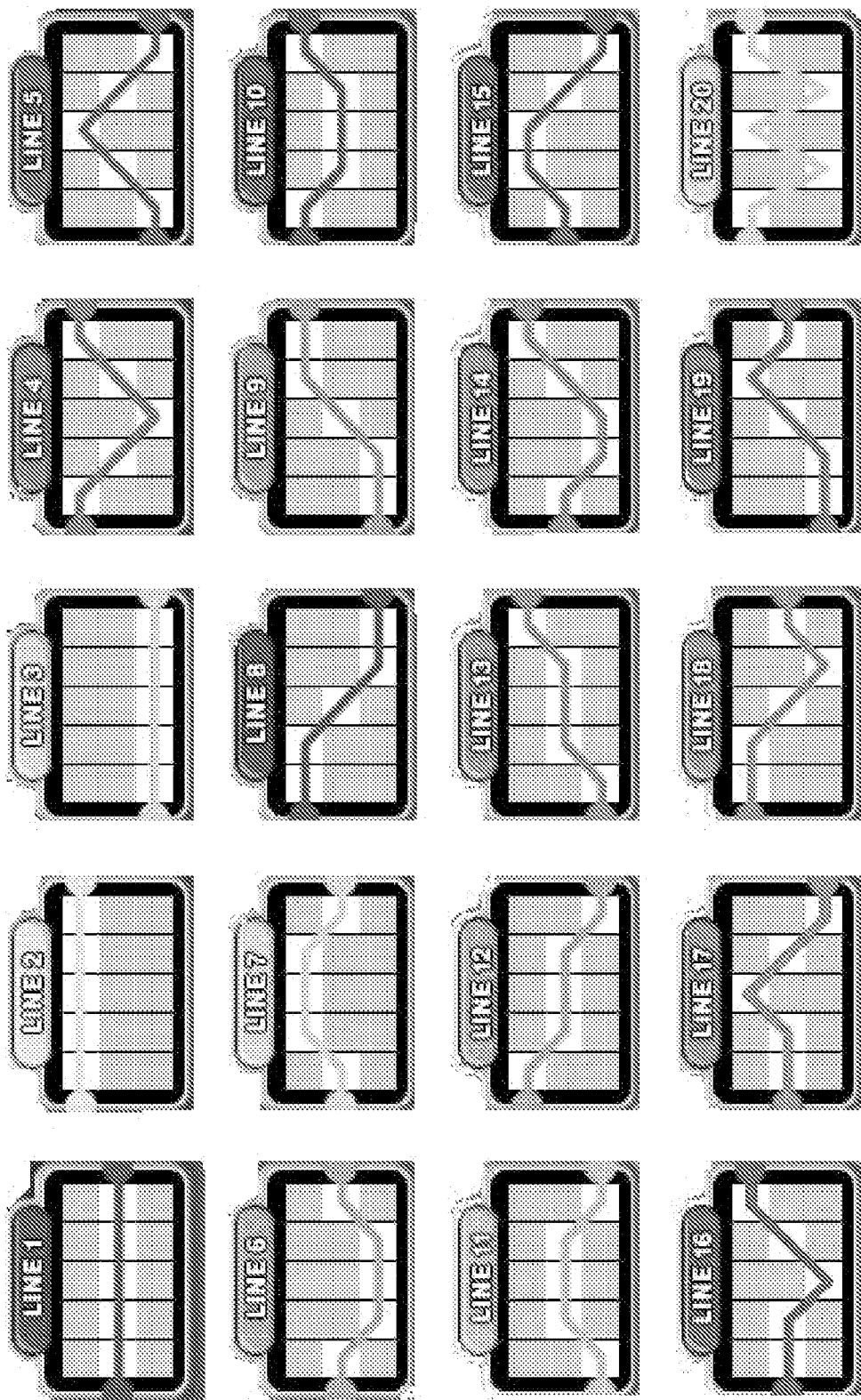


FIGURE 6

SLOT MACHINE GAME WHERE PLAYER CAN OPTIONALLY PURCHASE A WIN MULTIPLIER

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is also related to the following ten applications identified by their application number, all ten applications are incorporated by reference herein in their entireties: Ser. No. 11/035,691 ("Slot Machine Game that Allows Player to Purchase Reel Respins"); Ser. No. 11/326,125 ("Slot Machine Bonus Game"); Ser. No. 11/337,960 ("Slot Machine with Skill Aspect"); Ser. No. 11/558,405 ("System and Method for Allowing Piggyback Wagering"); Ser. No. 11/609,315 ("System and Method for Allowing Piggyback Wagering"); Ser. No. 11/459,253 ("Slot Machine Bonus Game"); Ser. No. 11/558,564 ("System and Method for Administering a Progressive Jackpot Limited to a Bonus Round"); Ser. No. 11/11/678,050 ("Slot Machine Game With Additional Features"); Ser. No. 11/764,689 ("Slot Machine Game with Additional Award Indicator"); and Ser. No. 11/776,508 ("Slot Machine Game with User Selectable Themes"). All ten of these applications are incorporated by reference herein in their entireties for all purposes. Any and all features of any of these applications can be combined with each other and with any feature(s) described herein.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present inventive concept relates to a system, method, and computer readable storage, for providing a slot machine game which allows a user to optionally purchase a multiplier.

[0004] 2. Description of the Related Art

[0005] Slot machine games are a billion dollar industry. The current three or five reel machines have been around for a long time and some players may find current game play monotonous.

[0006] What is needed is a slot machine with additional slot machine features which will generate more excitement for players and/or more revenue as well.

SUMMARY OF THE INVENTION

[0007] It is an aspect of the present general inventive concept to provide additional features to slot machine games.

[0008] The above aspects can also be obtained by a method that includes (a) receiving a first wager from a player; (b) spinning reels of a slot machine to a final position which determines a first award awarded to the player; (c) allowing the player to activate a variable multiplier at a cost, the variable multiplier having at least two potential multiplier values; (d) if the player activates the variable multiplier, then performing: (e) receiving the cost from the player; (f) determining a multiplier value of the variable multiplier; and (g) awarding a multiplied award which is determined by multiplying the multiplier value by an award amount, (h) wherein the cost is determined based on the award amount and average value of the variable multiplier.

[0009] These together with other aspects and advantages which will be subsequently apparent, reside in the details of construction and operation as more fully hereinafter

described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] Further features and advantages of the present invention, as well as the structure and operation of various embodiments of the present invention, will become apparent and more readily appreciated from the following description of the preferred embodiments, taken in conjunction with the accompanying drawings of which:

[0011] FIG. 1 is a flowchart illustrating an exemplary method of implementing a purchasable multiplier, according to an embodiment;

[0012] FIG. 2 is a screen shot illustrating a slot machine game with a variable multiplier symbol, according to an embodiment;

[0013] FIG. 3A is a screen shot illustrating a prompt screen asking a player whether the player wishes to purchase the multiplier, according to an embodiment;

[0014] FIG. 3B is a screen shot illustrating a display of a variable multiplier value and additional award, according to an embodiment;

[0015] FIG. 4 is a screen shot illustrating an exemplary payable for use with a slot game, according to an embodiment;

[0016] FIG. 5 is a block diagram illustrating exemplary hardware that can be used to implement the present invention, according to an embodiment; and

[0017] FIG. 6 is a diagram illustrating exemplary paylines that can be used, according to an embodiment.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0018] Reference will now be made in detail to the presently preferred embodiments of the invention, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to like elements throughout.

[0019] Embodiments of the invention relate to slot machine games, where typically a player places a wager, presses a button to spin the reels, the reels each stop at a random position, payouts are determined by comparing all paylines played to a predetermined set of winning combinations, and then the determined payouts, if any, are awarded to the player based on the wager. Additional features can augment the excitement of a player and may also result in increased action for the casino.

[0020] A slot machine game can have a variable multiplier which can be purchased by the player at the player's option. For example, a player can place a wager on a slot game, spins the reels which stop at a random position, and then wins an award based on the position of the reels. The player can choose to begin a new game, or the player can choose to purchase a dynamic multiplier. A dynamic multiplier is a multiplier which multiplies the final award (or other amount) but the actual multiplier is not known beforehand and can be determined randomly. The player can pay to activate the dynamic multiplier. Multiple paylines can be available, each payline represents a path of symbols used to form a combination for that payline. A machine may have a maximum amount of paylines available (e.g., 15), and the player can typically choose to play as many of these paylines as the player wants.

[0021] An example of how this can work is as follows. A player makes a \$1 wager in a slot machine. The reels spin and the player wins an award of \$10. The player is then offered the

option to activate a dynamic multiplier for an additional cost of \$12 (determined dynamically). The player can then choose to decline, and begin a brand new game, or pay the \$12 and activate the dynamic multiplier. If the player does the latter, then the amount of the variable multiplier will be determined (typically randomly) and displayed. Thus, as an example, the dynamic multiplier results in having a value of 2. Thus, the player now wins an additional \$20 (in addition to the \$10 the player originally won). The player had paid \$12 to activate the dynamic multiplier, thus the player has won a net profit of \$8 for the activation of the multiplier. Overall, the player has paid \$13 (\$1 for the initial wager plus \$12 to activate the dynamic multiplier), has won \$30 (\$10 for a first or initially award and \$20 for the additional award), thus the player has made a net profit of \$17. The player, after viewing the cost to activate the dynamic multiplier, may also decline to activate the dynamic multiplier and thus would not have to pay to activate the dynamic multiplier and can then begin a new game.

[0022] FIG. 1 is a flowchart illustrating an exemplary method of implementing a purchasable multiplier, according to an embodiment.

[0023] The method can start with operation 100, which receives a wager from a player and spins reels on the machine to stop at a resulting combination. This can be done as known in the art.

[0024] From operation 100, the method can proceed to operation 102, which determines whether the resulting combination is a winning combination. This can be done by comparing symbols on paylines on the resulting combination to determine whether any paylines comprise a winning combination based on a paytable.

[0025] If the determination in operation 102 determines that the resulting combination is not a winning combination, then the method can proceed to operation 116, wherein the game is over. From operation 116, the method can proceed to operation 100 which can start a new game.

[0026] If the determination in operation 102 determines that the resulting combination is a winning combination, then the method can proceed to operation 104, which awards a first (or initial) award. The initial award is based on the wager placed in operation 100 and the resulting combination. Any winning combinations are paid according to the payable in use for the game.

[0027] From operation 104, the method can proceed to operation 106, which determines whether a multiplier symbol is present. The multiplier symbol can be a variable multiplier symbol. The multiplier symbol can be present anywhere on the reels, or can be required to be on an active payline. If the multiplier symbol is not present, then the method can proceed to operation 114, wherein the game is over.

[0028] If in operation 106, it is determined that the multiplier symbol is present, then the method can proceed to operation 108, which determines and prompts the cost of the variable multiplier to the player. How the cost of the variable multiplier is determined is described below in more detail. The cost of the multiplier can be displayed to the player, along with buttons (e.g., "yes" and "no") as to what course of action the player decides to take.

[0029] From operation 108, the method can proceed to operation 110, which determines whether the player decides to purchase and activate the multiplier. The player can indicate his or her selection by pressing buttons (physical or virtual on a touch screen, or any other manner). If the player does not wish to purchase (activate) the multiplier, then the method can proceed to operation 116, wherein the game is over.

[0030] In another embodiment, the player may be required to touch (or select) the variable multiplier that has been displayed on the reels in order to trigger operations 108-114. Thus, for example, if a variable multiplier symbol is displayed, then the player can touch the variable multiplier symbol, upon which the variable cost to activate the variable multiplier symbol will be displayed, and then the player can choose whether to activate (and pay the variable cost) the variable multiplier symbol or not activate the variable multiplier symbol (and not pay the variable cost).

[0031] If in operation 110, the player wishes to purchase the multiplier, then the method can proceed to operation 112, which receives the cost of the variable multiplier from the player. Typically, the cost will be deducted from the player's credit meter.

[0032] From operation 112, the method can proceed to operation 114, which determines the multiplier value, displays the additional award earned by the player (if any), and awards any such award to the player. The additional award is determined by multiplying the multiplier value by an award (a base award). For example, the base award can be the previous win. The multiplier value can be determined at random based on predefined criteria of the variable multiplier being activated. For example, the variable multiplier can take on discrete values with an equal probability (thus the value is determined by choosing one of the discrete values randomly). After the value of the variable multiplier is determined, the additional award is determined and awarded, then the method can then proceed to operation 116, wherein the game is over. Typically, all these values (the determined value of the variable multiplier and the additional award) are displayed to the player.

[0033] It is noted that operations in FIG. 1 can be performed in any order. For example, operation 104 which awards the first (initial) award can also take place during operation 114, which awards the additional award (thus both awards are actually awarded together). One skilled in the art can appreciate that different configurations and sequences of the operations described herein can have an identical or similar effect.

[0034] The cost of purchasing the variable multiplier can depend on a number of factors, such as the possible values of the variable multiplier itself (for example the average value), the number of credits the player won on the last play (or other credit amount), and a house edge for the multiplier award (additional award). A house edge may not be required on the additional award but it can also optionally be included as well.

[0035] Table I below illustrates possible values of a variable multiplier.

TABLE I

0
2
3
0
4
5

[0036] Thus, according to Table I, there are six possible values of the multiplier. The actual value of the multiplier can be chosen randomly out of the six values. The average value is $14/6=2.333$.

[0037] Thus, for example, if the player wins an award on a slot machine game of \$10, and using the variable multiplier from Table I (with an equal probability of choosing each of the six values), then the cost to activate this multiplier would be $\$10 \times 2.333 = \23.33 . The player can win at the very least \$0

(if the 0 multiplier is chosen) and at the most \$50 (5, the highest possible multiplier, times \$10).

[0038] Optionally, a house edge can be factored into the cost as well. For example, in the latter example, if the cost is \$23.33, and a 10% house edge is to be factored into the cost, then the cost would be $\$23.33/0.90=\25.92 .

[0039] Table II below illustrates a different multiplier. There are 10 possible values of this multiplier, each chosen randomly. The average value is 4.5.

TABLE II

0
1
2
3
4
5
6
7
8
9

[0040] In an embodiment, the player may be given a choice of two possible variable multipliers (e.g., the one illustrated in Table I and the one illustrated in Table II), and the player can choose which one to activate (or can choose not to activate any). Of course, the multiplier with the higher average will cost higher to activate. The house edge can remain the same for different variable multipliers, or alternatively, the house edge can vary for different variable multipliers.

[0041] FIG. 2 is a screen shot illustrating a slot machine game with a variable multiplier symbol, according to an embodiment.

[0042] A first variable multiplier 200 and a second variable multiplier 202 appears on the reels as any other symbol. Having at least one variable multiplier displayed on a reel is a prerequisite to being able to activate the multiplier (operation 110). However, in an alternative embodiment, a variable multiplier does not need to be displayed on a reel as a prerequisite to activating a multiplier and operations 108-114 can still be performed.

[0043] In an embodiment, there can be different variable multipliers with different characteristics and activation costs. For example, a first variable multiplier displayed on a first reel may have a cost equal to the prior win (first award) and will result in a 50% chance of the additional award equaling the prior win amount and 50% chance of winning nothing. A second variable multiplier displayed on the second reel may have a cost equal to double the prior win, and will result in a 33.3% chance of the additional award being nothing, and a 33.3% chance of the additional award being double the prior win (first award), and a 33.3% chance of the additional award being four times the prior win. In this example, the expectation of each variable multiplier is the same (even though the characteristics are different).

[0044] Thus, the expectation (expected return) of each of the variable multipliers is the same, even though the variance is different. The player can choose which variable multiplier the player prefers to activate by touching the respective variable multiplier (the characteristics may be displayed to the player beforehand so that the player knows their respective characteristics). In the long run, if the two (or more) variable multipliers available to the player have the same expected return then it should not matter to the player which he or she chooses mathematically (there is no skill involved in the

choice). In a further embodiment, expectations (expected returns) of variable multipliers that the player can choose from can be different as well. Thus, choosing the variable multiplier may have an element of skill in it if different variable multipliers have different expected returns. FIG. 3A is a screen shot illustrating a prompt screen asking a player whether the player wishes to purchase the multiplier, according to an embodiment.

[0045] FIG. 3A illustrates a prompt screen in which the player is presented with the computed variable cost to activate the variable multiplier. The player can press (touch, etc.) "yes" if the player wishes to pay 60 credits to activate the variable multiplier, and "no" if the player does not wish to pay 60 credits (and thus the variable multiplier will not be activated).

[0046] FIG. 3B is a screen shot illustrating a display of a variable multiplier value and additional award, according to an embodiment.

[0047] In this case, the variable multiplier is determined to have a value of 4. Since the previous award was 20 credits (or 20 coins or 20 dollars, etc.) 20 times 4 equals 80. Thus, the player wins an additional 80 credits (plus the original 20 credits the player won for the original spin). Note that the player bet 20 to spin the reels originally and bet 60 to purchase the variable multiplier. Thus, the player bet a total of 80 credits and won 100 credits, for a net profit of 20 credits.

[0048] FIG. 4 is a screen shot illustrating an exemplary payable for use with a slot game, according to an embodiment.

[0049] In a further embodiment, the player would not have to pay to activate the variable multiplier but the cost to activate the variable multiplier is taken out of the player's win. For example, if the player wins \$100 on a spin, and a cost to activate the multiplier is \$20, the player can be awarded \$80+the award awarded from the activation of the multiplier. The player may be presented with all of this information (e.g., original win, multiplier activation cost, additional award amount, etc.), or all these numbers can be performed "behind the scenes" and the player is only presented with a final award amount.

[0050] FIG. 5 is a block diagram illustrating exemplary hardware that can be used to implement the present invention, according to an embodiment.

[0051] A processing unit 500 can be a microprocessor and any related apparatus (e.g., cache, etc.) The processing unit 500 can be connected to an input device 502 (such as a keyboard, buttons, touch screen, etc.), an output device 504 (such as an LCD display, touch screen, speakers, etc.), a network device 506 (to connected the apparatus to a network such as a LAN, Internet, or other computer communications network), other device 508 (any other device known in the art needed to operate the system), a RAM 510, a storage device 512 (e.g., CD-ROM drive, hard drive, etc.), and a financial device 514 (device used to accept payment such as cash and disburse payments to the player). All awards that are determined are also typically awarded and can be disbursed to the player by the financial device, which can either distribute coins to the player and/or can add credits to the credit meter (which can be distributed using coins to the player at a later time) or can add credits to a player's electronic wagering account.

[0052] It is also noted that the methods described herein can be performed on a mechanical slot machine as well that uses physical reels (as opposed to virtual reels displayed on an

output display). The value for the multiplier can be determined by spinning an additional reel that contains multiplier values on it. For example, the multiplier values in Table 1 could be placed on a five stop multiplier reel: 2, 3, 0, 4, 5. Of course any number of stops can be used on the reel along with any multiplier values. If the multiplier reel is not weighted (stops at a random stop), then the variable multiplier cost can be determined as described herein. If the multiplier is activated then the multiplier reel spins and stops on a random multiplier value, which is then used to multiply a prior award (as described herein). Thus, in other words, a physical (or virtual) reel can be used to determine the multiplier value when the variable multiplier is activated. Instead of using a touch screen monitor to receive player decisions, the physical reel version can use physical buttons to receive all player decisions.

[0053] FIG. 6 is a diagram illustrating exemplary paylines that can be used, according to an embodiment.

[0054] Twenty paylines are shown, although of course any other amount can be used as well. If a player wagers \$1 on all of twenty paylines, then the player would wager \$20 on a spin. Each payline represents a combination of five symbols which are used to apply to a paytable (such as the paytable illustrated in FIG. 4) to determine an award amount for each payline. A final award awarded to the player is an aggregate of all of the individual awards earned on all active (wagered on) paylines.

[0055] Further, the order of any of the operations described herein can be performed in any order and wagers can be placed/resolved in any order. Any operation described herein can also be optional. Any embodiments herein can also be played in electronic form and programs and/or data for such can be stored on any type of computer readable storage medium (e.g. CD-ROM, DVD, disk, etc.)

[0056] The descriptions provided herein also include any hardware and/or software known in the art and needed to implement the operations described herein. All components illustrated herein may also optionally communicate with any other illustrated or described component.

[0057] The many features and advantages of the invention are apparent from the detailed specification and, thus, it is intended by the appended claims to cover all such features and advantages of the invention that fall within the true spirit and scope of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation illustrated and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed is:

1. A method to play a slot machine game, the method comprising:

- receiving a first wager from a player;
- spinning reels of a slot machine to a final position which determines a first award which is awarded to the player;
- allowing the player to activate a variable multiplier at a cost, the variable multiplier having at least two potential multiplier values;
- if the player activates the variable multiplier, then performing:
 - receiving the cost from the player;
 - determining a multiplier value of the variable multiplier;
 - and

awarding a multiplied award which is determined by multiplying the multiplier value by an award amount, wherein the cost is determined based on the award amount and an average value of the variable multiplier.

2. The method as recited in claim 1, wherein the award amount is the first award.

3. The method as recited in claim 1, wherein the award amount is an award present on particular paylines but not including all paylines.

4. The method as recited in claim 1, wherein the award amount is an award present on only paylines which include a variable multiplier symbol.

5. The method as recited in claim 1, wherein the player activates the variable multiplier by selecting the variable multiplier which is displayed as part of the final position.

6. The method as recited in claim 1, wherein the player activates the variable multiplier by selecting the variable multiplier which is displayed as part of the final position, views the cost, then approves of the cost.

7. The method as recited in claim 1, wherein the determining a multiplier value determines the multiplier value by spinning an additional multiplier reel comprising multiplier values.

8. A method to play a slot machine game, the method comprising:

- receiving a first wager from a player;
- spinning reels of a slot machine to a final position which determines a first award which is awarded to the player;
- allowing the player to select a chosen multiplier out of a first multiplier and a second multiplier, the first multiplier having a different average value than the second multiplier;
- receiving a cost from the player based on chosen multiplier and the chosen multiplier's respective average value;
- determining a multiplier value of the chosen multiplier;
- and
- awarding a multiplied award which is determined by multiplying the multiplier value by an award amount.

9. The method as recited in claim 8, wherein the award amount is the first award.

10. The method as recited in claim 8, wherein the award amount is an award present on particular paylines but not including all paylines.

11. The method as recited in claim 8, wherein the award amount is an award present on only paylines which include the chosen multiplier.

12. The method as recited in claim 8, wherein the player activates the chosen multiplier by selecting the chosen multiplier which is displayed as part of the final position.

13. The method as recited in claim 8, wherein the player activates the chosen multiplier by selecting the chosen multiplier which is displayed as part of the final position, views the cost, then approves of the cost.

14. The method as recited in claim 8, wherein the determining a multiplier value determines the multiplier value by spinning an additional multiplier reel comprising multiplier values.

15. A slot machine apparatus, comprising:

- a processing unit to perform:
 - receiving a first wager from a player;
 - spinning reels of a slot machine to a final position which determines a first award which is awarded to the player;

allowing the player to select a chosen multiplier out of a first multiplier and a second multiplier, the first multiplier having a different average value than the second multiplier;
receiving a cost from the player based on chosen multiplier and the chosen multiplier's respective average value;
determining a multiplier value of the chosen multiplier;
awarding a multiplied award which is determined by multiplying the multiplier value by an award amount;
and
an output unit to output results of the processing unit.

16. The apparatus as recited in claim **15**, wherein the determining a multiplier value determines the multiplier value by spinning an additional multiplier reel comprising multiplier values.

17. The apparatus as recited in claim **15**, wherein the output unit is an electronic display.

18. The apparatus as recited in claim **15**, wherein the output unit comprises physical reels.

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