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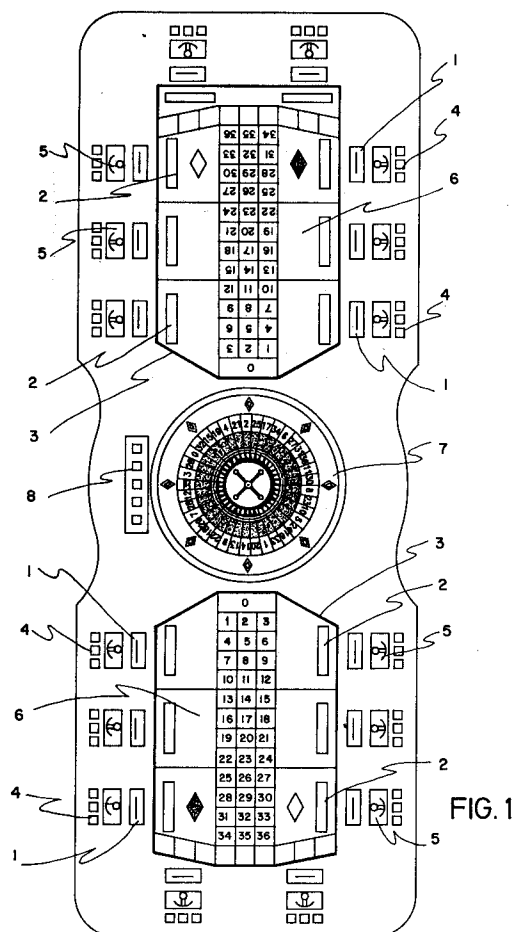
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E-28015 Madrid (ES)**(54) **Electronic system for the game of roulette and gambling table usable with said system.**

(57) Electronic system for the game of roulette and gambling table usable with said system. The game is played automatically in its traditional form under the control of a CPU and a logic programme of operation. Chips representing money are avoided and the game clothes (6) are graphic displays on a screen (3). The charges and payments of bets are recorded on an electronic card individualised for each player at the gambling table. The selection of bets is made through command means individualised (4,5) for each player at the gambling table or at distant game terminals. The system allows for the specification of other rules of the game, emission of audiovisual messages in several languages and the printing of data and events of the game. Application in casinos and other gambling premises.

**FIG. 1****EP 0 599 769 A2**

The invention refers to a system for the controlled play and prosecution of the game of roulette, which mainly uses electronic means, as well as the machine or roulette table usable with said system.

As it is known, the roulette is a game of chance where players bet amounts of money against the organizing establishment (casino). The obtention of prize depends on the final position of a ball capable of moving erratically on a revolving disc divided into, generally, thirty seven cells or recesses identified with numbers from 0 to 36 and coloured half red and half black. The game is played on a big and long table on which, on a cloth cover, numbers from 0 to 36 are printed in a squared reticle, as well as other areas adjacent to said series of numbers, forming a graphic set called game cloth. A roulette device is placed on one end of the table, if there is only one game cloth, or in the middle if there are two or more game clothes. The bets are made by placing chips representing a determined economic value on the squared reticle, what also serves for identifying the type of bet made. Usual bets are the straight (one number), split (two numbers), square (four numbers), dozen (twelve numbers), red and black, even and odd, "passe" and "manque", and in some countries and under different regulations there are other types of bets like "sixaine", line, column, street, etc. Each bet has a prize depending on its own probability.

The game of roulette, in spite of its simplicity of conception, has a certain complexity in its prosecution, inasmuch as it involves several players around each game cloth, every player with equal or similar chips that, depending on their position on the game cloth mean a type of bet. Moreover, at the end of each coup it is necessary to remove the chips of losing bets, to pay the prize of winning bets, change and exchange chips, to put them in order of value and colour, and at the end of every game session to make an inventory and recount of each gambling table. Consequently the casino needs to employ a number of persons (two or more per game cloth) in different shifts, dedicated to control and manage the game in each table or game cloth. So the game is many times slow and there is always the risk of mistake in its management and control. Moreover, the game requires that the player is placed close to the game cloth, many times standing, and with enough degree of memory and attention to the bets he has made.

In the state of the art there are electronic or electromechanic machines of slot machine type that simulate to a great or lesser extent the rules or the mechanism of the game of roulette, and they work on player against machine basis with a limited chance, since they must give prizes with a pre-

determined frequency. However, devices or machines for playing the real or classic game of roulette are unknown.

The objective of the present invention is to provide technical solutions for the drawbacks of the game of roulette. Therefore, objectives to achieve are: reduction of the staff of the casino dedicated to each table or game cloth, to increase the speed of the game and to remove the risk of mistake both for the player making bets and the casino paying the prizes.

Other objectives are to increase the control of the game, as well as the speed and reliability of the administration for the casino, and also to offer the player the possibility of playing the game from a location apart from the gambling table.

According to the invention it is proposed a system that mainly comprises electronic means. The system of the invention keeps the traditional rules of the game of roulette, whereas it modifies and increases its physical or technical elements. Thus, the roulette as mechanic device in which the thrust of turning and throwing the ball is done by an employee of the casino (croupier), might be changed by an electromechanic device which provokes the rotation of the disk, throws the ball and determines the final location (cell) of the ball, even though the latter operation could be also done by optical means.

In a different embodiment, the roulette device is substituted by an electronic random number generator.

The traditional game cloth or clothes are replaced by one or more CRT and/or LCD screens which display with the greatest fidelity the usual color and graphic distribution of said game clothes: reticle of numbers and areas of simple and multiple bets.

Furthermore, the traditional chips in different colours and values are omitted, and the betting action of the player placing chips is carried out by command means, such as a directional keyboard or analogical simulators of movement (joystick), which displace chips displayed on the screen. The task of the employees of the casino to remove the losing bets and to pay the winning ones is done automatically at the end of each coup or by command means.

The economic exchange of the game is done by means of a magnetic support (card) on which has been previously recorded the amount of money each player wishes to bet in one or more times, and on which prizes and losses are added or deducted, so that the tedious operations of collecting, recounting and exchanging chips are avoided.

The coordination of the elements which make up the system of the invention is done by means of one or more CPU provided with its own micropro-

cessors, controllers, interfaces and memory supports, which work in response to the commands of a logic programme of operation.

The system of the invention is advantageously applied to an electronic machine which makes up a roulette table, and also allows for the existence of game terminals located in other places of the casino, in order to avoid the eventual agglomeration of players and the need of the player of being close to the gambling table.

In accordance with the invention, an electronic system for the game of roulette comprises:

- at least a CPU provided with its own micro-processors, image, sound and communication controllers, and data input/output plates,
- memory supports ROM and/or RAM, which contain at least the data pertaining to the statutory or voluntary regulations of the game, the current, statistical and historical data of each coup or series of coups, and a logic programme for the operation and command of the elements of the system,
- one or more CRT and/or LCD screens for the display of the game cloth and other data, images or messages relative to the game,
- a magnetic support individualised for each player which allows for the recording of charges and payments of amounts of money,
- a reader/recorder device for said magnetic support,
- at least a command keyboard of the system for the casino,
- at least a keyboard or command member individualised for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the screen,
- acoustic means for the transmission of messages,
- voice synthesiser means to transmit messages through said acoustic means,
- means for the translation of the acoustic and/or visual messages into several languages,
- one or more printers capable of printing statistical, historical or current data and messages of the progress of the coups, and
- an independent emergency power supply device for the elements of the system.

In a more complex form of embodiment, the system comprises one or more game terminal machines each one provided at least with one or more CRT and/or LCD screens for the display of the game cloth and other data, images or messages relative to the game, a keyboard or command member individualised for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the

screen, acoustic means for the transmission of messages, a reader/recorder device of magnetic supports individualised for each player, and at least a command keyboard of the game terminal for the casino.

In other forms of embodiment, the system comprises a roulette device under electromechanic command associated to a number reading device for the cell finally occupied by the ball, or an automatic electronic random number generator as substitutes for the roulette device, a wave transmitter/receiver for the remote control of the system by the casino and for connecting and telecontrolling the game terminals, and means for connection to a public or private audiovisual communication system.

In accordance with the invention a machine or roulette table, in particular usable with the system of the invention, comprises:

- at least a CPU provided with its own micro-processors, image, sound and communication controllers, and data input/output plates,
- memory supports ROM and/or RAM, which contain at least the data pertaining to the statutory or voluntary regulations of the game, the current, statistical and historical data of each coup or series of coups, and a logic programme for the operation and command of the elements of the table,
- one or more CRT and/or LCD screens for the display of the game cloth and other data, images or messages relative to the game,
- a magnetic support individualised for each player which allows for the recording of charges and payments of amounts of money,
- a reader/recorder device for said magnetic support,
- at least a command keyboard of the table for the casino,
- at least a keyboard or command member individualised for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the screen,
- acoustic means for the transmission of messages,
- voice synthesiser means to transmit messages through said acoustic means,
- means for the translation of the acoustic and/or visual messages into several languages,
- means for connection to one or more printers capable of printing statistical, historical or current data and messages of the progress of the coups, and
- an independent emergency power supply device for the elements of the table.

In a further complex form of embodiment, the gambling table comprises in addition means for connection to one or more game terminal machines, each one provided at least with one or more CRT and/or LCD screens for the display of the game cloth and other data, images or messages relative to the game, a keyboard or command member individualised for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the screen, acoustic means for the transmission of messages, a reader/recorder device of magnetic supports individualised for each player, and at least a command keyboard of the game terminal for the casino.

In other forms of embodiment, a roulette table according to the invention comprises a roulette device under electromechanic command associated to a number reading device for the cell finally occupied by the ball, or an automatic electronic random number generator, which is displayed on a CRT or LCD screen as substitutes for the roulette device, a wave transmitter/receiver for the remote control of the machine by the casino and for connecting and telecontrolling the game terminals, and means for connection to a public or private audio-visual communication system.

Additionally, in accordance with the invention a terminal machine for the game of roulette, in particular usable with the aforesaid system and/or dependent on the gambling table, comprises at least:

- one or more CRT and/or LCD screens for the display of the game cloth and other data, images or messages relative to the game,
- a keyboard or command member individualised for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the screen,
- acoustic means for the transmission of messages,
- a reader/recorder device of magnetic supports individualised for each player,
- at least a command keyboard of the game terminal for the casino, and
- an independent emergency power supply device.

In other particular forms of embodiment, the terminal machine comprises the display of a roulette device, a wave transmitter/receiver for the remote control of the machine by the casino and for connection to the gambling table, and means for connection to a public or private audiovisual communication system.

The sheets of drawing represent:

Figure 1 is a plan view of an example of a gambling table according to the invention.

Figure 2 is a plan view of an example of a game terminal according to the invention.

The system, the gambling table and the game terminals of the invention, as well as other additional advantages will be better understood from the description which follows of an example of application of the system in a gambling table and game terminal with reference to Figures 1 and 2.

In accordance with the system of the invention, the player is located in a game post at a table (in Figure 1 there are sixteen posts represented) or at a game terminal (in Figure 2 there are three posts represented). The player inserts in a reader/recorder device (1) the magnetic card he had previously obtained, for example in the cashdesk of the casino, which is automatically checked as its authenticity and existence of credit. A colour or another identification of chips is assigned to the player, which is displayed for example on an area or window (2) of the general screen CRT/LCD (3), and starting from that moment, if the player is at the proper time of betting, he can assign/cancel/repeat/consult/finish his bets with the keys (4), and with the joystick (5) put them in the desired places of the game cloth (6) displayed on the screen (3). When the betting time is over, the roulette device or the number generator (7) is operated, either manually or automatically in response to a temporization of the logic programme of operation of the CPU or by punching a keyboard (8) dependent on the casino, and the settling of the number and colour winning is expected. Automatically, by blinking, flashing, voice, etc., the winning number is identified and the winning bets are displayed on the screen (3), and on the area (2) of each player his eventual prize. Then the prizes, which also could be announced by voice, are paid and in the reader/recorder device (1) the corresponding notice of payment or credit is made on the magnetic card of the player, so that a new coup or cycle may be started. The player, by means of the keyboard (4), may then leave the game recovering his card, either to come back later or going to another table or game terminal, or even exchange for money, for example in the cashdesk of the casino, the balance recorded on his card.

Figure 2 represents a game terminal which operation is substantially the same as aforesaid for the gambling table. The main difference lies in its dispersed or eventual location into the casino, which allows to play from different places of the casino and avoids the crowd of people playing or waiting around the gambling tables. These game terminals, which may have a very variable size, or even they can be portable, are connected to the gambling table by cable or by a wave transmitter/receiver. In the illustrated example, in addition

to the screen (3) which displays the game cloth (6), there is another screen CRT/LCD (9) for the displaying of the roulette device or number generator (7) of the gambling table, so that the player follows the game as directly as if he were at the gambling table, although the information about the winning number and other acoustic or visual messages relative to the game also could be displayed on the areas or windows (2) of the screen (3), so that the game terminal could be smaller.

All these events have been coordinated and memorized by the CPU, so that at any moment and particularly at the end of each game session, there is a complete historical, statistical and accounting information about the operation of every gambling table or game terminal, which can be printed as a statutory or accounting document immediately available.

It should be understood that the system of the invention is easily adaptable to different rules of the game of roulette, for example to the roulette of twenty-four numbers, and the types of bets could be varied. It is also understandable that all the messages between machine and player can be displayed on the screen or be transmitted by the voice synthesiser, both with the possibility of translation into several languages. Also it must be understood that part of the historical or statistical information of each table will be available to any player, and that the screens and particularly the screens of the gambling table and game terminals are capable of transmitting information or entertainment from a public or private audiovisual communication system.

Claims

1. Electronic system for the game of roulette characterised by comprising:

- at least a CPU provided with its own microprocessors, image, sound and communication controllers, and data input/output plates,
- memory supports ROM and/or RAM, which contain at least the data pertaining to the statutory or voluntary regulations of the game, the current, statistical and historical data of each coup or series of coups, and a logic programme for the operation and command of the elements of the system,
- one or more CRT and/or LCD screens for the display of the game cloth and other data, images or messages relative to the game,
- a magnetic support individualised for each player which allows for the recording of charges and payments of amounts

of money,

- a reader/recorder device for said magnetic support,
- at least a command keyboard of the system for the casino,
- at least a keyboard or command member individualised for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the screen,
- acoustic means for the transmission of messages,
- voice synthesiser means to transmit messages through said acoustic means,
- means for the translation of the acoustic and/or visual messages into several languages,
- one or more printers capable of printing statistical, historical or current data and messages of the progress of the coups, and
- an independent emergency power supply device for the elements of the system.

2. Electronic system for the game of roulette, according to claim 1, characterised by comprising one or more game terminal machines, each one provided at least with one or more CRT and/or LCD screens for the display of the game cloth and other data, images or messages relative to the game, a keyboard or command member individualised for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the screen, acoustic means for the transmission of messages, a reader/recorder device of magnetic supports individualised for each player, and at least a command keyboard of the game terminal for the casino.

3. Electronic system for the game of roulette, according to claims 1 or 2, characterised by comprising a roulette device under electromechanic command associated to a number reading device for the cell finally occupied by the ball or an automatic electronic random number generator as substitutes for the roulette device.

4. Electronic system for the game of roulette, according to claims 1 to 3, characterised by comprising a wave transmitter/receiver for the remote control of the system by the casino and for connecting and telecontrolling the game terminals.

5. Electronic system for the game of roulette, according to claims 1 to 4, characterised by comprising means for connection to a public or private audiovisual communication system. 5
6. Electronic table for the game of roulette, in particular usable with the system of the preceding claims, characterised by comprising:
 - at least a CPU provided with its own microprocessors, image, sound and communication controllers, and data input/output plates, 10
 - memory supports ROM and/or RAM, which contain at least the data pertaining to the statutory or voluntary regulations of the game, the current, statistical and historical data of each coup or series of coups, and a logic programme for the operation and command of the elements of the table, 15
 - one or more CRT and/or LCD screens (3) for the display of the game cloth (6) and other data, images or messages (2) relative to the game, 20
 - a magnetic support individualised for each player which allows for the recording of charges and payments of amounts of money, 25
 - a reader/recorder device (1) of said magnetic support, 30
 - at least a command keyboard (8) of the table for the casino, 35
 - at least a keyboard or command member individualised (4,5) for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the screen, 40
 - acoustic means for the transmission of messages, 45
 - voice synthesiser means to transmit messages through said acoustic means,
 - means for the translation of the acoustic and/or visual messages into several languages,
 - means for connection to one or more printers capable of printing statistical, historical or current data and messages of the progress of the coups, and 50
 - an independent emergency power supply device for the elements of the table. 55
7. Electronic table for the game of roulette, according to claim 6, characterised by comprising means for connection to one or more game terminal machines, each one provided at least with one or more CRT and/or LCD screens (3) for the display of the game cloth (6) and other data, images or messages (2) relative to the

game, a keyboard or command member individualised (4,5) for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the screen, acoustic means for the transmission of messages, a reader/recorder device (1) of magnetic supports individualised for each player, and at least a command keyboard of the game terminal for the casino.

8. Electronic table for the game of roulette, according to claims 6 or 7, characterised by comprising a roulette device under electromechanic command associated to a number reading device for the cell finally occupied by the ball or an automatic electronic random number generator which is displayed on a CRT or LCD screen, as substitutes for the roulette device (7).
9. Electronic table for the game of roulette, according to claims 6 to 8, characterised by comprising a wave transmitter/receiver for the remote control of the machine by the casino and for connecting and telecontrolling the game terminals.
10. Electronic table for the game of roulette, according to claims 6 to 9, characterised by comprising means for connection to a public or private audiovisual communication system.
11. Electronic terminal machine for the game of roulette, in particular usable with the system and/or dependent upon the gambling table of the preceding claims, characterised by comprising at least:
 - one or more CRT and/or LCD screens (3,9) for the display of the game cloth and other data, images or messages (2) relative to the game,
 - a keyboard or command member individualised (4,5) for each player, which allows for the selection and control of the bets and the movement of the chips displayed on the screen,
 - acoustic means for the transmission of messages,
 - a device reader/recorder (1) of magnetic supports individualised for each player,
 - at least a command keyboard of the game terminal for the casino, and
 - an independent emergency power supply device.
12. Electronic terminal machine for the game of roulette, according to claim 11, characterised by comprising a wave transmitter/receiver for

the remote control of the machine by the casino and for connection with the gambling table.

- 13.** Electronic terminal machine for the game of roulette, according to claims 11 or 12, characterised by comprising means for connection to a public or private audiovisual communication system.

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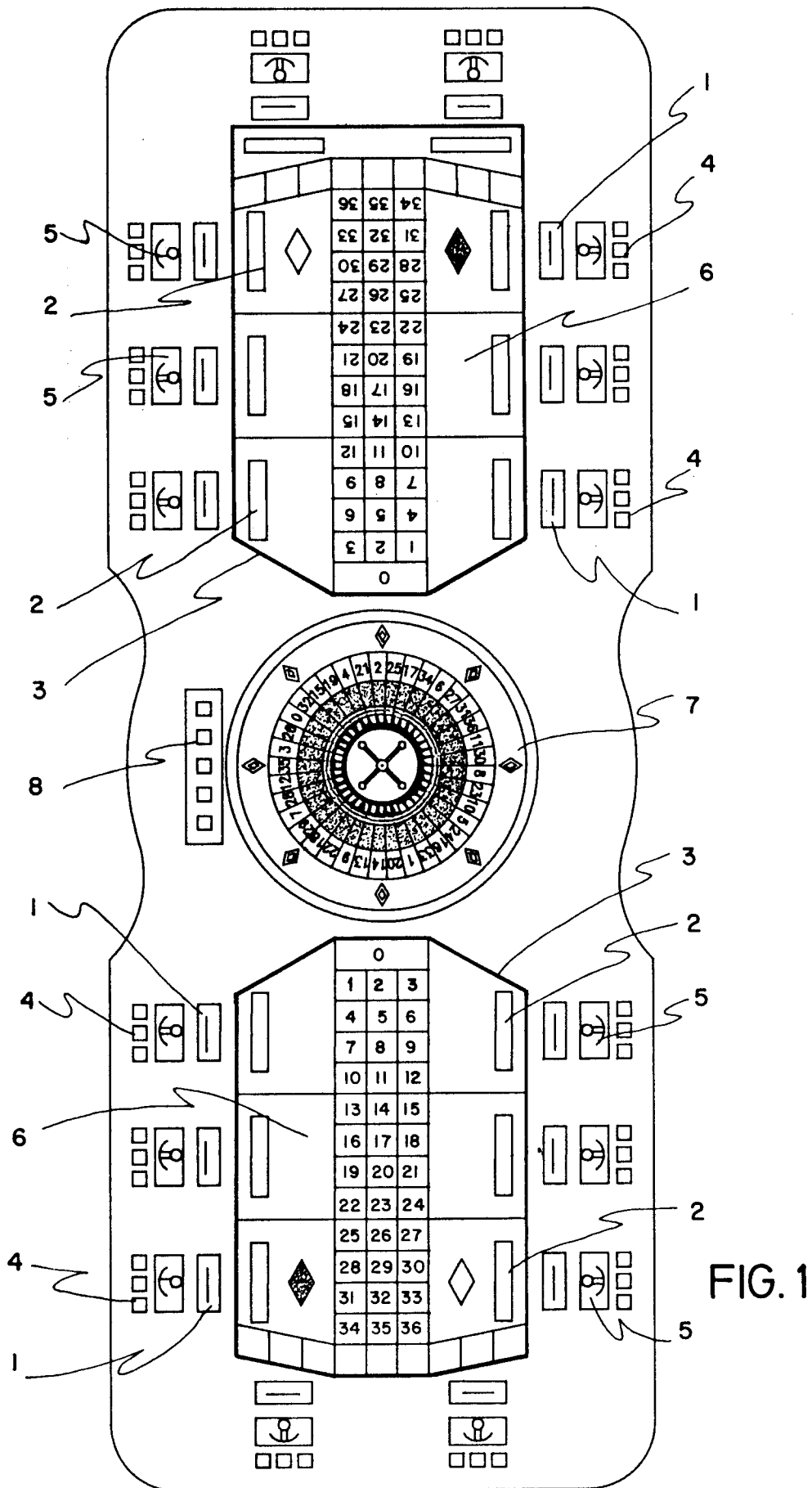
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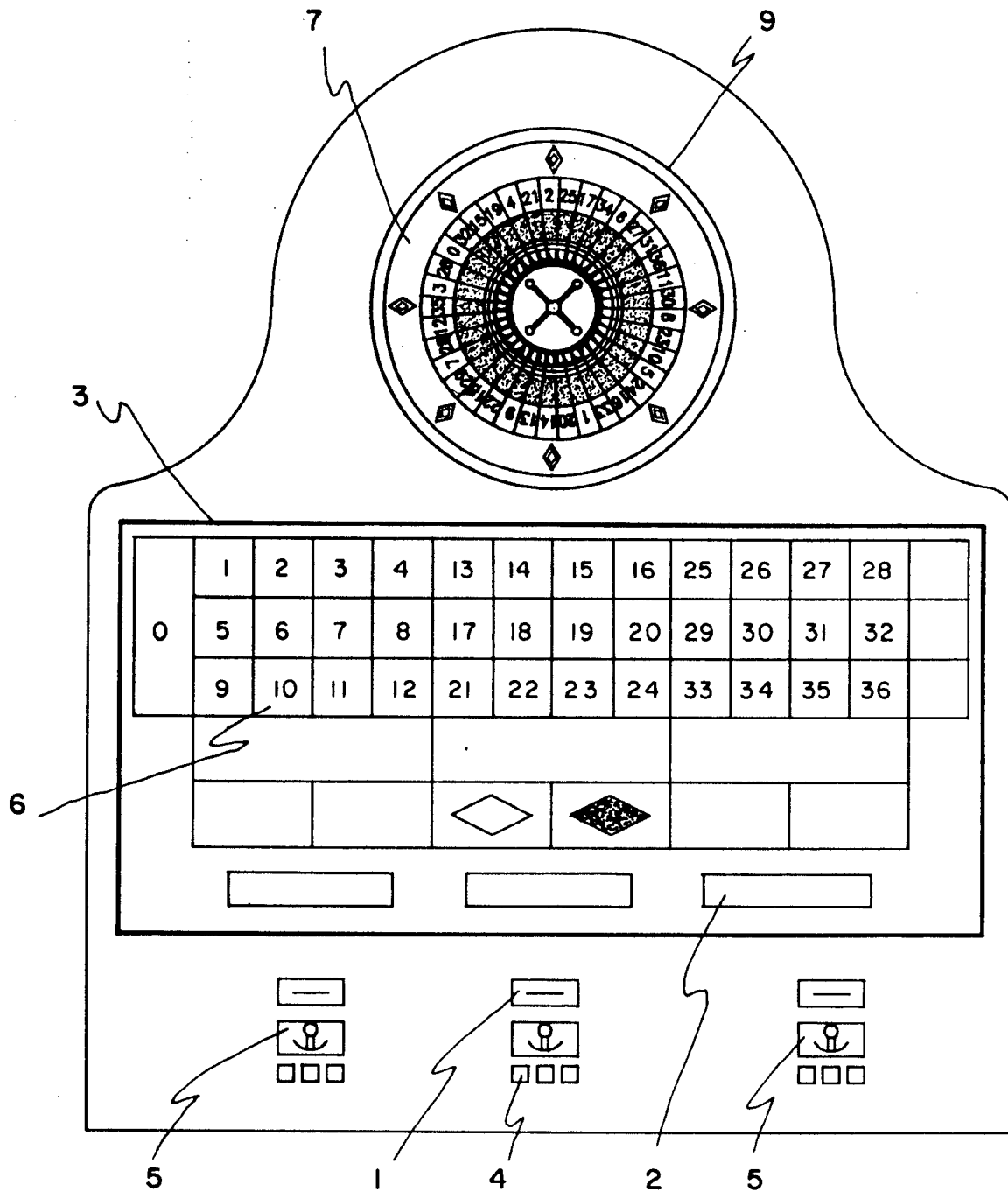


FIG. 2