table, the chip tray, or the cage. Particularly when gaming chips are moved between the chip tray and the cage, it is difficult to prevent theft and losses of gaming chips and so continuous monitoring of gaming chips inside casinos is demanded.

[0007a]

An aspect of the present invention provides a management system comprising:

a game table at which a game is playable using playing cards and chips containing radio frequency identification (RFID) tags which store chip IDs;

a chip float (a) provided on the game table, (b) into which the chips can be collected by a dealer during the game, and (c) from which the chips can be paid out by the dealer during the game;

a storage area provided separately from the float and in which the chips can be stored;

a first antenna, wherein the first antenna is configured to read the RFID tags contained in the chips accommodated in the chip float to obtain the chip IDs;

a second antenna, wherein the second antenna is configured to read the RFID tags contained in the chips stored in the storage area to obtain the chip IDs; and

a controller, wherein the controller is configured to use the readings of the first antenna and the second antenna to at least one of:

determine a total number of the chips in the chip float and the storage area combined;

identify a listing of the chip IDs that are of the chips in the chip float and the storage area combined; or

determine a total value of the chips in the chip float and the storage area combined

wherein the controller determines whether an amount or value of the chips to be delivered from a cage that manages the chips of a casino to the game table and an increase amount or increase value of the chips at the game table due to the delivery match.

[0008]

A system according to the present disclosure is a system that manages a package of shuffled playing cards and gaming chips, wherein the system includes the shuffled playing cards having playing cards constituting a predetermined number of decks shuffled in random order and integrally constituted individually as one container or package with a unique playing card ID code provided to the container or package, a chip case housing gaming chips having a chip ID code and to which a case ID code is provided, a game table on which a game is played using the shuffled playing cards and the gaming chips, a storage box provided in association with the game table to store a plurality of the shuffled playing cards carried from a card room and inserted into a card shooter apparatus on the game table and also to store a plurality of the chip cases housing the gaming chips used on the game table and including an opening/closing mechanism enabling taking out of the shuffled playing cards and the chip cases, and a control apparatus to manage the shuffled playing cards and the gaming chips, the storage box includes one or a plurality of card readers that reads playing card ID codes

In the above system, the control apparatus has a function to grasp an increase/decrease of the chip cases housed in the storage box by periodically monitoring the case ID code of the chip case and, when the increase/decrease is grasped, to output the total amount after the increase/decrease of the value of all the gaming chips housed in the storage box.

[0013]

There is also disclosed a system that manages shuffled playing cards and gaming chips, including shuffled playing cards having playing cards constituting a predetermined number of decks shuffled in random order and integrally constituted individually as one container or package with a unique playing card ID code provided to the container or package, a chip case housing gaming chips having a chip ID code, a game table on which a game is played using the shuffled playing cards and the gaming chips, a shuffled playing card storage box provided in association with the game table to store a plurality of the shuffled playing cards carried from a card room and inserted into a card shooter apparatus on the game table, a chip storage box that stores a plurality of the chip cases housing the gaming chips used on the game table, and a control apparatus to manage the shuffled playing cards and the gaming chips, wherein the control apparatus has a function to output total numbers of the shuffled playing cards stored in the shuffled playing card storage box and

output the total amount after the increase/decrease of the value of all the gaming chips housed in the chip storage box.

[0017]

In the above system, the shuffled playing card storage box may include a lock unit configured to prevent taking out of the shuffled playing cards from the shuffled playing card storage box.

[0018]

There is also disclosed a storage box that manages shuffled playing cards and gaming chips, wherein the storage box is carried from a card room to store a plurality of shuffled playing cards and also makes available the shuffled playing cards by individually taking out and inserting the shuffled playing cards into a card shooter apparatus on a game table and further stores a plurality of chip cases housing gaming chips used on the game table to adjust a quantity of the gaming chips on the game table using the chip cases when the gaming chips on the game table are excessive or lacking in accordance with development of a game on the game table and also to be able to store the gaming chips that are excessive before being transferred to a cage that manages the gaming chips of a casino and includes an opening/closing mechanism arranged near the game table to enable taking out of the shuffled playing cards and gaming chips when necessary, the shuffled playing cards have playing cards constituting a

In the above storage box, the control apparatus may have a function to output a total amount of value of all the gaming chips housed in the storage box by reading all the chip ID codes present in the storage box.

[0022]

In the above storage box, the case ID code of the chip case may be associated with the chip ID code of the gaming chip in the case and the control apparatus may have a function to output a total amount of value of all the gaming chips housed in the storage box based on the case ID code by acquiring all the case ID codes housed in the storage box.

[0023]

There is also disclosed a system including a chip case that houses gaming chips having a chip ID code, a storage box that stores a plurality of the chip cases housing the gaming chips used on a game table, adjusts a quantity of the gaming chips on a chip float of the game table using the chip cases when the gaming chips placed on the chip float of the game table are excessive or lacking in accordance with development of a game on the game table and also is able to store the gaming chips that are excessive before being transferred to a cage that manages the gaming chips of a casino and includes an opening/closing mechanism to enable taking out of the gaming chips when necessary, the game table on which a game is played using the gaming chips, and a control

increase/decrease value of the gaming chips placed on the chip float of the game table or an increase/decrease amount or increase/decrease value of the gaming chips placed in the cage that manages the gaming chips of a casino and an increase/decrease amount or increase/decrease value of the gaming chips housed in the storage box match.

[0028]

In the above system, a case ID code may be provided to the chip case and associated with the chip ID code of the gaming chip in the case.

[0029]

There is also disclosed a gaming chip used by a system that manages the gaming chips including a unique chip ID code, wherein the gaming chip is housed in a chip case, the chip case is housed in a storage box including an opening/closing mechanism together with shuffled playing cards, and the chip ID code is configured to be read by a chip reader installed in the storage box and managed by a control apparatus that outputs a total number of the gaming chips stored in the storage box and all chip ID codes stored in the storage box.

[0030]

There is also disclosed a gaming chip managed by the above system.

[0031]

There is also disclosed a chip case housing gaming chips used by a system that

CLAIMS

1. A management system comprising:

a game table at which a game is playable using playing cards and chips containing radio frequency identification (RFID) tags which store chip IDs;

a chip float (a) provided on the game table, (b) into which the chips can be collected by a dealer during the game, and (c) from which the chips can be paid out by the dealer during the game;

a storage area provided separately from the float and in which the chips can be stored;

a first antenna, wherein the first antenna is configured to read the RFID tags contained in the chips accommodated in the chip float to obtain the chip IDs;

a second antenna, wherein the second antenna is configured to read the RFID tags contained in the chips stored in the storage area to obtain the chip IDs; and

a controller, wherein the controller is configured to use the readings of the first antenna and the second antenna to at least one of:

determine a total number of the chips in the chip float and the storage area combined;

identify a listing of the chip IDs that are of the chips in the chip float and the storage area combined; or

determine a total value of the chips in the chip float

and the storage area combined

wherein the controller determines whether an amount or value of the chips to be delivered from a cage that manages the chips of a casino to the game table and an increase amount or increase value of the chips at the game table due to the delivery match.

2. The management system according to claim 1, further comprising a warning device, wherein the warning device is configured to notify that the storage has opened to take the chips in or out from the storage area.

3. The management system according to claim 1, further comprising a recording device, wherein the recording device is configured to record taking in or out of the chips from the storage area.

4. The management system according to claim 3, wherein recording device is configured to record the taking in or out of the chips from the storage area in response to the storage area being opened.

5. The management system according to claim 4, wherein recording device is configured not to record the taking in or out of the chips from the storage area when an opening of the storage does not occur.

6. The management system according to claim 1, wherein the second antenna is configured not to read the RFID tags contained in the chips stored in the storage area when an opening of the storage area does not occur.

7. The management system according to claim 1, wherein the controller is configured to determine one of:

respective total numbers of the chips in the chip float and of the chips in the storage area;

which of the chip IDs are of the chips in the chip float and which of the chip IDs are of the chips in the storage area; and

respective total values of the chips in the chip float and of the chips in the storage area.

8. The management system according to claim 1, wherein the controller is configured to output whether a change in an amount or value of the chips accommodated in the chip float correlates with a change in an amount or value of the chips stored in the storage area.

9. The management system according to claim 1, wherein the storage area has a box shape.

10. The management system according to claim 1, further

comprising a lock, wherein the lock is configured for preventing the chips from being taken out from the storage area.

11. The management system according to claim 1, wherein the storage area is configured to store the chips in a manner by which the chips can be independently placed in and removed from the storage area.

12. The management system according to claim 1, further comprising an opening and closing device, wherein the storage area can transition, by the opening and closing device, into an open state that enables the chips to be removed from the storage area.

13. The management system according to claim 1, wherein the controller is configured to compare a total amount of the chips determined to be present in the chip float based on a reading by the first antenna prior to a collection and/or redemption to a total amount of the chips determined to be present in the chip float based on a reading by the first antenna after the collection and/or redemption.

14. The management system according to claim 1, wherein, when the chips of the chip float are insufficient, the chip float can be replenished by the dealer with gaming chips transferred from the storage area into the chip float.

15. The management system according to claim 1, wherein:

the chip float is removably embedded in the game table;

chips bet by losing players of the game are collectible by the dealer and insertable by the dealer into the chip float; and

chips in the chip float are payable by the dealer from the chip float to winning players of the game.

16. The management system according to claim 1, wherein the first antenna and the second antenna are the same antenna.

17. The management system according to claim 1, wherein the storage area is arranged under a dealer position of the game table on which the chip float is arranged.