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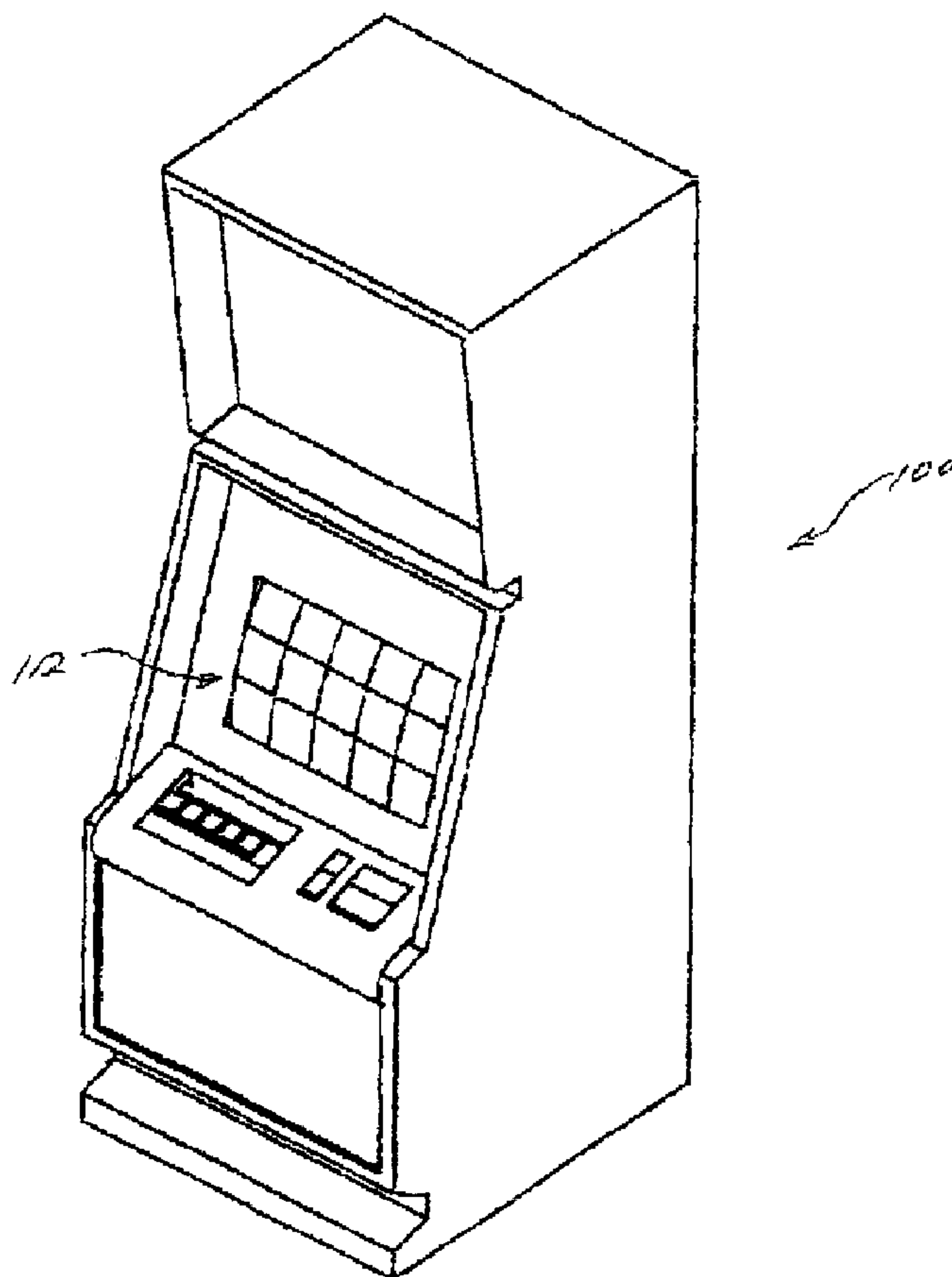
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(54) Titre : METHODE DE MISE EN EVIDENCE DE SYMBOLES

(54) Title: SYMBOL ENHANCEMENT METHOD



(57) Abrégé/Abstract:

A method for the enhancement of video imagery of selected symbols during spinning of simulated reels of an electronic gaming machine; said method including the steps of: (a) selecting for enhancement a subset of symbols displayed on said reels, (c)



(57) **Abrégé(suite)/Abstract(continued):**

associating a symbol enhancement feature comprising a virtual overlay with each of said subset of symbols during transit of said symbols through said display.

ABSTRACT

A method for the enhancement of video imagery of selected symbols during spinning of simulated reels of an electronic gaming machine; said method including the steps of:

- 5 (a) selecting for enhancement a subset of symbols displayed on said reels,
- (c) associating a symbol enhancement feature comprising a virtual overlay with each of said subset of symbols during transit of said symbols through said display.
- 10

SYMBOL ENHANCEMENT METHOD

The present invention relates to gaming machines for the playing of games of chance and, more particularly, to special features of elements of the display of such
5 machines.

BACKGROUND

Gaming, or poker machines, have become a major source of amusement and diversion in such places as clubs, hotels
10 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 application of some mechanical input. If the subsequent
15 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 regulated by government authorities as to their number and
20 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 increase in the complexity and variations of gaming
25 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 eagerly sought by the gaming industry and there is consequently intense competition between machine
5 manufacturers to innovate.

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

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

BRIEF DESCRIPTION OF INVENTION

Accordingly, in a first broad form of the invention,
15 there is provided a method for the enhancement of video imagery of selected symbols during spinning of simulated reels of an electronic gaming machine; said method including the steps of:

- (a) selecting for enhancement a subset of symbols
20 displayed on said reels,
- (b) associating a symbol enhancement feature comprising a virtual overlay with each of said subset of symbols during transit of said symbols through said display.

Preferably, visual effect of said virtual overlay is proportional to rotational velocity of said spinning of said reels; said effect a maximum at maximum reel spin velocity; said effect disappearing as said reels come to
5 rest at a conclusion of a game sequence.

Preferably, said symbol enhancement feature comprises a semi-transparent region of a contrasting character.

Preferably, said region is centred on each of said selected symbols and extends partially over at least one
10 adjoining symbol.

Preferably, said contrasting character is based on colour.

Preferably, said contrasting character is based on a random cycling of selected colours.

15 Preferably, said contrasting character is based on luminosity.

Preferably, said contrasting character is based on fluctuations of said luminosity.

Preferably, said region is of a comet-like shape; said
20 region defining a head portion and a trailing tail portion.

Preferably, said head portion is centred on each of said selected symbols; said trailing tail portion extending

substantially over at least a next following symbol of each of said selected symbols.

Preferably, said contrasting character of said head portion and said trailing tail portion is substantially
5 identical.

Preferably, said contrasting character of said head portion and said trailing tail portion is different.

Preferably, said contrasting character of said head portion provides visually stronger enhancement than said
10 trailing tail portion.

In a further broad form of the invention, there is provided a gaming machine for the playing of games of chance; said gaming machine comprising at least one display unit in which simulated reels are caused to spin and
15 wherein selected symbols on said reels are provided with a semi-transparent symbol enhancement feature during spinning of said reels.

Preferably, said gaming machine includes a primary and a secondary display unit.

20 Preferably, said gaming machine is one of an array of gaming machines interconnected with to a jackpot system.

Preferably, said gaming machine is part of a local area network of interlinked machines.

In yet a further broad form of the invention there is provided a symbol enhancement feature comprising a virtual overlay for association with selected symbols on reels of an electronic gaming machine; said symbol enhancement
5 feature synchronously spinning with spinning reels of said gaming machine.

In yet a further broad form of the invention there is provided a method of implementing said symbol enhancement feature of any one of claims 1 to 18 on a gaming machine;
10 said method including the steps of:

- (a) providing said gaming machine with a control module; said module including a microprocessor, a working memory and a data storage device connection means,
- 15 (b) writing program code to said data storage device,
- (c) connecting said data storage device to said control module.

In still a further broad form of the invention there
20 is provided media for storing enabling digital code for playing games according to any of claims 1 to 19; said media comprising solid state data retaining devices including, read only memory (ROM) and erasable programmable

read only memory (EPROM), compact flash cards and PCMCIA cards; said media further including disc-based storage devices.

BRIEF DESCRIPTION OF DRAWINGS

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

 Figure 1 is a perspective view of an electronic gaming machine with a single display unit,

10 Figure 2 is a representation of the display unit of Figure 1 showing the matrix of symbol containing elements of formed by simulated or virtual reels,

 Figure 3 is a representation of the display unit of Figures 1 and 2 during spinning of the virtual reels in a
15 game sequence with virtual enhancement of selected symbols,

 Figure 4 is a representation of the display unit of Figure 3 after the reels have come to rest,

 Figure 5 is a representation of a display of N-sided elements with enhancement of selected symbols,

20 Figure 6 is a representation of a further display of symbols in N-sided elements,

 Figure 7 illustrates a gaming machine wherein a further embodiment of the invention is applied to a dual monitor arrangement,

Figure 8 illustrates a bank of dual monitor gaming machines to which a further embodiment of the present invention has been applied,

Figure 9 illustrates a hardware implementation of
5 embodiments of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Conventionally, electronic gaming machines or poker machines such as shown in Figure 1 have continued to
10 simulate in some form the spinning reels of their mechanical antecedents. Thus the video display unit (or the main display unit of a dual display machine), typically shows the progress and final outcome of a game played on the machine, implemented as segmented reels spinning about
15 a notional horizontal axis, coming to rest as a matrix of elements in columns and rows as shown in Figure 2. Some arrangement of predefined symbols displayed in selected ones of the displayed segments may then constitute a pay line or pattern.

20 The video images displayed on electronic gaming machines are computer generated on some form of electronic display such as CRTs, plasma and liquid crystal displays for example, and may be described as virtual images.

An important factor in the attraction of gaming
25 machines of this type, is the anticipation by the player of a possible winning outcome as he or she watches the

spinning reels and their symbols through the sequence of initial rapid spin, through gradual slowing, to coming to rest. A common feature of these games is that a selected sub-set of symbols may confer some additional prize or a bonus feature game, should some of the symbols of this sub-set form a winning pattern of symbols displayed at the final outcome of a game sequence.

The likely disposition of selected symbols to form a winning pattern as suggested by their appearance as the reels spin and slow towards stopping, is of particular interest to the player. The method of the present invention seeks to heighten the anticipation of a player during reel spin by enhancing the visibility of, or drawing attention to, such symbols as they traverse the display.

With reference to Figure 2, a display unit 10 shows an array of, in this example, five spinnable reels 12A to 12E. Reels 12A to 12E are arranged side by side and are simulated to spin about a notional common horizontal axis. Each reel is divided into a number of elements containing symbols 16, thus forming a five column by three row matrix when the reels are at rest as in Figure 2. As the reels spin, at least the symbols 16 of three elements of each reel are visible in the display 12 at any given instant, as shown in Figure 3.

For a game sequence according to the present invention, a subset of symbols is selected for enhancement.

These symbols may be any subset of the symbols displayed on the reels but will preferably be ones on which some outcome favourable to the player depends. For example, each, or a selection of the reels, may include a special symbol 18, 5 for example a "wild" or "scatter" symbol, which potentially confers some additional benefit to the player. As the reels spin (from top to bottom of the display) and special symbols 18 transit through the display, each is overlaid with an enhancing virtual overlay, comprising a 10 synchronously spinning semi-transparent region 20 (indicated by shading in Figure 2). Region 20 has some contrasting character to distinguish it from the general appearance of the spinning reels 12A to 12B, and thus draws the player's attention to the symbol 18 visible beneath it.

15 The nature of the contrasting character may take the form of increased luminosity so that the region 20 appears to a viewer as a relatively bright translucent white mist through which the selected symbol 18 is still easily recognizable. Alternatively, the region 20 may consist of a 20 patch of translucent contrasting colour.

In a least one preferred form, region 20 extends beyond the element 14 of the reel containing the selected symbol 18 and, in a particularly preferred form, consists of a comet-like shape comprising a head portion 22 and a 25 tail portion 24. The head portion 22 in this preferred embodiment is then approximately centred on the selected

symbol 18 with the trailing tail portion 24 extending at least over part of the element containing the next following symbol.

As a means of further enhancing the selected symbols, the luminescence of the region 20 may fluctuate or flare as the symbol passes through the display. Where the contrasting character is that of colour, the colour may sequence through a selection of colours for each passage of the symbol through the display.

The extent and intensity of the enhancing virtual overlay is proportional to the velocity of the spin of the reels. Thus the extent of the region, its luminosity or colour, are at a maximum when reel spin is maximum. As the reels begin to slow towards the end of the spinning phase of the game, the enhancing effect is gradually reduced and by the time the reels have come to rest, has disappeared completely as indicated in Figure 4. The reduction of the effect may take the form of a gradual reduction of the length of the tail portion 24 and a lessening of the intensity of luminosity or colour.

The enhancement region 20 may be applied to symbol containing elements of a display other than those forming a strictly rectangular element matrix at the end of a game sequence. Thus, although the game sequence may still simulate spinning reels, the elements of those reels may be bounded by n sides where n takes values other than 4. Thus

for example Figures 5 and 6 show displays in which n-sided symbol containing elements with $n=6$ are employed. Again, selected symbols within those elements are enhanced by a distinctive region 20.

5

Game Implementation

As shown in Fig. 9, a control module 50 is provided with a microprocessor 52 and working random access memory (RAM) 54. The program code driving any of the forms of symbol enhancement described above, may be introduced into the control module 50 by connection of a data storage device. The device may take any of a number of forms, such as read only memory (ROM), erasable read only memory (EPROM), Compact Flash Card, PCMCIA card and the like. Alternatively, control module 50 may incorporate a hard disc drive to which the code may be written via a suitable input device.

Control module 50 acts to implement appropriate elements of the program code according to inputs from a user keyboard 56 and outputs video imagery to at least a main display module 58.

Examples of Gaming Machine Implementation

The symbol enhancement feature of the present invention may be applied to both primary games played on the gaming machine and any bonus or feature games which may be offered as an outcome of the primary game.

25

1. Stand-alone Gaming Machines

As shown in Figure 1, the symbol enhancement feature described above may be implemented on a stand-alone gaming machine 100 provided with a single display unit 112.

2. Stand-alone Gaming Machines with Secondary Display Unit

In a further preferred embodiment of the invention as shown in Figure 7, a stand-alone gaming machine 120 is provided with a secondary display unit 125 as well as a main display unit 122. In this embodiment the symbol enhancement feature may be implemented on either or both of the display units.

3. Gaming Machines Linked to Progressive Jackpot System

In yet a further preferred embodiment of the invention as shown in Figure 8, a plurality of gaming machines 300 are arranged side by side in a line or arc so as to allow each of the players (not shown) of the machines to view a common jackpot prize display unit 313. Each individual machine 310 is provided with at least a main game display unit 312 for the playing of a main game in which the symbol enhancement feature is applied to selected symbols of games played on the machines.

Each of machines 310 of the embodiment illustrated in Figure 8 is electronically linked to a jackpot control module 314 which monitors the volume of play on each of the linked machines and displays an incrementing jackpot value

316 determined according to the combined volume of play on
the linked machines.

It will be appreciated that the linked machines may
form part of Local Area Networks (LAN) or Wide Area
5 Networks (WAN).

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

CLAIMS

1. A method for the enhancement of video imagery of selected symbols during spinning of simulated reels of an electronic gaming machine; said method including
5 the steps of:
 - (a) selecting for enhancement a subset of symbols displayed on said reels,
 - (b) associating a symbol enhancement feature comprising a virtual overlay with each of said
10 subset of symbols during transit of said symbols through said display.
2. The method of claim 1 wherein visual effect of said virtual overlay is proportional to rotational velocity of said spinning of said reels; said effect a maximum
15 at maximum reel spin velocity; said effect disappearing as said reels come to rest at a conclusion of a game sequence.
3. The method of claim 1 or 2 wherein said symbol enhancement feature comprises a semi-transparent
20 region of a contrasting character.
4. The method of claim 3 wherein said region is centred on each of said selected symbols and extends partially over at least one adjoining symbol.

5. The method of claim 3 or 4 wherein said contrasting character is based on colour.
6. The method of claim 3 or 4 wherein said contrasting character is based on a random cycling of selected
5 colours.
7. The method of claim 3 or 4 wherein said contrasting character is based on luminosity.
8. The method of claim 3 or 4 wherein said contrasting character is based on fluctuations of said luminosity.
- 10 9. The method of any one of claims 3 to 8 wherein said region is of a comet-like shape; said region defining a head portion and a trailing tail portion.
10. The method of claim 9 wherein said head portion is centred on each of said selected symbols; said
15 trailing tail portion extending substantially over at least a next following symbol of each of said selected symbols.
11. The method of claim 9 or 10 wherein said contrasting character of said head portion and said trailing tail
20 portion is substantially identical.
12. The method of claim 9 or 10 wherein said contrasting character of said head portion and said trailing tail portion is different.

13. The method of claim 9 or 10 wherein said contrasting character of said head portion provides visually stronger enhancement than said trailing tail portion.
14. A gaming machine for the playing of games of chance;
5 said gaming machine comprising at least one display unit in which simulated reels are caused to spin and wherein selected symbols on said reels are provided with a semi-transparent symbol enhancement feature during spinning of said reels.
- 10 15. The gaming machine of claim 14 wherein said gaming machine includes a primary and a secondary display unit.
16. The gaming machine of claim 14 or 15 wherein said gaming machine is one of an array of gaming machines
15 interconnected with to a jackpot system.
17. The gaming machine of any one of claims 14 to 16 wherein said gaming machine is part of a local area network of interlinked machines.
18. A symbol enhancement feature comprising a virtual
20 overlay for association with selected symbols on reels of an electronic gaming machine; said symbol enhancement feature synchronously spinning with spinning reels of said gaming machine.

19. A method of implementing said symbol enhancement feature of any one of claims 1 to 18 on a gaming machine; said method including the steps of:

5 a. providing said gaming machine with a control module; said module including a microprocessor, a working memory and a data storage device connection means,

b. writing program code to said data storage device,

10 c. connecting said data storage device to said control module.

20. Media for storing enabling digital code for playing games according to any of claims 1 to 19; said media comprising a solid state data retaining device.

15

21. The media of claim 20 wherein said data retaining device includes at least one of a read only memory (ROM), an erasable programmable read only memory (EPROM), a compact flash card or PCMCIA card.

20

22. The media of claim 20 or claim 21, said media further including a disc-based storage device.

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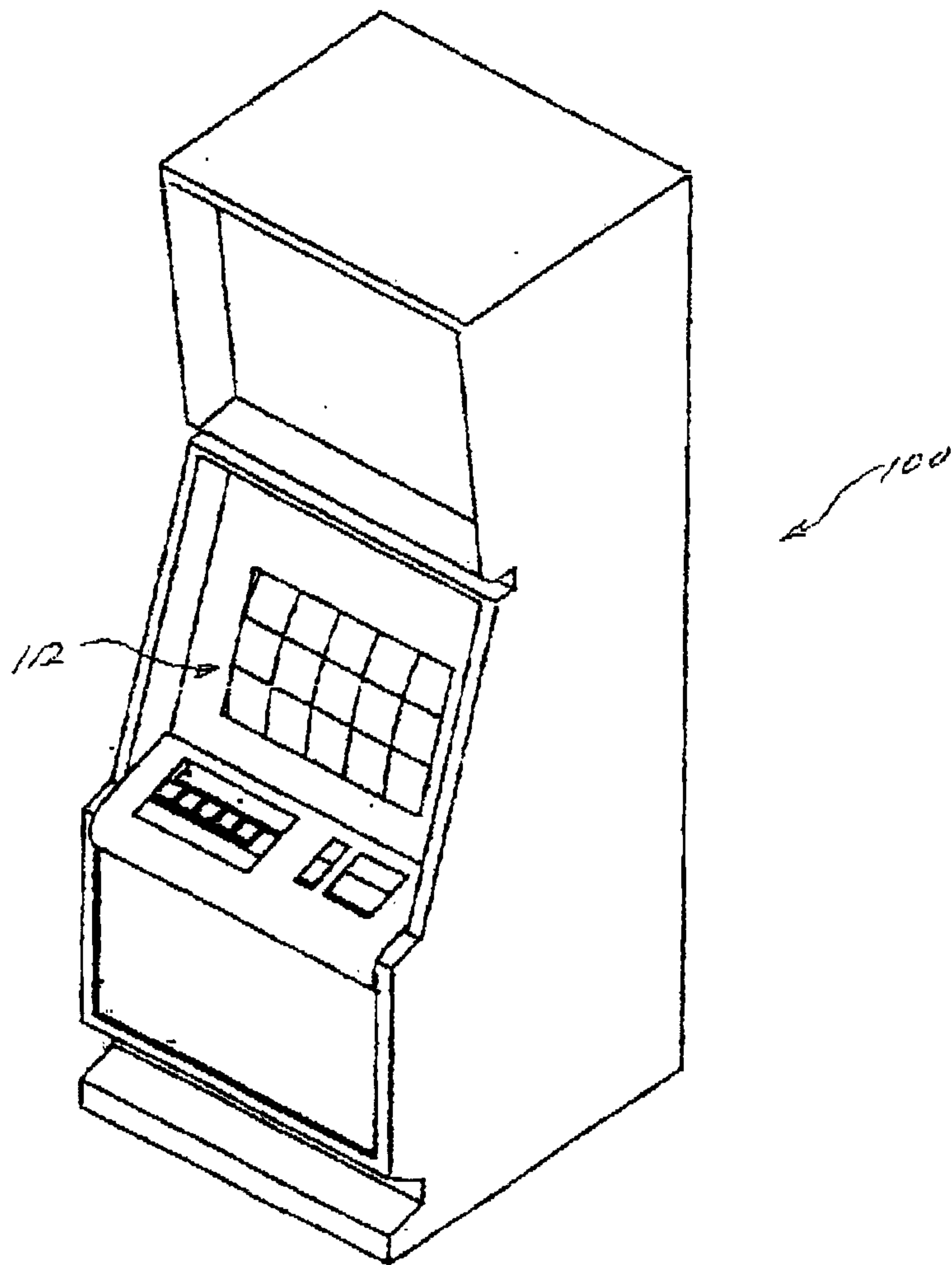


Fig. 1

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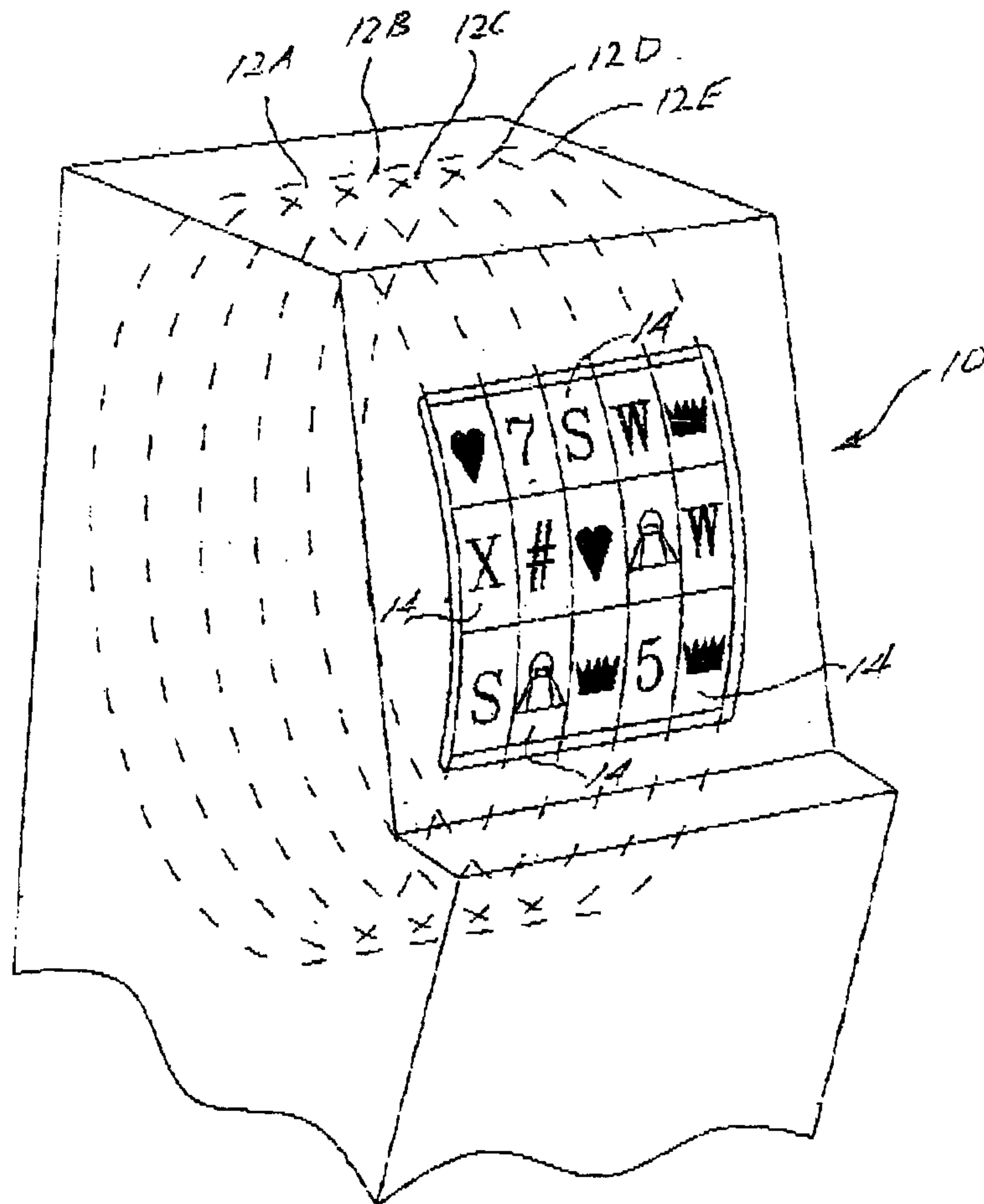


Fig. 2

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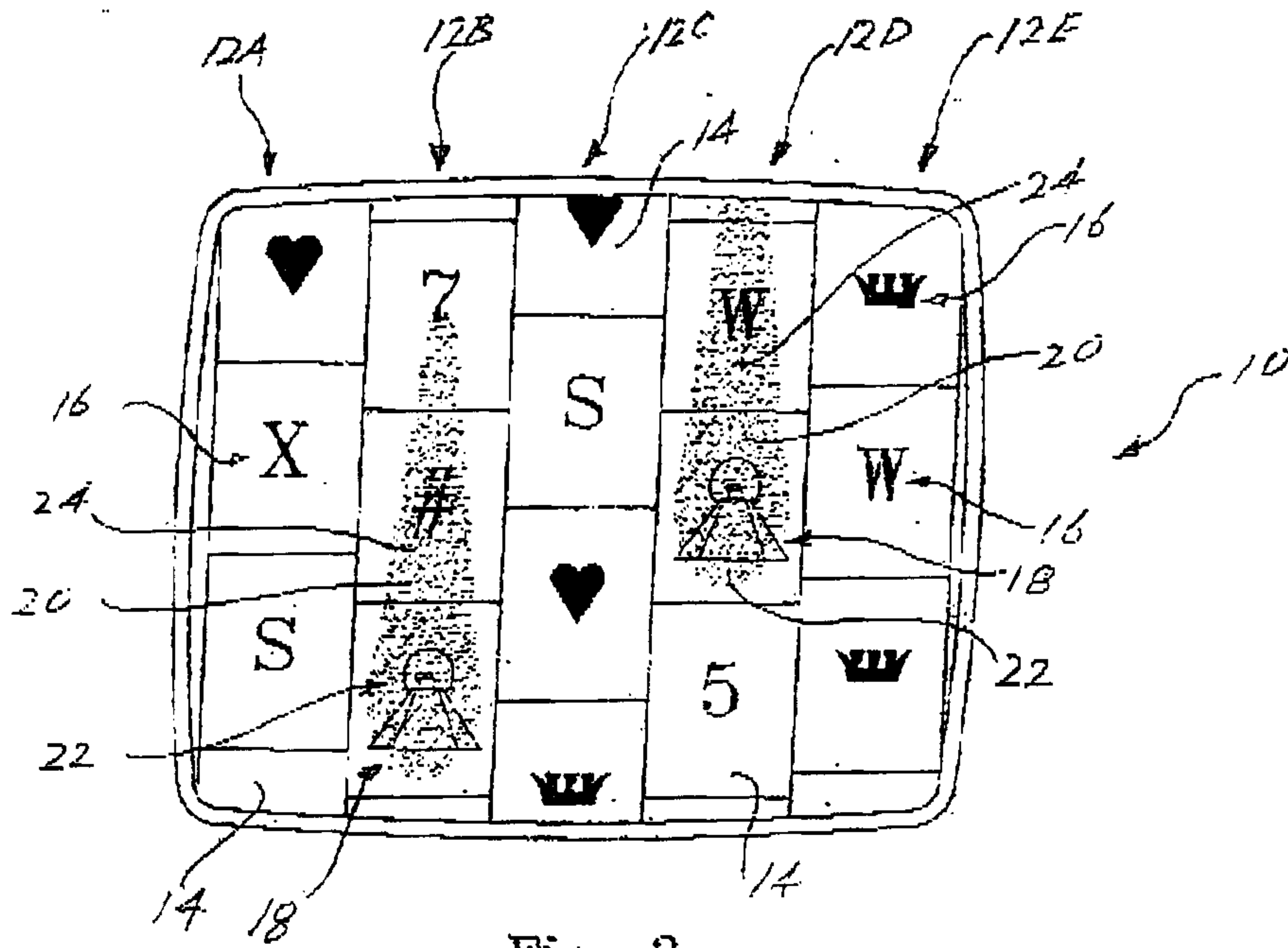


Fig. 3

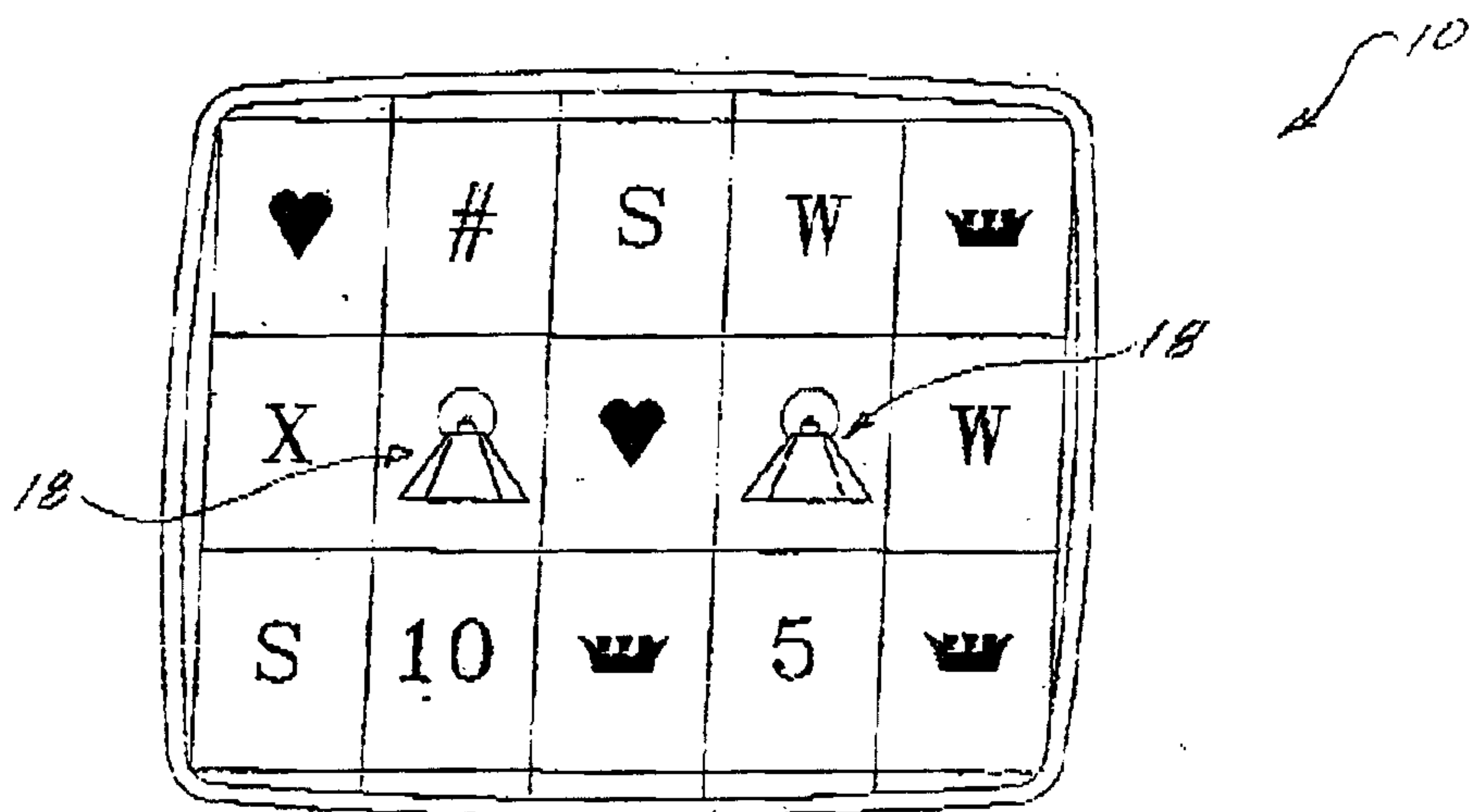


Fig. 4

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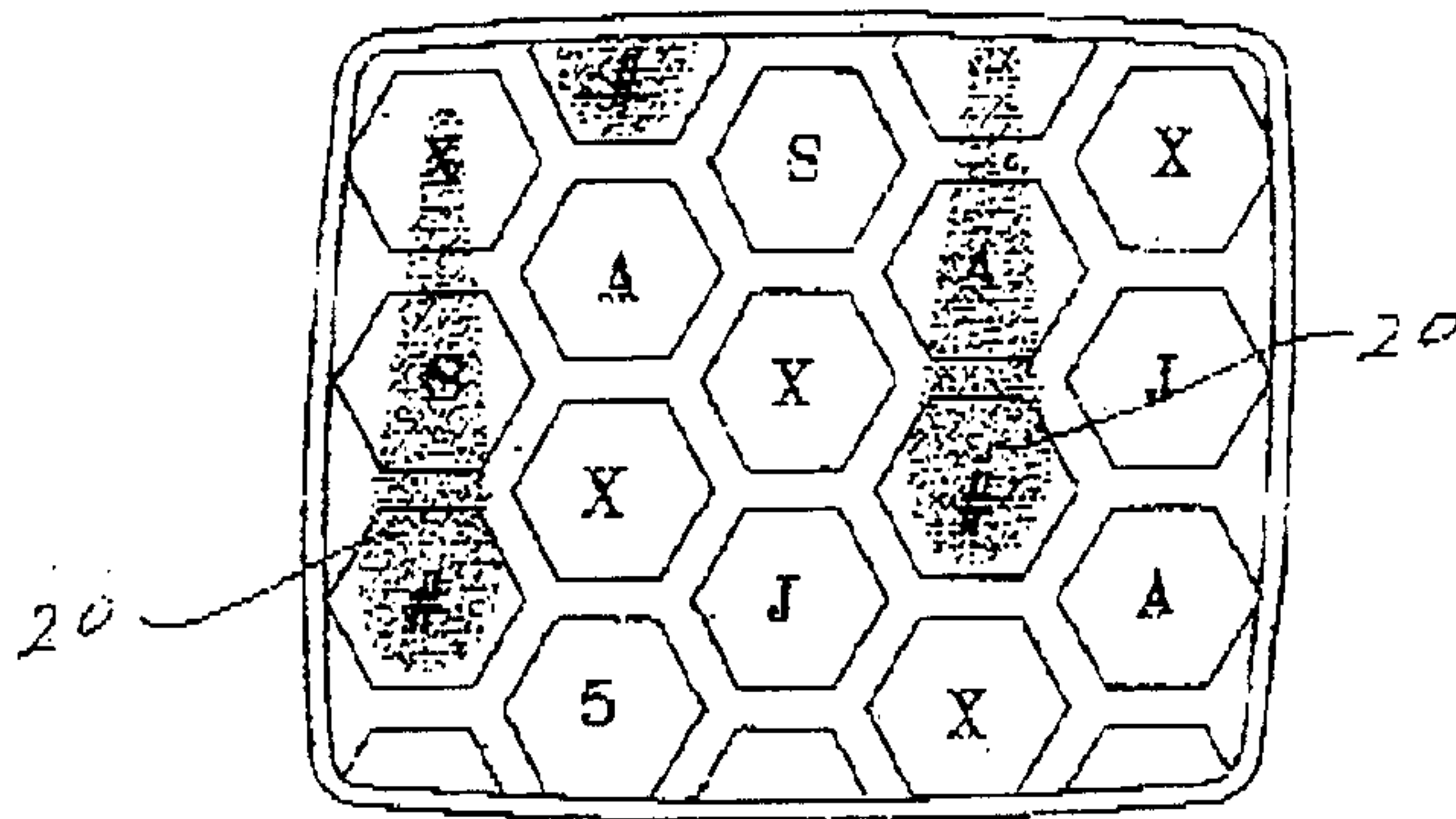


Fig. 5

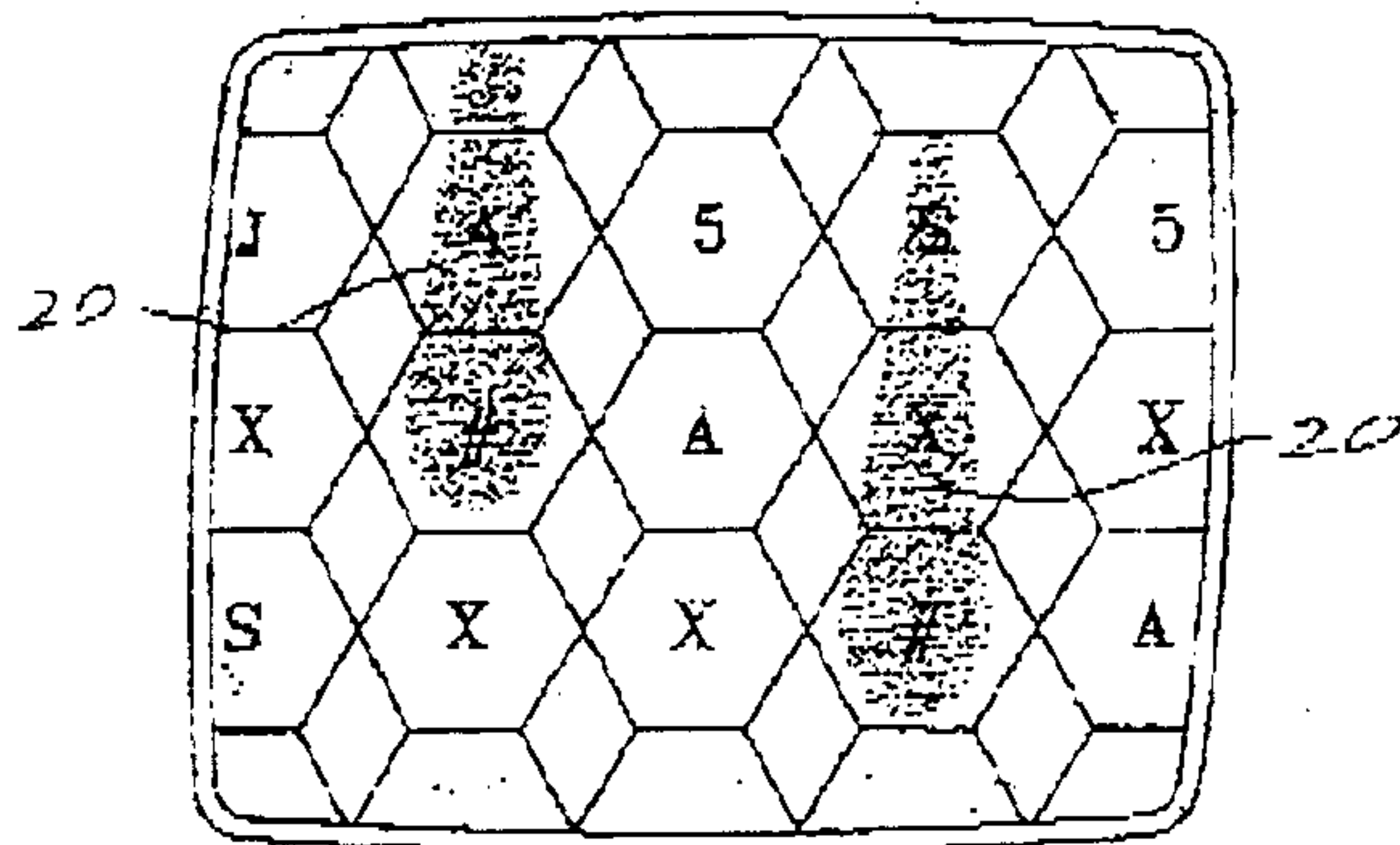


Fig. 6

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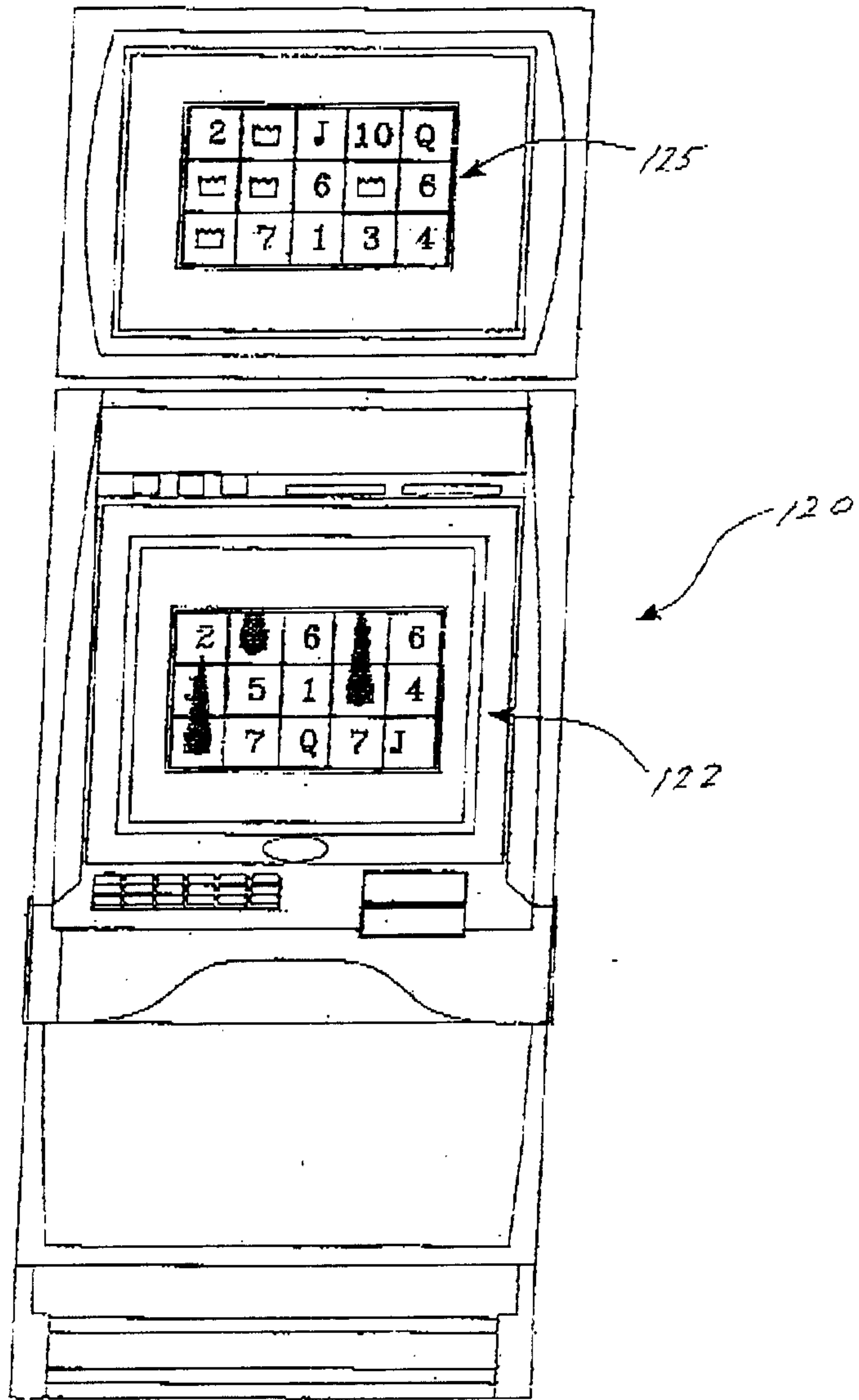


Fig. 7

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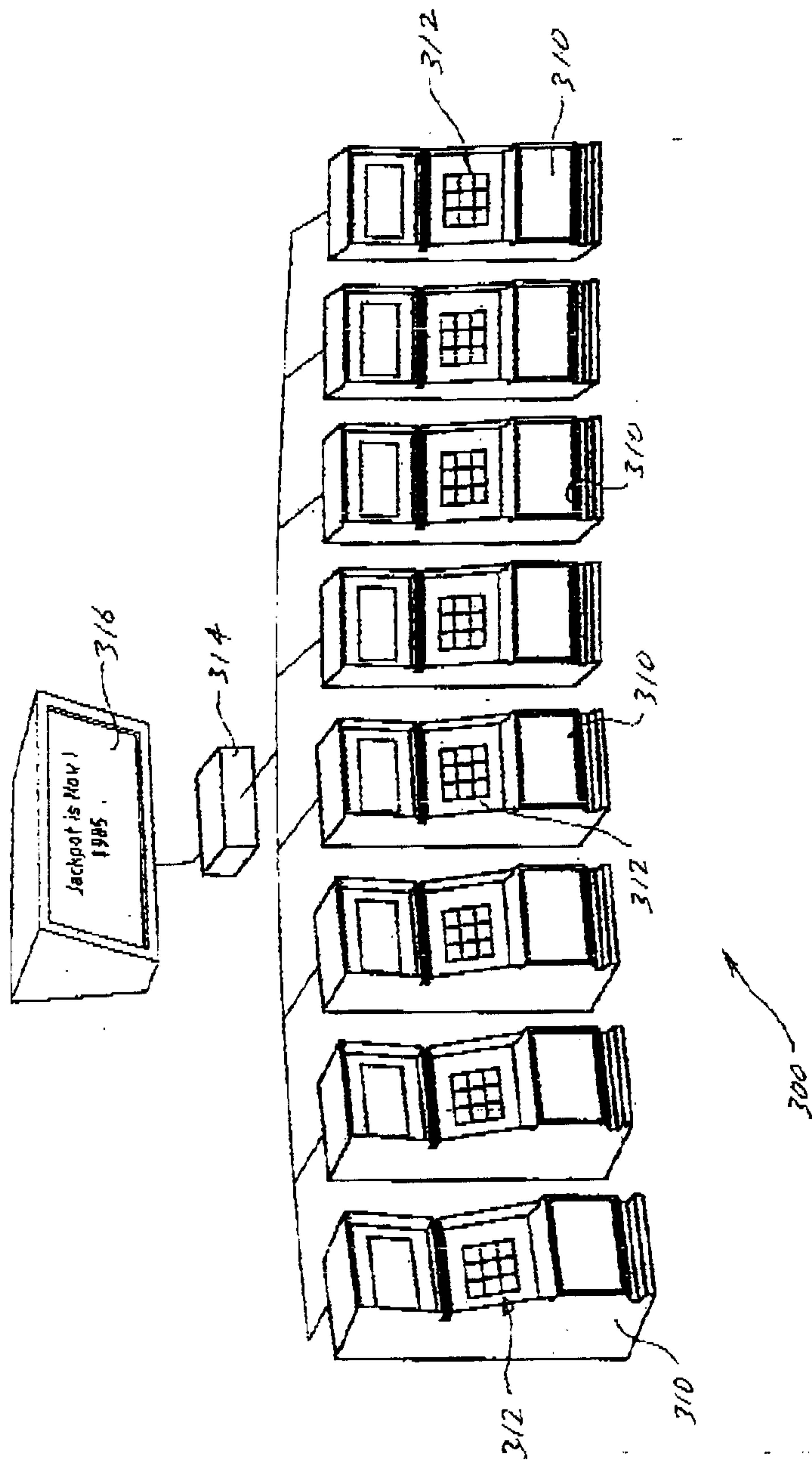


Fig. 8

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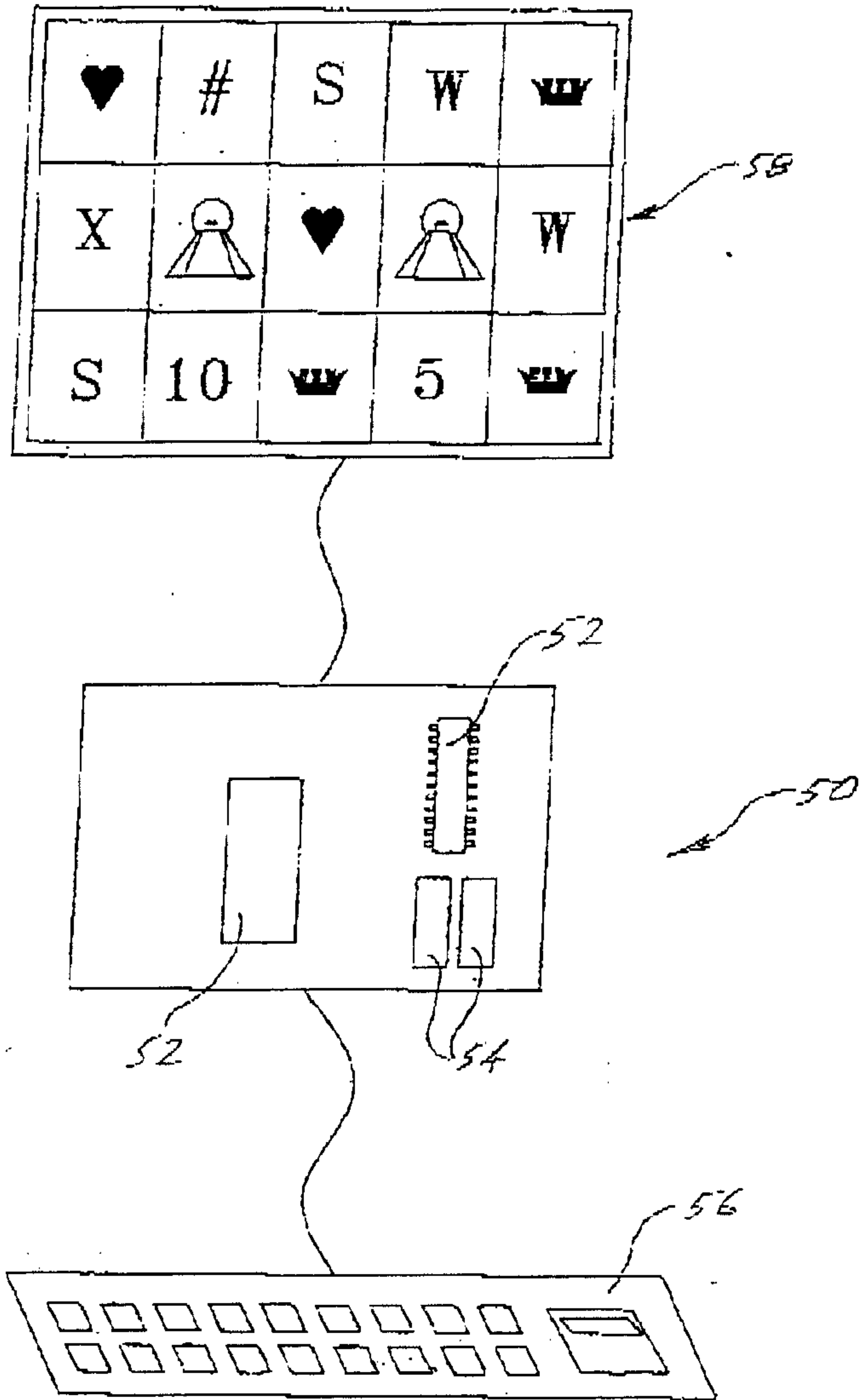
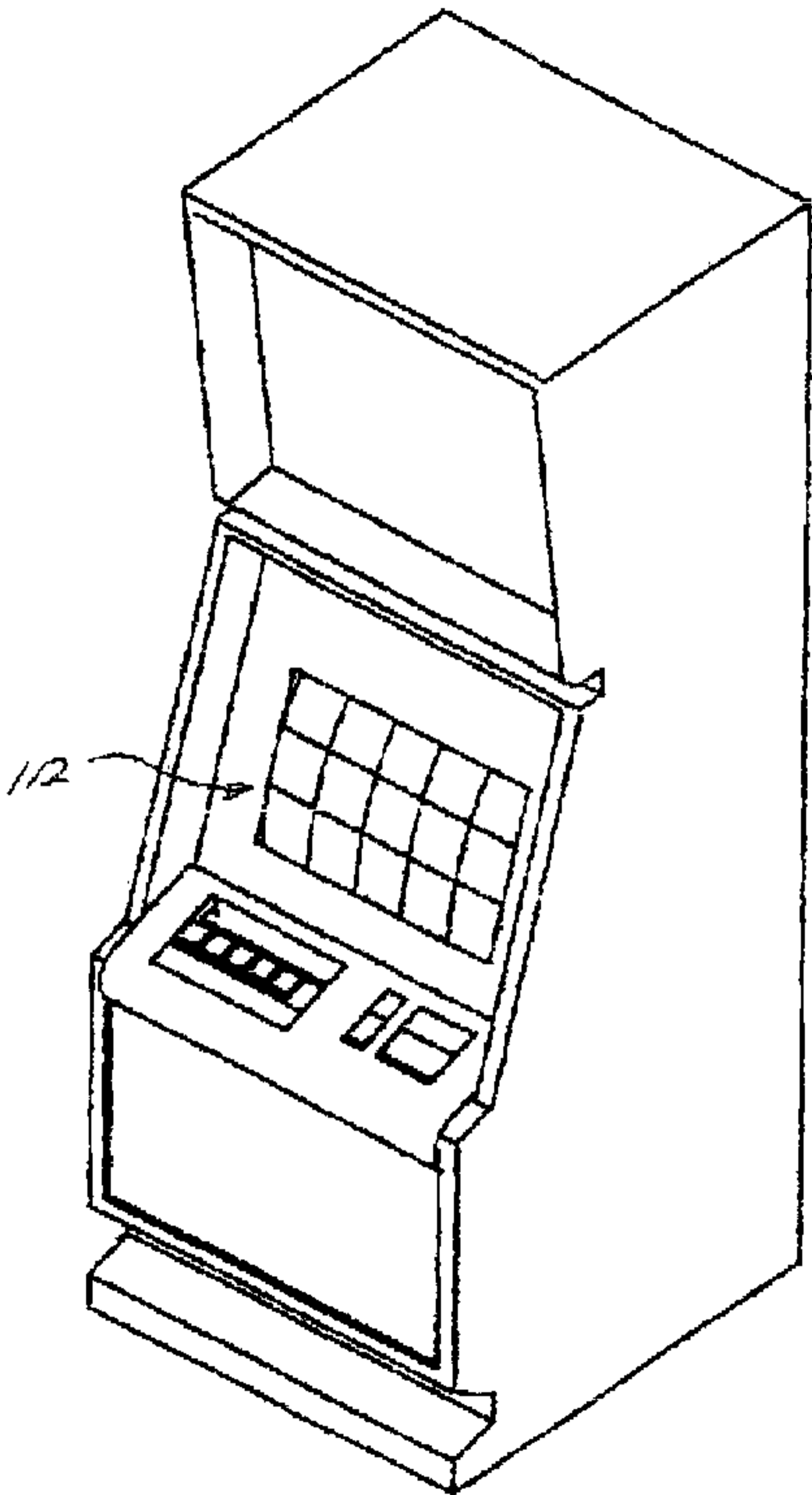


Fig. 9



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