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(54) **CASINO TABLE DEVICE WITH  
AUTOMATED PROGRESSIVE JACKPOT**

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(57) **ABSTRACT**

Casino table device with automated progressive jackpot, comprising a gaming table, game means for a casino game, several player positions (1) with a betting position, a jackpot calculator (32), and display means (34) for displaying the state of the jackpot.

Each player position has a detection mechanism (20) for detecting an action carried out by a player or croupier for that player position, which action forms an essential part of the casino game and is essential for a continuation of a round of a game for that player position. The detection mechanism of each player position is linked to the jackpot calculator (32), so that on detection of the action carried out by a player or croupier for that player position during a round of a game an instruction is sent automatically to the jackpot calculator to raise the jackpot progressively.

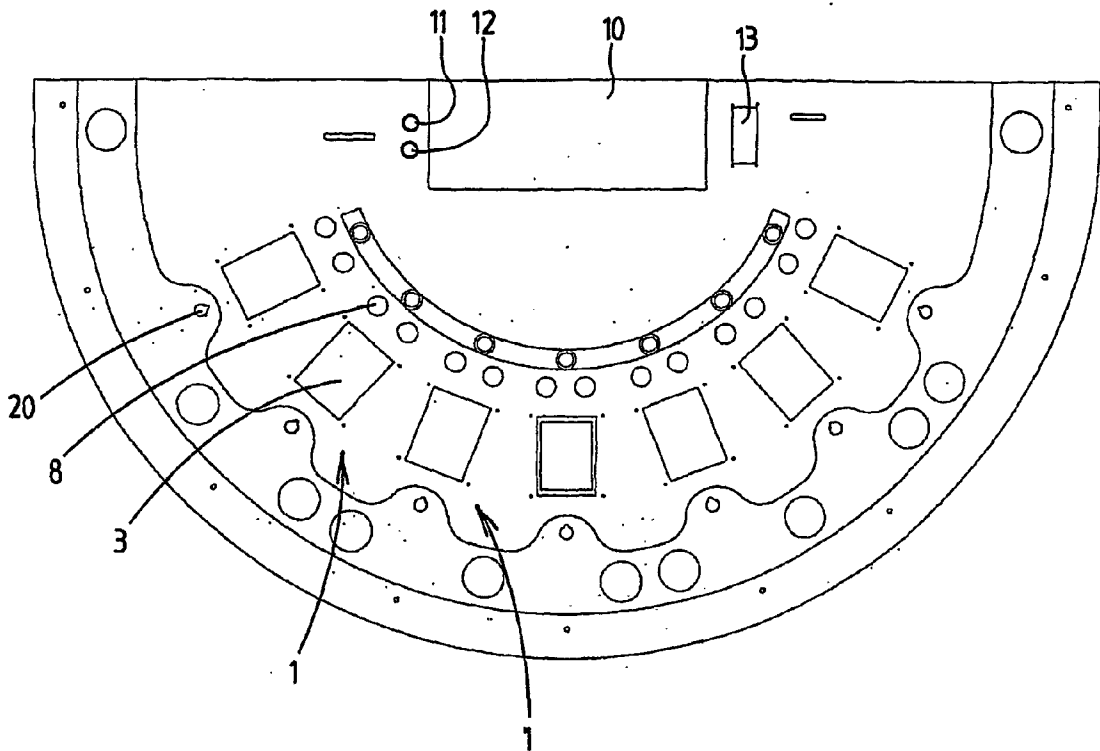
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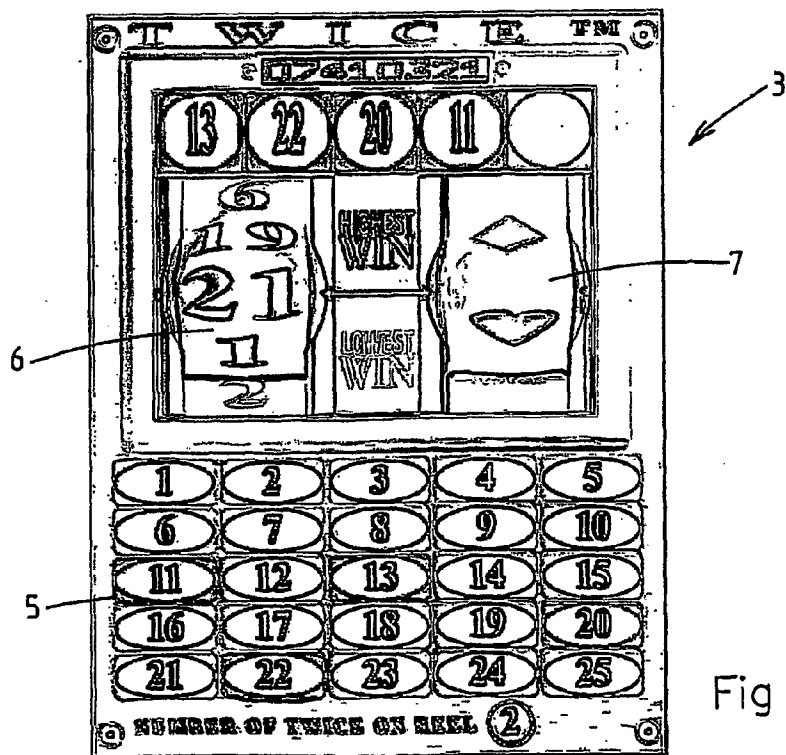
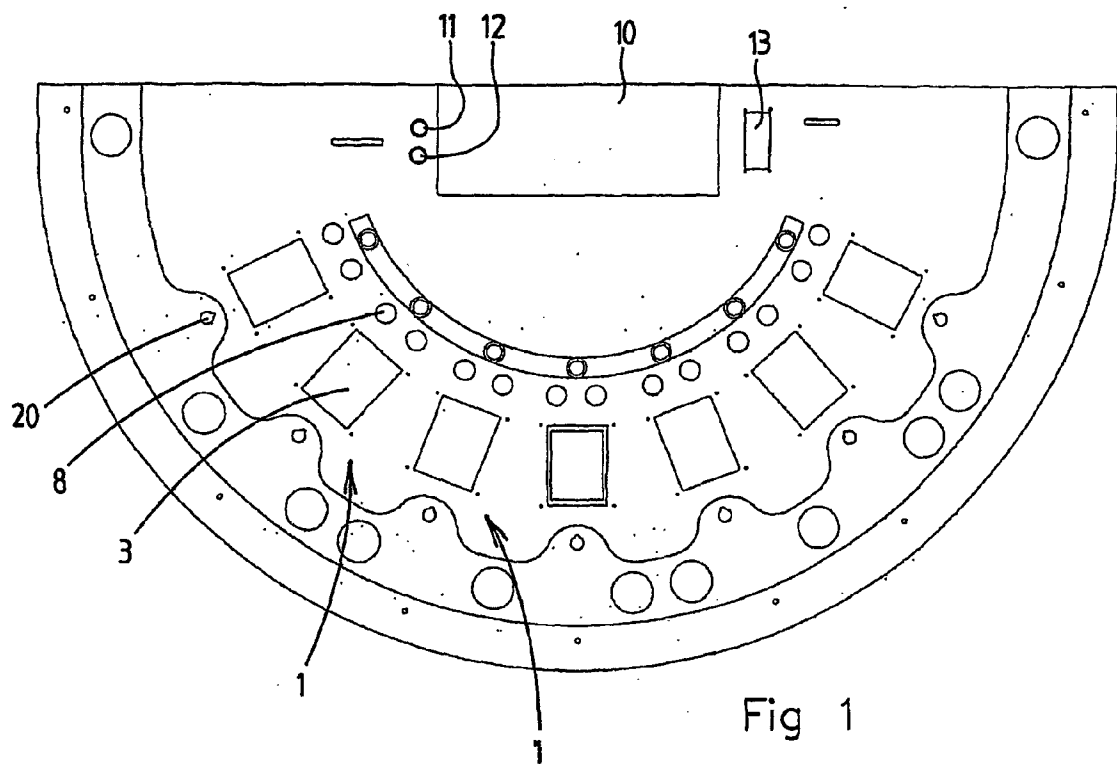
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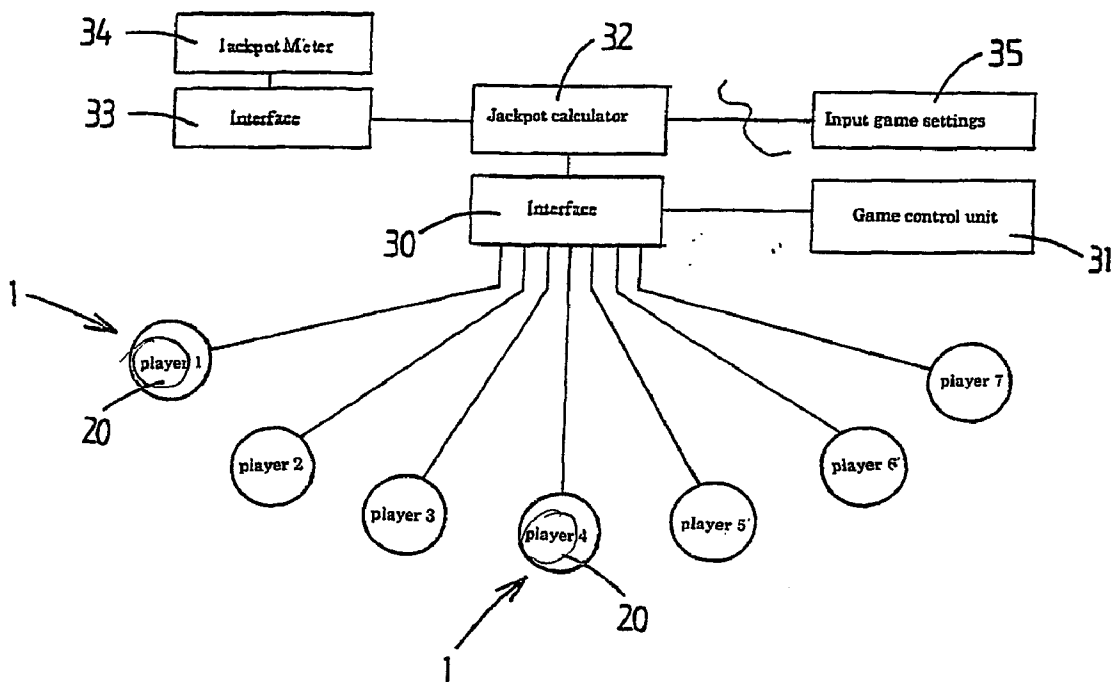


Fig 3

### CASINO TABLE DEVICE WITH AUTOMATED PROGRESSIVE JACKPOT

[0001] The invention relates to a casino table device with automated progressive jackpot.

[0002] In casinos the addition of a jackpot to a casino game has an additional attraction for players. The imagination is fired by the possibility of standing a slight chance of winning a very high sum from a progressive jackpot in addition to the chance of winning in the actual casino game. Whether or not a casino game has a jackpot can be an important factor in determining whether or not people take part in the casino game. In current casino practice, the addition of a jackpot is known primarily in the case of large numbers of interlinked gaming machines. It is even possible here to have gaming machines of different casinos linked together. In order to be able to take part in this type of jackpot, it is usually necessary, instead of placing one or two bets, to place an additional second or third bet respectively, in which the other prizes in the prize scheme are also higher.

[0003] In the case of automated roulette table games also, it is already known from the patent literature in a number of variants to add a jackpot, in order to obtain an additional attraction for the roulette game here too. Taking part in the jackpot in such a roulette table game is optional. In each round of the game the player has to decide whether or not he wants to take part in the jackpot.

[0004] U.S. Pat. No. 5,588,650, for example, discloses an automated roulette table in which for each individual player position bets can be placed on a jackpot. A player can take part in the jackpot by operating a jackpot bet button and in this way activating an indicator. This activation is possible only if a minimum bet is placed in the roulette game and there is sufficient player credit for the player position concerned. This player credit can be built up, for example, by inserting cash into a money slot at the player position concerned. In order to make it possible to check whether the player has actually placed a bet, each player position is provided with its own automated bet display with push-buttons. After activation of the jackpot bet button, the jackpot is raised by a certain sum that is debited from the player credit.

[0005] The disadvantage in the case of this known roulette table game with progressive jackpot is that participation in the jackpot is often forgotten in the tense rush of the actual roulette game. If it is then found that the player would have won the jackpot had he actually operated the jackpot bet button, this leads to great frustration. On the other hand, it often happens that the separately required bet for the jackpot acts as a hurdle for participation in the jackpot, this despite the fact that the bet for the jackpot is low. The provision of the additional jackpot bet button and all the means going with it for checking or assessing whether all conditions have been met makes the device complex and susceptible to faults. The provision of individual bet displays with push-buttons is necessary in order to be able to check whether participation in the jackpot is permitted, but in practice has proved unattractive to players, who are, after all, looking for more interaction with fellow players in the game.

[0006] Other known casino table games are those in which players actively have to place an additional bet in order to participate in a jackpot. Various mechanisms have been

developed in order to be able to detect whether an additional bet has actually been placed for the jackpot. It has been found in practice that such mechanisms are very susceptible to faults. The faults adversely affect the game. Moreover, such a system is too expensive or too laborious for many casino table games.

[0007] WO 98/29169 shows in **FIG. 1** a Stud Poker table with several player positions. Each player position has marked-out areas for placing a bet. The table also has a dealer position, in addition to several jackpot displays and an input keyboard. By placing a bet, each player automatically takes part in both a round of Stud Poker and several jackpots. In each round of the game, the jackpots are supplied progressively—according to a certain formula—with a certain amount of money, which is deducted from payouts to players who have won in the Stud Poker game. At the end of each round of the game the dealer counts the number of winning players and enters this number in a jackpot calculator by way of a keyboard. The jackpot calculator then ensures that the correct amount of money is added to the jackpots. A certain jackpot pays out if a player receives a predetermined specific hand of cards.

[0008] The disadvantage of this known Stud Poker table with progressive jackpot is that the impression is created among the players that the jackpot is included in the bet that the players place on the table for each Stud Poker round. The player is, however, faced with the fact that the sums for increasing the jackpot and for being able to guarantee the starting value of the jackpot are not financed from the game itself, but are deducted directly in relatively smallish amounts (1 dollar) from the payouts that the player can have in this variant of poker. It is expected that these types of deductions from the prize money will not be understood or appreciated by the player. The fact that in each round of the game the dealer has to enter the number of winners there are in each round of the game means that this is time-consuming and susceptible to human input errors. The players find the additional input actions a nuisance, while the dealer does not consider that these actions are actually part of his job.

[0009] A casino table device according to the preamble of claim 1 is known from U.S. Pat. No. 5,707,287. The device comprises an automated progressive jackpot, in the case of which the jackpot is automatically progressively increased depending on the detection of a bet placed by a player. To this end, a sensor is provided for each player position, at the position of a bet region on a gaming table. The sensor is equipped to determine the value of the bet and to pass it on to a computer. The computer automatically increases the progressive jackpot by a specific percentage of the bet value of a player position if a certain game event occurs, such as a certain minimum threshold value of bet being exceeded by a player, for example a bet of more than \$6.00.

[0010] The disadvantage here is that the moment of detection of the bet is all-important. In practice, however, players often change their betting strategy at the very last moment. Restricting the players too much in this respect is undesirable, if only for the fact that additional impulse bets are often placed at the very last moment. Such instantaneous bet detection can make cheating easier. Furthermore, the sensors are expensive and, for example, all the betting tokens have to be provided with microchips. Owing to the large quantity of tokens in a casino and the different possible values of the

tokens, such a system is susceptible to faults. Putting microchips on the tokens makes the tokens very expensive. Such tokens very quickly become a large loss-making item for a casino if the tokens are lost or are taken away as a collector's item.

**[0011]** The object of the present invention is at least partially to overcome the abovementioned disadvantages, and in particular to provide an attractive casino table device with automated progressive jackpot which is not susceptible to faults, and by means of which a round of a casino table game can be played purposefully together with participation in the jackpot.

**[0012]** This object is achieved by a casino table device according to claim 1. The device here comprises for each player position a control element that is designed for detecting in each round of the game an essential operation of the control element carried out by a player for that player position. The term essential operation should be understood as meaning an action that forms an essential part of the casino table game and is essential for a continuation of a round of a game for the player position in question, that is to say a game action which at any rate has to take place on the gaming table. According to the invention, the control element of each player position is actively linked to a game control unit and to a jackpot calculator. On operation during a round of a game the control element automatically sends both a play command to the game control unit and an instruction to the jackpot calculator to raise the jackpot progressively. This progressive raising of the jackpot is carried out in the usual way depending on the bet placed. It can be either a fixed percentage of the minimum bet or a fixed percentage of the actual bet for a particular player position. In order to take part in the jackpot, it is no longer necessary for a player to perform separate actions, such as placing separate bets, or for a croupier to input data. For the first time the jackpot is wholly reliably integrated in an interactive casino table game with several players. It has been found in practice that this has a great attraction for the average casino visitor.

**[0013]** The control element can be a push-button or a touch screen serving to supply instructions to the game control unit for influencing the course of a round of a game for the player position in question. The control element is linked both to the game control unit and the jackpot calculator. The control element thus forms the detection mechanism according to the invention. In this way it is ensured that a player who indicates by operating the control element that he wishes to take part in a round of a game automatically takes part in the jackpot, while the latter is raised automatically. The control element can also be a voice-activated element, or a remote-control element, in particular a wireless one. Another possibility is control by means of interlinked computers.

**[0014]** Further variants are set out in the subclaims.

**[0015]** The invention will be explained in greater detail with reference to the appended drawing, in which:

**[0016]** FIG. 1 shows an embodiment of a casino table device according to the invention for playing a random selection game combined with a high-low game;

**[0017]** FIG. 2 shows a read-out window of a player position in FIG. 1; and

**[0018]** FIG. 3 shows a diagrammatic view of the detection mechanism used in FIG. 1.

**[0019]** In FIG. 1 the casino table device comprises several player positions 1. Each player position 1 has a read-out window 3, which is shown in greater detail in FIG. 2 and comprises a first, a second and a third display 5, 6, 7. The first display 5 shows a series of numbers from 1 to 25. Provided under each of the numbers is a light, which can be controlled in such a way that it is flashing or is on constantly. Provided under the second display 6 is a rotatable first image roller, displaying in an arbitrary sequence a first set of images, formed here by the numbers 1 to 25. Provided under the third display 7 is a rotatable second image roller, displaying in an arbitrary sequence a second set of images, formed here by the card suits hearts, clubs, diamonds and spades. Above each read-out window 3 there are betting positions 8, in which bets are placed. At the head of the table is a dealer position 10. The dealer position 10 is provided with a starting button 11, which the dealer can operate in order to set in motion or unlock the rotatable first image rollers simultaneously. Beside the starting button 11 is a stop button 12, by means of which the dealer can stop the revolving first image rollers again. The dealer also has a deck of cards 13 at his disposal.

**[0020]** Each player position 1 comprises a control button 20, for the player to stop his rollers set in motion by the dealer. The control button 20 is connected to a random generator, which in turn is connected to drives for the rollers. The random generator ensures that after the player has operated his stop button 20 the roller continues to turn until it reaches a position that the random generator has calculated. It therefore appears to the player that he has an influence on the position at which the roller stops, while this is not the case, because the random generator calculates this position. This ensures that the game according to the invention is a game of pure chance.

**[0021]** Operating the control button 20 for the first time in a round of a game results in the first image roller being brought to a standstill and a number coming up in the second display 6 of the player position 1. This number that has come up is defined as the selected player number (selected first player image) for the player position 1 concerned in this round of the game.

**[0022]** The device further comprises a game control unit 31, which is linked to the starting button 11 of the dealer and to a random generator for activating game numbers from the first displays 5 of the player positions 1 at the beginning of each round of the game. This can be the same number for each player position 1, or it can be a different game number. The game number activated for the player position is indicated in his first display 5 by the number concerned being made to flash. The game control unit 31 is also designed in such a way that, after the player operates his control button 20 and as a result of doing so stops his first image roller, it can carry out a comparison check for each player position 1, in order to establish whether or not the condition of whether the activated game number corresponds to the selected player number is met. The numbers in the first display 5 are set up as a matrix. The game control unit 31 is designed in particular to ensure that the row, column and/or diagonal of numbers in the matrix in which the number that corresponds to the selected player number is situated is kept activated in

the matrix during at least the next round of the game, if the condition “activated game number”=“selected game number” is met. This entire row, column and/or diagonal is then lit up constantly. If the condition is not met, the game control unit **31** in the first display **5** of the player position **1** concerned will only make the image that corresponds to the selected player number lit up.

[0023] In addition, the game control unit **31** is designed to determine at a subsequent step of the round of the game the player positions **1** that have the highest and lowest selected player numbers.

[0024] Operating the control button **20** a first time results in the second image roller under the third display **7** of the player position **1** concerned beginning to rotate. Operating the control button **20** a second time in the round of the game results in the second image roller being brought to a standstill in a position calculated by the random generator, and in an image coming up in the third display **7** of the player position **1**. This image that has come up is defined as the selected second player image for the player position **1** concerned in this round of the game. With this selected player image, an additional game with winning chances is played in conjunction with cards to be turned over by the dealer from the deck of cards **13**.

[0025] In a variant the game control unit **31** is designed to deactivate a number kept activated from a previous round of the game and, if desired, to deactivate the row, column and/or diagonal in which that number is situated, if the condition “selected player number”=“one of the numbers already kept activated” is met. This increases the excitement of the random selection game and ensures that a first display **5** of a player position **1** is not fully lit up at too early a stage.

[0026] In a variant the game control unit **31** is designed to link a joker to a player position **1** for each row, column and/or diagonal lit up in the first display **5** concerned. In this case the game control unit **31** links the joker to the second image carrier of the player position **1** concerned for use during the step of the round of the game with the selected game images and player images. This linking can be advantageously carried out if the rotatable second image roller is replaced by an electronic buffer of images. The jokers can then simply be added to this buffer.

[0027] The game is now played, for example, as follows:

#### The First Step of the Round of the Game

[0028] After all players have placed their bets, the dealer starts the rotation of the first image rollers and the random determination and temporary activation by the game control unit **31** of a game number for each player position **1**, and draws a blind starting card. The players can now press their control button **20** and in this way select a player number. For the player positions **1** that are not occupied, the dealer can operate his stop button **12** and in this way stop the first image rollers of these positions. When all first image rollers have been stopped, the selected player numbers of the player positions **1** are automatically compared with each other. The player positions **1** with the highest and lowest numbers win, for example the bet times one.

#### The First Display

[0029] Each player will, as it were, have to try and make his first image roller under the second display **6** stop at the

activated game number. If the player succeeds in doing so, then the entire row, column and/or diagonal in his first display **5** running through this number will be lit up constantly for at least the next round of the game. If the player does not succeed in doing so, then only the number that he has selected in his first display **5** will be lit up. The object is to achieve a fully lit-up first display **5** in several rounds of the game, which produces a certain fixed bonus.

#### The Second Step of the Round of the Game

[0030] The dealer unlocks the second image rollers under the third displays **7** and now turns over the blind starting card. The players can now stop the rotation of their second image roller by pressing the control button **20** and in this way selecting a second player image. When all second image rollers have been stopped, the dealer compares the image of the starting card with the selected player images. The joker in this case applies for any of the card images. Each player decides for himself in this second round. If the image of the starting card differs from that of the selected player image, then he loses his bet to the dealer. If for a player position **1** the image under his third display **7** is a joker or corresponds to the image on the starting card that has been turned over, then the following situations can occur:

[0031] a) The value on the starting card is equal to the selected player number under the second display **6**. A payout of, for example, five times the bet is made;

[0032] b) The value on the starting card is higher than the selected player number. The player retains his bet;

[0033] c) The value on the starting card is lower than the selected player number. The player can pass or ask the bank or dealer to turn over additional cards. If the player asks for additional cards to be turned over, it is then examined in each case whether the sum of the values of the cards is still lower than the selected player number. The player can in each case decide to have another card turned over or to pass. If the value of the cards drawn together exceeds the selected player number, then he loses his bet to the dealer. If the value of the cards drawn together remains lower than or equal to his selected player number, then there is a payout depending on the number of cards drawn. The bank or dealer preferably always turns over a card for each of the player positions, which card then applies only to those player positions that have indicated that they want yet another card. This means that the game can run quickly and efficiently.

[0034] New rounds of the game can subsequently be played with the numbers kept activated in the first displays **5** remaining lit up until they are deactivated if desired.

[0035] According to the invention, the game described above is combined with an automated progressive jackpot. The jackpot is built up progressively in one or more rounds of the game by adding a certain percentage of the players' bets to the jackpot. The jackpot can already be won by participating in only one round of the game. For example, in the case of the combination of the random selection game with the high-low game described above, the jackpot can be

paid out if a player draws a certain number of cards all having the same image as his selected player image, and the total value of which is exactly the same as his selected player number. A separate bet is not required for participation in the jackpot.

[0036] As shown diagrammatically in FIG. 3, the control button 20 for each player position 1 is linked by way of an interface 30 not only to the game control unit 31 for playing the actual casino table game, but also to a jackpot calculator 32 for taking part in a jackpot. A player who is admitted by the croupier to a round of a game, and who has placed a minimum monetary or symbolic bet, must operate the control button 20 to ensure that the round of the game is continued for his player position 1. When the control button 20 is operated a command is issued to the game control unit 31 to stop the first image roller under the second display 6, and a signal is also released to the jackpot calculator 32, in order to raise the jackpot. It is therefore unavoidable for a player not only to take part in the game, but also to issue an order to the jackpot calculator 32 to increase the value of the jackpot by a certain percentage of the bet of the player concerned. The jackpot calculator 32 is linked by way of an interface 33 to a display 34 for showing the state of the jackpot.

[0037] The jackpot calculator 32 is advantageously also linked to an input 35, which is available only to the game manager, for example the croupier or casino manager. By way of this input, the game manager can adjust the game settings as desired. For example, the percentage of the player's bet that has to be diverted to the jackpot can be adjusted in this way. This percentage is advantageously less than 10% of the minimum bet defined for the casino game concerned. More particularly, the percentage is 0.5% of the minimum bet for the casino table device concerned. In the case of such a percentage it is ensured that the jackpot growth is not a substantial part of the game, and yet the jackpot can still rise by an attractive amount. Making the percentage purely dependent upon the minimum bet means that there is no need to establish the exact amount that the player has staked in the jackpot. It need only be established that a player is taking part.

[0038] In a variant the jackpot calculator can be integral with the game control unit. This advantageous dual use of hardware can lead to a saving of costs and space.

[0039] In a variant the betting positions 8 are in the form of automated betting positions that are each provided with a mechanism for detecting a betting token placed on it by a player. If the croupier indicates that no more bets may be placed, he also switches on the various mechanisms, for example by means of operating the starting button 11.

[0040] Such mechanisms are currently known, said mechanisms being based on microchips accommodated in the tokens and detectable by means of sensors. The sensors are also capable of determining the number of tokens and the value of the tokens. The placing of a minimum bet for the actual casino table game is a necessary action for further progression of a round of a game for a particular player position. The scanning element can be linked to the game control unit and/or the jackpot calculator. In this way it can be ensured that only after placing a bet for the actual casino table game does a player receive an activated control button

so that he can take part in a round of a game, and will thereby automatically take part in the jackpot, which is then increased automatically.

[0041] In a variant the automated betting position is provided in the form of a reader in which a player can place a smart card from which a bet can be debited at the beginning of each round of a game.

[0042] Many variants of the casino table game described above are possible. For instance, additional payments can be made in the case of certain combinations of numbers or images. The cards turned over by the dealer can advantageously be scanned and the information fed back to the game control unit 31. Provision can also be made for the dealer to be provided with a central dealer display below which is a movable image carrier linked to a random generator. Moreover, a very attractive variant is already achieved, for example, if the first displays and also the corresponding game with the activated game numbers are omitted from this device described above. The course of the game can otherwise remain largely the same, i.e. in the first step of the round of the game a high-low game, and in the second step of the round of the game a game with card suits and a chance of the jackpot.

[0043] In this way, according to the invention, an attractive game is produced, suitable in particular for being played in a casino. The game is a game of pure chance, which cannot be influenced by the players to their advantage, while the players still have the impression that they are actually influencing it. The rules of the game are very easy to remember, and in a number of variants are extended or adapted. Many variants of embodiments are conceivable for the table layout. For instance, the number of player positions is variable, and an electronically controlled buffer of first and second images can be used as the first and second image carrier instead of a rotatable roller. Instead of numbers and card suits, the images can also be other images that are distinguishable from one another. The movable first and second image carriers can also be combined with each other and with one operation of a control button lead to the selection of both a first and a second player image, if desired under one and the same display. The basic idea of the automated jackpot, which is fully integrated in the game as it progresses, can be retained in all of these variants.

[0044] The automated jackpot according to the invention is not only suitable for use in conjunction with the game described above, but can also very advantageously be combined with other casino table games. For example, this could be the dice game Sic-Bo or Baccarat/Creps, in which the throwing of the dice is activated by a player operating a control element, but a further example is the Wheel of Fortune, in which a player operates a control element thus causing a wheel to rotate and/or stop, with chances of winning and/or the playing of an additional game according to a certain position reached by the wheel. Another example is an electronic blackjack or poker variant, in which the player makes known his decisions, such as an additional card or not, by operating a control element. For other games too, such as roulette, the player could indicate by operating a control element that he wishes to take part in the game again, or he could indicate the bet regions on which he wishes to bet, and at the same time automatically raise a jackpot. In principle, any casino table game with several

player positions provided with game-determining control elements is suitable. For a continuation of a round of a game, any such casino table game requires an essential active operation for each player position, i.e. the operation of the control element. This operation that is essential for the round of the game is used according to the invention for sending signals to a jackpot calculator.

[0045] In particular, the use of a control element dependent upon player position in a gaming table in conjunction with a display makes many different games of chance possible, it being possible to use the element to determine any desired game result by putting into operation a chance process which could be directly or indirectly decisive for the outcome of a game, and in the case of which a signal sent through operation of the element is automatically used to increase a progressive jackpot.

[0046] According to the invention, an automated progressive jackpot for a casino table game which is user-friendly for both the casino and the players, and can be fully integrated in the normal course of a casino table game, is provided in this way.

1. Casino table device with automated progressive jackpot, comprising:

a gaming table designed for playing a casino game;

game means for playing the casino game;

a game control unit (31) for playing the casino game in an at least partially automated manner;

several player positions (1), in which each player position (1) has at least one betting position or betting mechanism (8) for placing at least a minimum bet at the beginning of a round of a game;

a jackpot calculator (32) for progressively raising a jackpot depending on the bets placed during the round of the game, and reducing the jackpot if a jackpot payout has been made to a player position (1); each player position (1) having a detection mechanism for detecting an action carried out for that player position (1) and the detection mechanism of each player position (1) being linked to the jackpot calculator (32), so that on detection of the action carried out for that player position (1) during a round of a game an instruction is sent automatically to the jackpot calculator (32) to raise the jackpot progressively depending on the bet placed, characterized in that for each player position (1) a control element (20) is provided, which control element is linked to the game control unit (31), so that a player can send a play command to the game control unit (31),

which play command forms an essential part of the casino game and is essential for a continuation of the round of the game for that player position (1),

the detection mechanism (20) being formed by the control element (20), so that on operation of the control element (20) during the round of the game an instruction is sent automatically to the jackpot calculator (32) to raise the jackpot progressively, and the play command is sent simultaneously to the game control unit (31).

2. Casino table device according to claim 1, in which the control element (20) is a control button.

3. Casino table device according to claim 1, in which the control element (20) is a touch screen.

4. Casino table device according to one of the preceding claims, in which the casino game is a random selection game, making use of a series of first images, in particular numbers, in the case of which each player position is provided with:

a read-out window under which at least a first display is situated, on which display the entire series of first images or a selection of them is provided;

a control element that can be operated by the player and is linked to a random generator for selecting a first player image from the series of first images during each round of a game, the device further comprising:

a central control unit that is designed to ensure that the image in the first display corresponding to the selected first player image is kept activated during at least the next round of the game.

5. Casino table device according to one of the preceding claims, in which the jackpot calculator (32) is designed for progressively raising the jackpot as a fixed percentage of the minimum bet when the control element (20) is operated.

6. Casino table device according to one of the preceding claims, in which the game means for each player position comprise a buffer with images, and the game control unit (31) comprises a random generator for causing a random selection of an image from the abovementioned buffer when the control element (20) is operated.

7. Casino table device according to claim 6, in which the buffer is a rotatable roller provided with images.

8. Casino table device according to claim 6, in which the buffer is an electronic buffer.

9. Casino table device according to one of the preceding claims, in which the jackpot calculator (32) is integral with the game control unit (31).

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