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Gaming Machine with Multiple Reel Arrays

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ABSTRACT

A gaming machine provided with an outcome arrangement of games wherein any play of said machine initiates play of at least two separately displayed games of chance; said
5 at least two games of chance played simultaneously within a single game sequence on said gaming machine; said at least two games of chance separately displayed on a single display screen of said gaming machine, and wherein an outcome of one of said at least two games of chance
10 may be combined with at least an outcome of a second said game of chance to award a bonus feature to a player of said gaming machine.

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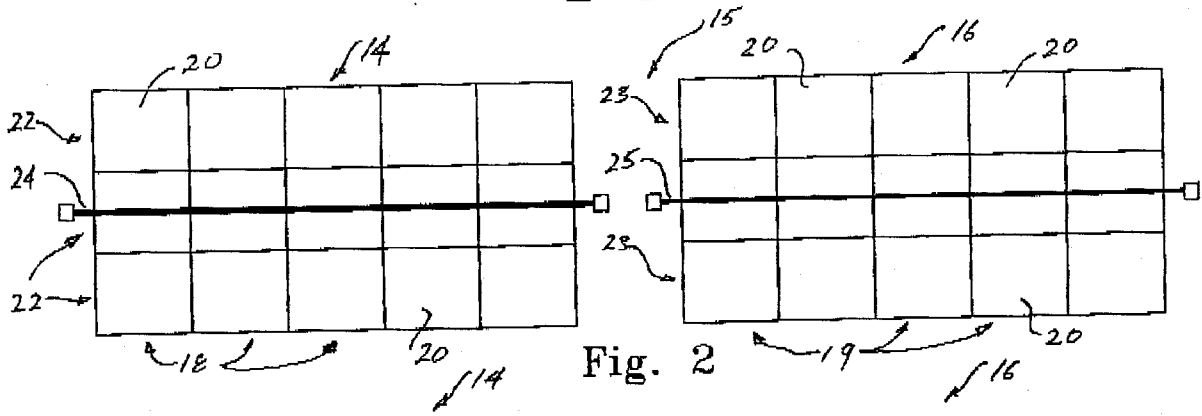


Fig. 2

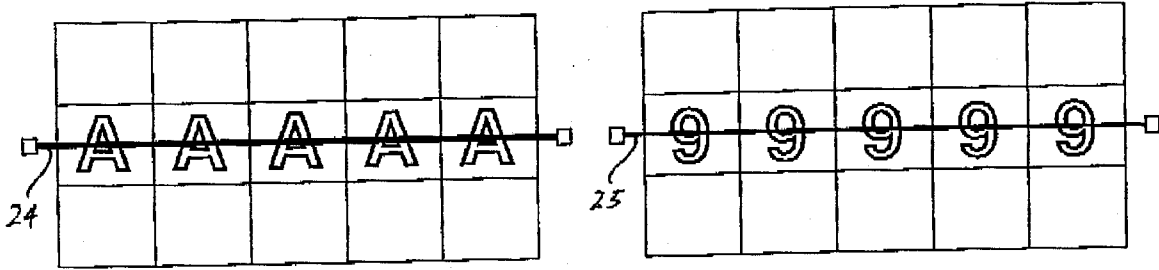


Fig. 3

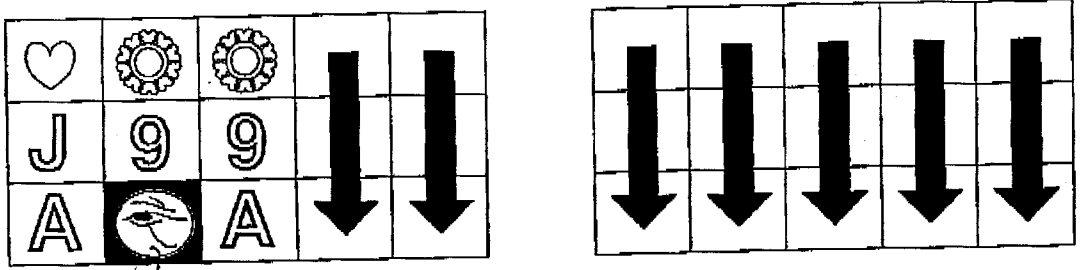


Fig. 4

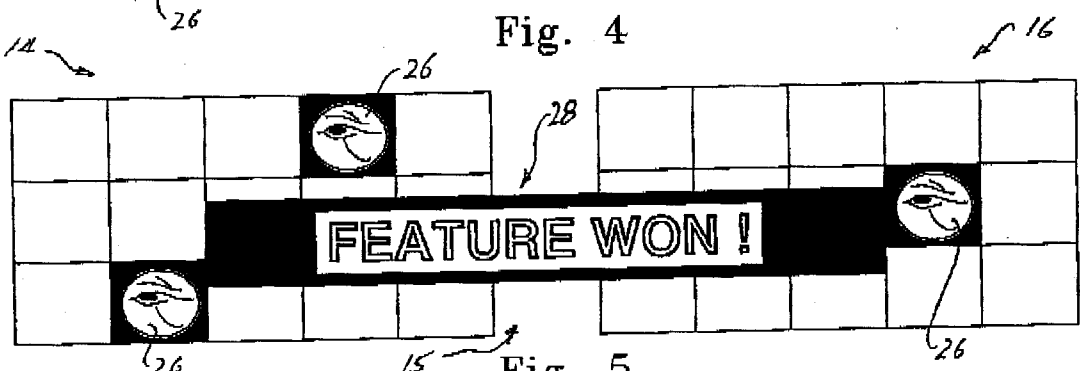


Fig. 5

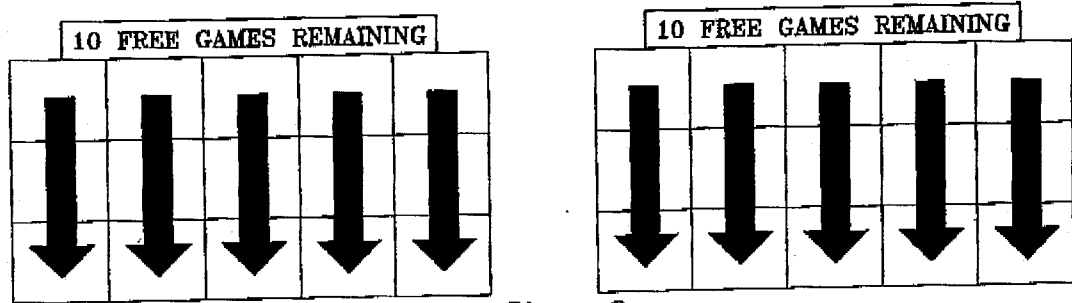


Fig. 6

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Regulation 3.2

AUSTRALIA
Patents Act 1990

COMPLETE SPECIFICATION

Invention Title:

GAMING MACHINE WITH MULTIPLE REEL ARRAYS

The invention is described in the following statement together with the best method of performing it known to us:

Our Ref: 092003

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GAMING MACHINE WITH MULTIPLE REEL ARRAYS**FIELD OF THE INVENTION**

The present invention relates to gaming machines and,
5 more particularly, to gaming machines in which special
symbols are arranged to persist in at least one reel spin
subsequent to a reel spin in which they first appear.

BACKGROUND

Gaming, or poker machines, have become a major source
10 of amusement and diversion in such places as clubs, hotels
and casinos in many parts of the world.

Traditionally such machines were mechanical devices
where a number of reels marked with a plurality of numbers
or symbols could be made to spin randomly by the
15 application of some mechanical input. If the subsequent
patterns of numbers or symbols displayed on the reels, when
these returned to a rest state, corresponded to
predetermined patterns, the machine would provide a prize
or payout. Generally such gaming machines have come to be
20 regulated by government authorities as to their number and
in the manner in which the machines must return a
percentage of the monetary turnover to the players.

The introduction of electronics, computers and
electronic graphical displays, has allowed a continual
25 increase in the complexity and variations of gaming

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machines, games and displays while maintaining the basic concept of the traditional machine.

Machines and games that offer novel and stimulating variations on the basic game theme and environment are
5 eagerly sought by the gaming industry and there is consequently intense competition between machine manufacturers to innovate.

Nevertheless the repetitive playing of even modern gaming machines can lead to boredom of the players with a
10 consequent under-utilization of machines and increase in player dissatisfaction.

It is an object of the present invention to address or at least ameliorate some of the above disadvantages.

15 **Notes**

1. The term "comprising" (and grammatical variations thereof) is used in this specification in the inclusive sense of "having" or "including", and not in the exclusive sense of "consisting only of".
- 20 2. The above discussion of the prior art in the Background of the invention, is not an admission that any information discussed therein is citable prior art or part of the of the common general knowledge of persons skilled in the art in any country.

25

BRIEF DESCRIPTION OF INVENTION

Accordingly in one broad form of the invention there is provided a gaming machine provided with an outcome arrangement of games wherein any play of said machine
5 initiates play of at least two separately displayed games of chance; said at least two games of chance played within a single game sequence on said gaming machine; said at least two games of chance separately displayed on a single display screen of said gaming machine, and wherein an
10 outcome of one of said at least two games of chance may be combined with at least an outcome of a second said game of chance to award a bonus feature to a player of said gaming machine.

Preferably said at least two games comprise a first game
15 and a second game displayed side by side on said single display screen.

Preferably each of said first game and said second game includes an array of simulated reels; displayed portions of said reels forming a matrix of symbol containing elements
20 when said reels are at rest.

Preferably symbols of said array of simulated reels of each said first game and said second game form separate and substantially distinct sets of symbols.

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Preferably symbols of said array of simulated reels of each of said first game and said second game form a common set of symbols.

Preferably at least some symbols of said array of symbols
5 of each of said first game and said second game are common to each of said games.

Preferably at least one of said symbols common to each of said first game and said second game is a scatter symbol.

Preferably said first game and said second game played side
10 by side on said single display screen, are played simultaneously; said simultaneous play forming a said game sequence.

Preferably said first game and said second game displayed
side by side on said single display screen, are played
15 sequentially; spinning of said simulated reels of a said second game being initiated after said simulated reels of a said first game have come to rest.

Preferably spinning of said simulated reels of said second
game is initiated after initiation of spinning of said
20 simulated reels of said first game; said simulated reels of said second game coming to rest after said simulated reels of said first game have come to rest.

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Preferably each of said simulated reels of said first game and of said second game comes to rest sequentially.

Preferably a win outcome of a said sequence of play is determined by at least one predefined pattern of said symbols displayed coincident with a predefined pay line of a said matrix of symbols of at least one of said arrays of simulated reels.

Preferably a win outcome of a said sequence of play is determined by a predefined pattern of said symbols displayed coincident with a predefined pay line of each said matrix of symbols of each of said arrays of simulated reels.

Preferably a said bonus feature is won when at least one said scatter symbol appears among said symbols displayed in each of said first game and said second game, when said simulated reels have been brought to rest at an end of a said game sequence.

Preferably a said bonus feature is won when at least three said scatter symbols appear among symbols displayed in said first game and said second game, when said simulated reels are at rest at an end of a said game sequence.

Preferably said bonus feature includes an award to a player of a number of free said game sequences.

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Preferably probability of a said predefined pattern of symbols appearing coincident on a said predetermined pay line of said first game and said second game, is different.

5 Preferably said bonus feature is won, an image of a banner is shown extending from over at least a portion of said matrix of said first game, to over at least a portion of said matrix of said second game when said game sequence is completed; said banner indicating to a player of said game sequence that said bonus feature has been won.

10 Preferably said matrix formed by displayed said symbol containing elements of said first game and said matrix formed by displayed said symbol containing elements of said second game are horizontally aligned on said single display screen.

15 Preferably said matrix of said first game and of said second game are horizontally separated one from another on said single display screen.

In yet a further broad form of the invention there is provided a method of awarding a bonus feature in a game
20 sequence played on a gaming machine; said method including the steps of:

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(a) displaying a first game and a second game side by side on a single display screen of said gaming machine,

5 (b) spinning simulated reels of said first game and of said second game during said game sequence,

(c) awarding said bonus feature if at least one scatter feature appears among displayed symbols of said simulated reels of each of said first game and of said second game, when said reels
10 have come to rest after completion of said game sequence.

Preferably said simulated reels of said first game and said second game are spun simultaneously within a said game sequence.

15 Preferably said simulated reels of said first game and said second game are spun sequentially within a said game sequence.

Preferably said method further includes displaying a banner spanning at least across a portion of each of said first
20 game and said second game.

BRIEF DESCRIPTION OF DRAWINGS

Embodiments of the present invention will now be described with reference to the accompanying drawings wherein:

5 Figure 1 is a perspective view of a gaming machine of the present invention showing two game arrangements displayed on a single display screen of the gaming machine,

Figure 2 to 6 are representations of the two game arrangements of Figure 1 at various stages of play on the
10 gaming machine,

Figure 7 is a schematic representation of the main electronic components of the gaming machine of Figure 1.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

15 With reference to Figure 1, a gaming machine 10 is provided with a primary display 12. Primary display 12 is an electronic display unit, such as for example a cathode ray tube, plasma screen, liquid crystal display, or any other electronic medium which is capable of displaying
20 video imagery.

In the present invention, display 12 shows at least two video games 14 and 16 side by side, each of which comprises an array of simulated reels 18 and 19 respectively. Reels 18 and 19 are each divided into a
25 number of symbol containing elements 20, of which a subset

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is visible in the respective displayed portions of the reels 18 and 19 at any one time.

Thus preferably, in this instance as shown in Figures 2 to 6, each of the two side by side games 14 and 16, are displayed as a matrix in which the visible portions of the reels 18 and 19 form the columns, and the symbol containing elements, when aligned, form the rows 22 and 23 respectively. Preferably, as can be seen in Figures 2 to 6, the matrices comprising both the first game 14 and the second game 16 are of equal size, horizontally aligned and separated one from the other by a gap 15. Preferably, each of the two games includes five simulated reels 18 of which three symbol containing elements 20 of each reel are displayed when the reels are at rest, thus forming two side by side matrices of five columns and three rows.

Both the first game 14 and the second game 16 are associated with a predetermined pay line 24 and 25 respectively, as shown in Figure 2 and 3, to indicate possible winning outcomes of the patterns of symbols coincident with these pay lines. Each pay line may be a fixed pay line under the rules of the game, or in at least one preferred embodiment, the pay line for both or at least one of the two games may be a matter of choice for selection by a player.

The symbols populating each set of reels of the first game and those of the second game may comprise two

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substantially distinct sets of symbols. In at least one preferred form of the invention however, at least some of the symbols are common to both the first game and the second game. In either case, the symbols of each set of symbols include at least one scatter symbol 26 which may determine the conferring of a bonus feature as explained in more detail below. The scatter symbol 26 most preferably is common to both the first game and the second game.

Play of a Game Sequence

It is a feature of the present invention that the two side by side games 14 and 16 are always both played during any game sequence of a wager played on the gaming machine 10. A winning outcome of a game sequence may be determined by a predefined pattern of symbols appearing coincident with a pay line of one or both of the games as shown in Figure 3.

In one preferred form, spinning of the simulated reels 18 of both the first game 14 and the reels 19 of the second game 16 is initiated at the same instance and the reels brought to rest substantially at the same time also. Reels of each game may all be brought to rest simultaneously or sequentially as illustrated in Figure 4.

In another preferred form, spinning of the reels 19 of the second game 16 is initiated after initiation of spinning of the reels 18 first game 14. In one instance, the initiation of the spinning of the second game reels 19

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commences prior to the reels 18 of the first game 14 coming to rest, but in at least one other possible variation, the reels 18 of the first game 14 have been brought to rest before the spinning of the second game reels is initiated.

5 In this latter arrangement, the player's anticipation of receiving a benefit may be heightened in that, being aware of some potentially favourable outcome from the pattern of symbols already displayed in the first game 14 matrix, the player eagerly awaits the results of the second
10 game 16.

It is another feature of the present invention, that the conferring of a bonus feature on a player of the game is a function of a distribution of scatter symbols 26 distributed over both games 14 and 16 when the reels of
15 both games have been brought to rest. Thus preferably a minimum of one scatter symbol 26 must appear at some location in each of the matrices displayed as the outcomes of games 14 and 16. More preferably, a minimum of three scatter symbols distributed between the two games will
20 trigger the bonus feature.

When such a distribution of scatter figures occurs at the end of a game sequence, a banner 28 is displayed to indicate that the bonus feature has been won. Banner 28 is displayed as covering at least a portion of each of the
25 displays of games 14 and 16 and across the gap 15 between them.

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A triggering of the bonus feature may provided the player with a number of free games, playable on both sets of reels of the first and second games as indicated in Figure 6.

5 **Game Implementation**

Any of the above described embodiments may be implemented on any gaming machine or group of gaming machine provided with a control module. As shown in Fig. 7, a control module 60 is provided with a microprocessor 62
10 and working random access memory (RAM) 64. The program code driving any of the described embodiments may be introduced into the control module 60 by connection of a data storage device 66. The device may take any of a number of forms, such as read only memory (ROM), erasable read only memory
15 (EPROM), Compact Flash Card, PCMCIA card and the like. Alternatively, control module 60 may incorporate a hard disc drive to which the code may be written via a suitable input device.

Control module 60 acts to implement appropriate
20 elements of the program code according to inputs from a user keyboard 68 and outputs video imagery to at least a main display module 70.

The above describes only some embodiments of the present invention and modifications, obvious to those
25 skilled in the art, can be made thereto without departing from the scope and spirit of the present invention.

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CLAIMS

1. A gaming machine provided with an outcome arrangement
of games wherein any play of said machine initiates
play of at least two separately displayed games of
5 chance; said at least two games of chance played
simultaneously within a single game sequence on said
gaming machine; said at least two games of chance
separately displayed on a single display screen of
said gaming machine, and wherein an outcome of one of
10 said at least two games of chance may be combined with
at least an outcome of a second said game of chance to
award a bonus feature to a player of said gaming
machine.
2. The gaming machine of claim 1 wherein said at least
15 two games comprise a first game and a second game
displayed side by side on said single display screen.
3. The gaming machine of claim 1 or 2 wherein each of
said first game and said second game includes an array
of simulated reels; displayed portions of said reels
20 forming a matrix of symbol containing elements when
said reels are at rest.
4. The gaming machine of claim 3 wherein symbols of said
array of simulated reels of each said first game and

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said second game form separate and substantially distinct sets of symbols.

5. The gaming machine of claim 3 wherein symbols of said array of simulated reels of each of said first game and said second game form a common set of symbols.

6. The gaming machine of claim 5 wherein at least some symbols of said array of symbols of each of said first game and said second game are common to each of said games.

7. The gaming machine of claim 6 wherein at least one of said symbols common to each of said first game and said second game is a scatter symbol.

8. The gaming machine of any one of claims 1 to 7 wherein said first game and said second game played side by side on said single display screen, are played simultaneously; said simultaneous play forming a said game sequence.

9. The gaming machine of any one of claims 1 to 7 wherein said first game and said second game displayed side by side on said single display screen, are played sequentially; spinning of said simulated reels of a said second game being initiated after said simulated reels of a said first game have come to rest.

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10. The gaming machine of any one of claims 1 to 7 wherein spinning of said simulated reels of said second game is initiated after initiation of spinning of said simulated reels of said first game; said simulated reels of said second game coming to rest after said simulated reels of said first game have come to rest.

11. The gaming machine of any one of claims 2 to 10 wherein each of said simulated reels of said first game and of said second game comes to rest sequentially.

12. The gaming machine of any one of claims 1 to 11 wherein a win outcome of a said sequence of play is determined by at least one predefined pattern of said symbols displayed coincident with a predefined pay line of a said matrix of symbols of at least one of said arrays of simulated reels.

13. The gaming machine of any one of claims 1 to 11 wherein a win outcome of a said sequence of play is determined by a predefined pattern of said symbols displayed coincident with a predefined pay line of each said matrix of symbols of each of said arrays of simulated reels.

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14. The gaming machine of any one of claims 7 to 13 wherein a said bonus feature is won when at least one said scatter symbol appears among said symbols displayed in each of said first game and said second game, when said simulated reels have been brought to rest at an end of a said game sequence.

15. The gaming machine of any one of claims 7 to 13 wherein a said bonus feature is won when at least three said scatter symbols appear among symbols displayed in said first game and said second game, when said simulated reels are at rest at an end of a said game sequence.

16. The gaming machine of any one of claims 1 to 15 wherein said bonus feature includes an award to a player of a number of free said game sequences.

17. The gaming machine of any one of claims 12 to 17 wherein, probability of a said predefined pattern of symbols appearing coincident on a said predetermined pay line of said first game and said second game, is different.

18. The gaming machine of any one of claims 3 to 17 wherein, when said bonus feature is won, an image of a banner is shown extending from over at least a portion of said matrix of said first game, to over at least a

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portion of said matrix of said second game when said game sequence is completed; said banner indicating to a player of said game sequence that said bonus feature has been won.

5 19. The gaming machine of any one of claims 3 to 18 wherein said matrix formed by displayed said symbol containing elements of said first game and said matrix formed by displayed said symbol containing elements of said second game are horizontally aligned on said
10 single display screen.

20. The gaming machine of any one of claims 3 to 19 wherein said matrix of said first game and of said second game are horizontally separated one from another on said single display screen.

15 21. A method of awarding a bonus feature in a game sequence played on a gaming machine; said method including the steps of:

a) displaying a first game and a second game side by side on a single display screen of said gaming
20 machine,

b) spinning simulated reels of said first game and of said second game during said game sequence,

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c) awarding said bonus feature if at least one scatter feature appears among displayed symbols of said simulated reels of each of said first game and of said second game, when said reels have come to rest after completion of said game sequence.

5

22. The method of claim 20 wherein said simulated reels of said first game and said second game are spun simultaneously within a said game sequence.

10

23. The method of claim 20 wherein said simulated reels of said first game and said second game are spun sequentially within a said game sequence.

15

24. The method of claim 20, said method further including displaying a banner spanning at least across a portion of each of said first game and said second game.

25. A gaming machine as claimed in claim 1 and as hereinbefore particularly described with reference to what is shown in the accompanying drawings.

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26. The method of claim 21 as hereinbefore particularly described with reference to what is shown in the accompanying drawings.

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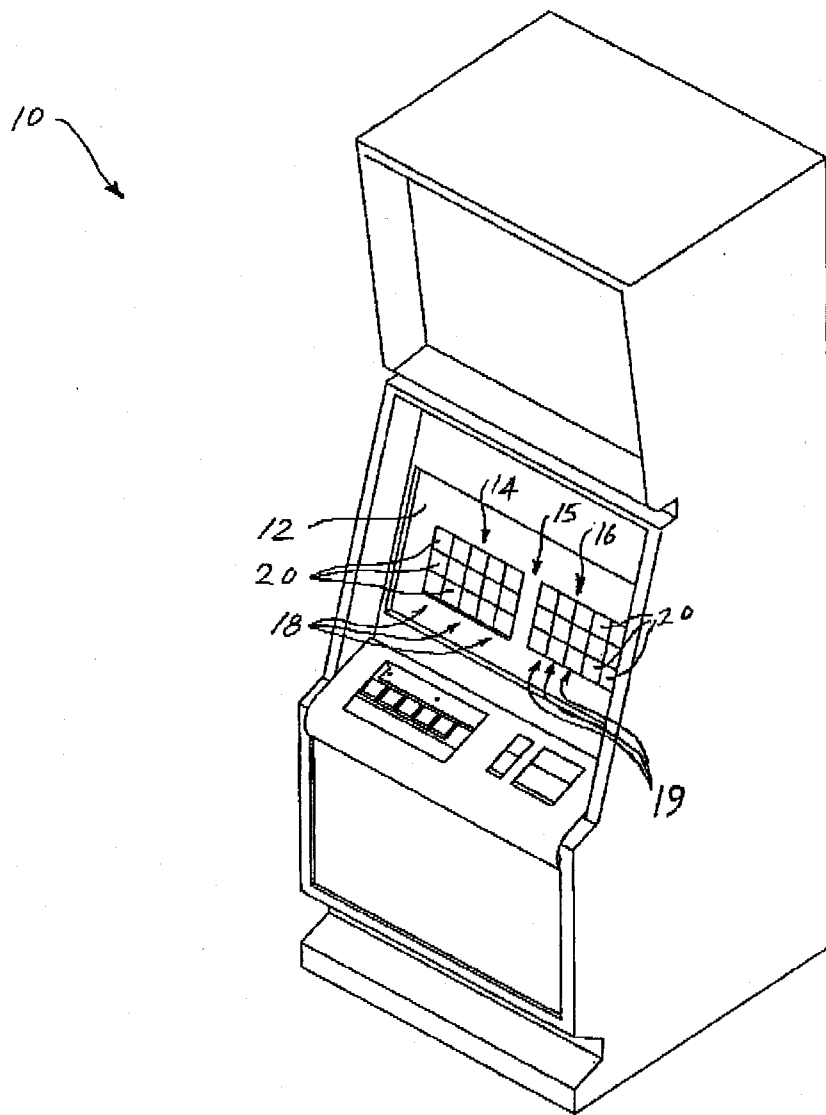


Fig. 1

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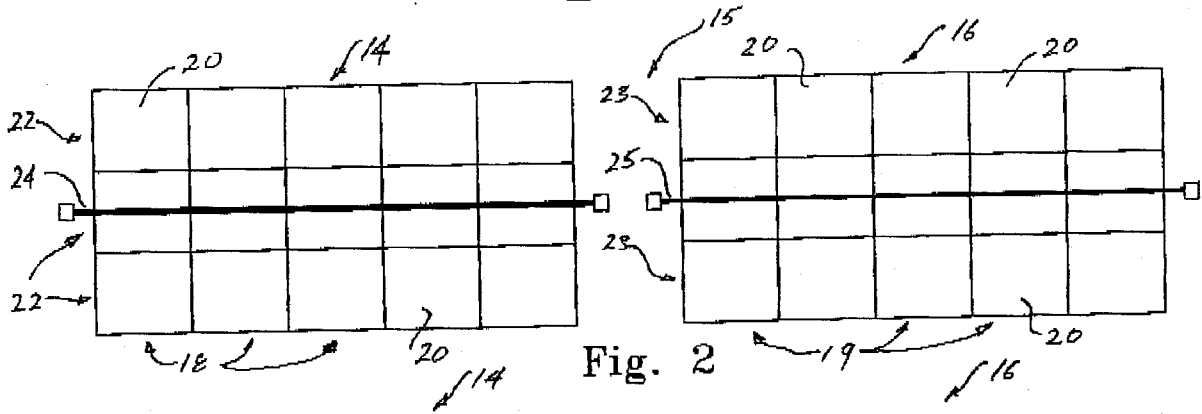


Fig. 2

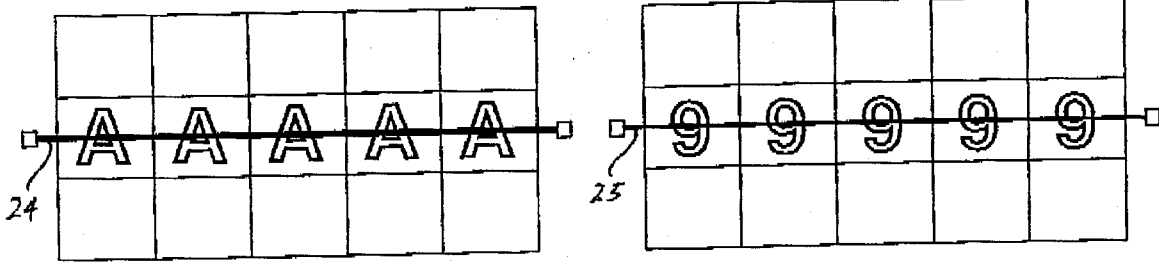


Fig. 3

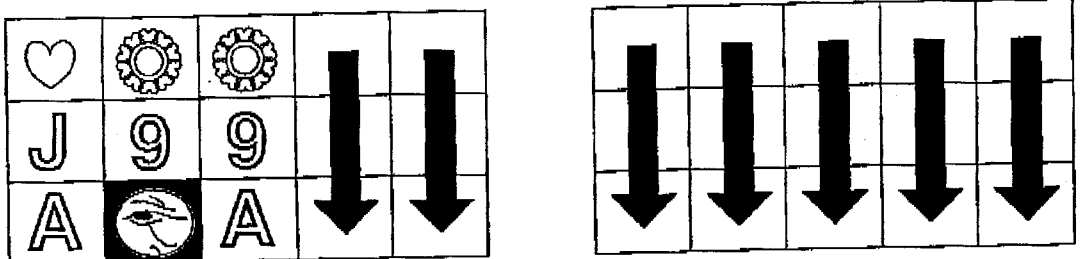


Fig. 4

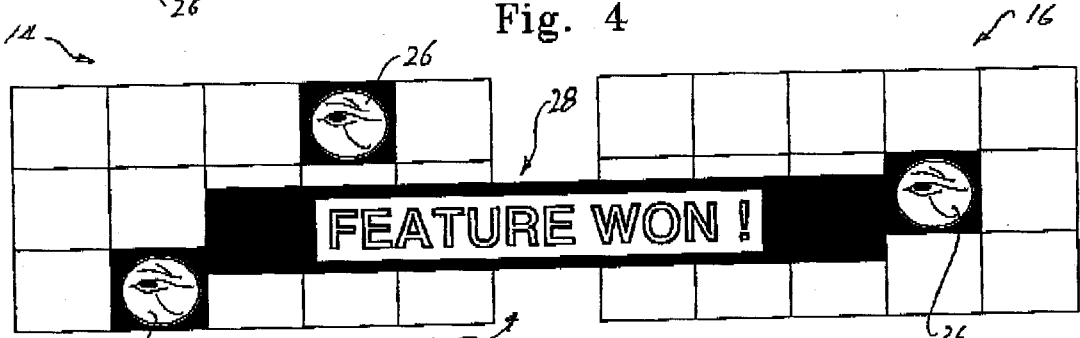


Fig. 5

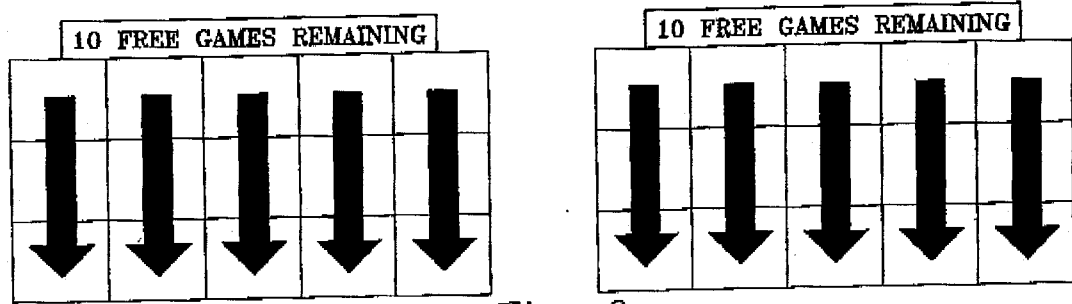


Fig. 6

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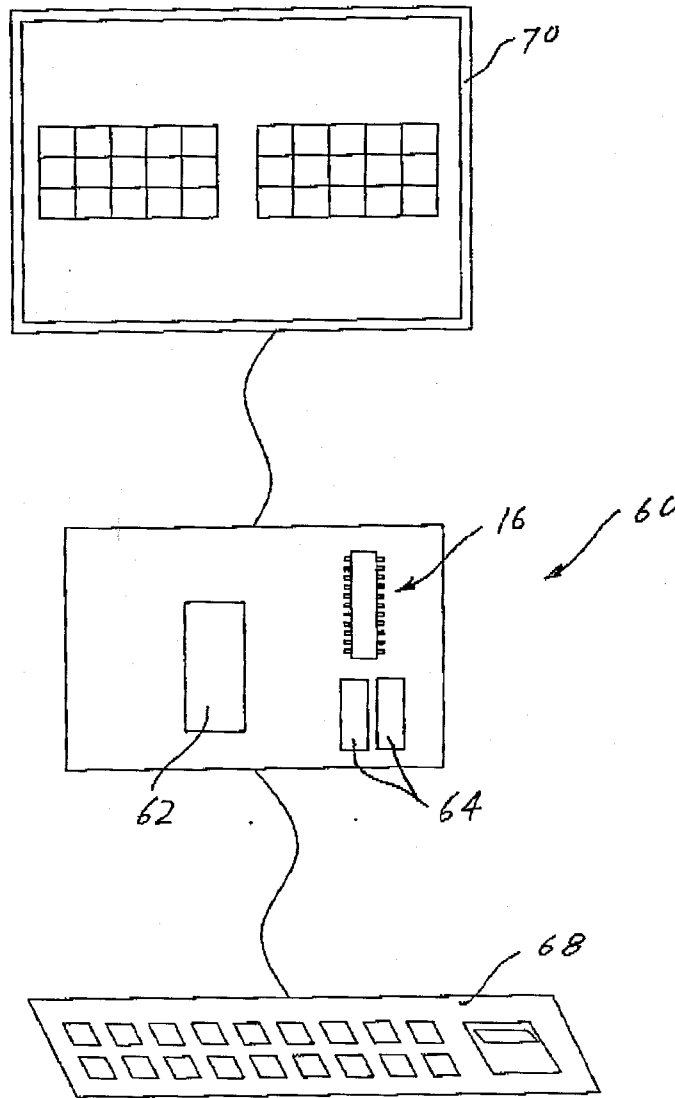


Fig. 7