of a game, fraud according to collection or repayment of chips that is different from the result of win/loose, and the like based on an image acquired from the monitoring camera.

[0004]

Meanwhile, in order to perceive the number or a total amount of bet chips, it has been proposed to perceive the amount of chips by attaching a IC tag to each chip.

[0005]

In a card game monitoring system disclosed in PCT/JP2015/000171, it is determined whether or not chips placed on a game table is collected or re-payed according to a result of win/loose by performing an image analysis of the movement of chips, whereby fraud is monitored.

Disclosure of Invention

Technical Problem

[0006]

Embodiments of the present invention seek to provide a new management system that can detect fraud in a game in a game house or a mistake or fraud when substitute currency for gaming is bet or is paid off.

Solution to Problem

[0007]

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

substitute currency for gaming to which an individually identifiable ID is attached;

a game table on which games are played using the substitute currency for gaming;

a chip tray for holding the substitute currency for gaming used by a dealer at the game table;

a chip determination device that specifies types and quantities of the substitute currency for gaming held in the chip tray by using the ID;

a winning/losing determination device that determines and displays a result of winning/losing of each game in a game table;

a measurement device that measures types and quantities of the substitute currency for gaming placed on a game table by using a camera; and

an intelligent-type control device that determines a position, types, and quantities of the substitute currency for gaming through the measurement device, wherein

the substitute currency for gaming forms a stripe pattern on a side face by employing a multi-layer structure in which a plurality of plastic layers having different colors are stacked, a coloring layer is included at least in the middle, and white layers or thin-color layers are stacked on both sides of the coloring layer disposed in the middle, and has a configuration enabling the type of the substitute currency for gaming to be specified by the coloring layer,

the intelligent-type control device is capable of determining a total amount of the substitute currency for gaming in the chip tray, and further is capable of specifying the type of the substitute currency for gaming based on the coloring layer, though the chip determination device, determines whether an increase/decrease amount is correct or not by using the specified type of the substitute currency for gaming on the game table and winning/losing result of game obtained from the winning/losing determination device.

A management system of a table game according to embodiments of the

present disclosure is a management system of a table game comprising: a card distributing device that determines and displays a result of winning/losing of each game in a game table; a measurement device that measures types and quantities of substitute currency for gaming placed on the game table by using a camera; and a management control device that specifies and stores a position, types, and quantities of the substitute currency for gaming placed on the game table by a game participant by using a result of the measurement performed by the measurement device in each game, wherein the substitute currency for gaming forms a stripe pattern on a side face in a stacking direction by employing a multi-layer structure in which a plurality of plastic layers having different colors are stacked, a coloring layer is included at least in the middle, and white layers or thin-color layers are stacked on both sides of the coloring layer disposed in the middle, and has a configuration enabling the type of the substitute currency for gaming to be specified by the coloring layer, and the management control device has a calculation function of determining the game participant as a winner/loser in each game and calculating a balance of a casino side on the game table for each game by using the result of winning/losing acquired from the card distributing device and the result of the measurement of the position, the types, and the quantities of the substitute currency for gaming placed by the game participant.

CLAIMS

1. A management system of a table game, comprising:

substitute currency for gaming to which an individually identifiable ID is attached;

a game table on which games are played using the substitute currency for gaming;

a chip tray for holding the substitute currency for gaming used by a dealer at the game table;

a chip determination device that specifies types and quantities of the substitute currency for gaming held in the chip tray by using the ID;

a winning/losing determination device that determines and displays a result of winning/losing of each game in a game table;

a measurement device that measures types and quantities of the substitute currency for gaming placed on a game table by using a camera; and

an intelligent-type control device that determines a position, types, and quantities of the substitute currency for gaming through the measurement device, wherein

the substitute currency for gaming forms a stripe pattern on a side face by employing a multi-layer structure in which a plurality of plastic layers having different colors are stacked, a coloring layer is included at least in the middle, and white layers or thin-color layers are stacked on both sides of the coloring layer disposed in

the middle, and has a configuration enabling the type of the substitute currency for gaming to be specified by the coloring layer,

the intelligent-type control device is capable of determining a total amount of the substitute currency for gaming in the chip tray, and further is capable of specifying the type of the substitute currency for gaming based on the coloring layer, though the chip determination device, determines whether an increase/decrease amount is correct or not by using the specified type of the substitute currency for gaming on the game table and winning/losing result of game obtained from the winning/losing determination device.

2. The management system of a table game according to claim 1, the management system further comprising a configuration that detects a type of the substitute currency for gaming by using the chip determination device in a specific place on the game table, and detects a type of the substitute currency for gaming by using the measurement device in a place other than the specific place on the game table.

3. The management system of a table game according to claim 1, wherein the management control device has a function of determining the quantity of the substitute currency for gaming by measuring the numbers of the coloring layers or white layers or thin-color layers of the substitute currency for gaming placed by each game participant.