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Summary of Invention

Technical Problem

[0010]

~~The present invention has been made under the circumstances. An object~~Embodiments of the present invention ~~is~~seek to provide a game system that can detect a fraudulent act of a card game on the spot and that can prevent duplication of cards by a person who has fraudulently acquired the cards.

Solution to Problem

[0010a]

According to an aspect of the present invention, there is provided a game system comprising: a card to which group information indicating a group of the card is attached as a sign code; card group information acquisition means for reading the sign code of the card that is to be placed on a game table to be used in each round of game, and acquiring the group information of the card; determination means for comparing the group information of the card read from the sign code with predetermined group information stored in advance, and determining whether the group information of the card matches the predetermined group information or not; and output means for outputting a determination result of the determination means, wherein the sign code is provided as chemical material and printed on the card, being mixed in paint or transparent liquid, and is configured to return, when irradiated with specific light, light in which specific wavelengths according to the sign code are combined, wherein the chemical material reflects combination of specific multi-wavelength light, which has a combination of specific

wavelengths, in response to specific light, and wherein the group information is determined by the combination of the specific multi-wavelength light detected by an optical sensor.

[0010b]

According to another aspect of the present invention, there is provided a card to which group information indicating a group of the card is attached as a sign code, wherein the sign code is provided as chemical material and printed on the card, being mixed in paint or transparent liquid, and is configured to return, when irradiated with specific light, light in which specific wavelengths according to the sign code are combined, wherein the chemical material reflects combination of specific multi-wavelength light, which has a combination of specific wavelengths, in response to specific light, and wherein the group information is determined by the combination of the specific multi-wavelength light detected by an optical sensor.

[0011]

~~An aspect of the present invention provides~~There is also disclosed a game system including: cards with a molecular arrangement including coded group information indicating a group of the cards; group information acquisition means of entering cards that is installed on a game table and that is for reading the molecular arrangement of entering cards, which are cards that are delivered in each game, to acquire the group information of entering cards; determination means for comparing the group information of entering cards read from the molecular arrangement with predetermined group information to determine whether the group information of entering cards coincides with

the predetermined group information; and output means for outputting a determination result of the determination means.

[0012]

~~Another aspect of the present invention provides~~There is also disclosed a game system including: cards with a molecular arrangement including coded group information indicating a group of the cards; group information acquisition means of leaving cards that is installed on a game table and that is for reading the molecular arrangement of leaving cards, which are cards that leave from each game, to acquire the group information of leaving cards; determination means for comparing the group information of leaving cards read from the molecular arrangement with predetermined group information to determine whether the group information of leaving cards coincides with the predetermined group information; and output means for outputting a determination result of the determination means.

[0013]

~~Another aspect of the present invention provides~~There is also disclosed cards with a molecular arrangement including coded group information indicating a group of the cards.

[0014]

~~Another aspect of the present invention provides~~There is also disclosed a card shoe. The card shoe is installed on a game table and holds a plurality of cards, the card shoe allowing manual drawing of each card from an opening section, the

cards including a molecular arrangement including coded group information indicating a group of the cards, the card shoe including: group information acquisition means for reading the molecular arrangement of the cards to acquire the group information of the cards when the cards are fed; determination means for comparing the group information of the cards read from the molecular arrangement with predetermined group information to determine whether the group information of the cards coincides with the predetermined group information; and output means for outputting a determination result of the determination means.

[0015]

~~Another aspect of the present invention provides~~There is also disclosed a card shuffle apparatus. The card shuffle apparatus includes: a plurality of card stockers, each holding a plurality of cards; feeding rollers that feed each card from the plurality of card stockers, respectively; and a shuffled card stocker that is arranged at a position where the cards fed from the plurality of card stockers can be received and that holds the cards fed by the feeding rollers, the cards including a molecular arrangement including coded group information indicating a group of the cards, the card shuffle apparatus including: group information acquisition means for reading the molecular arrangement of the cards to acquire the group information of the cards when the feeding

rollers feed the cards; determination means for comparing the group information of the cards read from the molecular arrangement with predetermined group information to determine whether the group information of the cards coincides with the predetermined group information; and output means for outputting a determination result of the determination means.

[0016]

~~Another aspect of the present invention provides~~There is also disclosed a card shuffle apparatus including: a distribution card stocker that holds a plurality of cards; feeding rollers that feed each card from the distribution card stocker; a plurality of holding stockers that receive cards fed by the feeding rollers at different locations, respectively; and a shuffled card stocker that stacks and holds the cards of the plurality of holding stockers, the cards including a molecular arrangement including coded group information indicating a group of the cards, the card shuffle apparatus including: group information acquisition means for reading the molecular arrangement of the cards to acquire the group information of the cards when the feeding rollers feed the cards; determination means for comparing the group information of the cards read from the molecular arrangement with predetermined group information to determine whether the group information of the cards coincides with the predetermined group information; and output means for

Claims

1. A game system comprising:

a card to which group information indicating a group of the card is attached as a sign code;

card group information acquisition means for reading the sign code of the card that is to be placed on a game table to be used in each round of game, and acquiring the group information of the card;

determination means for comparing the group information of the card read from the sign code with predetermined group information stored in advance, and determining whether the group information of the card matches the predetermined group information or not; and

output means for outputting a determination result of the determination means,

wherein the sign code is printed on the card, being mixed in paint or transparent liquid (0062), and is configured to return, when irradiated with specific light, light in which specific wavelengths according to the sign code are combined (0063).

2. The game system according to claim 1, comprising:

exiting-card group information acquisition means for reading the sign code of a card that is placed on the game table and that exits after being used in each round

of game, and acquiring the group information of the exiting card,

wherein the determination means compares the group information of the exiting card read from the sign code with predetermined group information, and determines whether the group information of the exiting card matches the predetermined group information or not.

3. The game system according to claim 1 or 2, wherein a back design of the card or a mark showing a rank or a suit of the card is printed on the card using the paint or the transparent liquid.

4. The game system according to claim 1 or 2, wherein the sign code is attached to the card at a position not overlapping a mark showing a rank or a suit of the card.

5. The game system according to any of claims 1 to 4, wherein the group information is coded by at least one or a plurality of sign codes among a plurality of types of sign codes.

6. The game system according to any of claims 1 to 5, wherein the card group information acquisition means is provided to a card shoe that is used when a dealer delivers a card that is to be placed on the game table to be used in each game.

7. The game system according to any of claims 1 to 6, wherein the group information indicating the group of the card includes at least one of a manufacturer, a manufacturing date, a manufacturing lot and a manufacturing number.

8. The game system according to any of claims 1 to 7, wherein the group information indicating the group of the card is set to a plurality of decks (0060).

9. A card to which group information indicating a group of the card is attached as a sign code, wherein the sign code is printed on the card, being mixed in paint or transparent liquid, and is configured to return, when irradiated with specific light, light in which specific wavelengths according to the sign code are combined (0063).

10. The card according to claim 9, wherein a back design of the card or a mark showing a rank or a suit of the card is printed on the card using the paint or the transparent liquid.

11. The card according to claim 9, wherein the sign code is attached to the card at a position not overlapping a mark showing a rank or a suit of the card.

12. The card according to any of claims 9 to 11, wherein the group information is coded by at least one or a plurality of sign codes among a plurality of types of sign codes.

13. The card according to any of claims 9 to 12, wherein the group information indicating the group of the card includes at least one of a manufacturer, a manufacturing date, a manufacturing lot and a manufacturing number.

14. The card according to any of claims 9 to 13, wherein the group information indicating the group of the card is set to a plurality of decks (0060).

CLAIMS

[Claim 1]

A game system comprising:

a card to which group information indicating a group of the card is attached as a sign code;

card group information acquisition means for reading the sign code of the card that is to be placed on a game table to be used in each round of game, and acquiring the group information of the card;

determination means for comparing the group information of the card read from the sign code with predetermined group information stored in advance, and determining whether the group information of the card matches the predetermined group information or not; and

output means for outputting a determination result of the determination means,

wherein the sign code is provided as chemical material and printed on the card, being mixed in paint or transparent liquid, and is configured to return, when irradiated with specific light, light in which specific wavelengths according to the sign code are combined,

wherein the chemical material reflects combination of specific multi-wavelength light, which has a combination of specific wavelengths, in response to specific light, and

wherein the group information is determined by the combination of the specific multi-wavelength light detected by an optical sensor.

[Claim 2]

The game system according to claim 1, comprising:

card group information acquisition means for reading the sign code of a card that is placed on the game table and that exits after being used in each round of game, and acquiring the group information of the card,

wherein the determination means compares the group information of the card read from the sign code with predetermined group information, and determines whether the group information of the card matches the predetermined group information or not.

[Claim 3]

The game system according to claim 1 or 2, wherein a back design of the card or a mark showing a rank or a suit of the card is printed on the card using the paint or the transparent liquid.

[Claim 4]

The game system according to claim 1 or 2, wherein the sign code is attached to the card at a position not overlapping a mark showing a rank or a suit of the card.

[Claim 5]

The game system according to any of claims 1 to 4, wherein the group information is coded by at least one or a plurality of sign codes among a plurality of types of sign codes.

[Claim 6]

The game system according to any of claims 1 to 5, wherein the card group information acquisition means is provided to a card shoe that is used when a dealer delivers a card that is to be placed on the game table to be used in each game.

[Claim 7]

The game system according to any of claims 1 to 6, wherein the group information indicating the group of the card includes at least one of a manufacturer, a manufacturing date, a manufacturing lot and a manufacturing number.

[Claim 8]

The game system according to any of claims 1 to 7, wherein the group information indicating the group of the card is set to a plurality of decks.

[Claim 9]

A card to which group information indicating a group of the card is attached as a sign code, wherein the sign code is provided as chemical material and printed on the card, being mixed in paint or transparent liquid, and is

configured to return, when irradiated with specific light, light in which specific wavelengths according to the sign code are combined,

wherein the chemical material reflects combination of specific multi-wavelength light, which has a combination of specific wavelengths, in response to specific light, and

wherein the group information is determined by the combination of the specific multi-wavelength light detected by an optical sensor.

[Claim 10]

The card according to claim 9, wherein a back design of the card or a mark showing a rank or a suit of the card is printed on the card using the paint or the transparent liquid.

[Claim 11]

The card according to claim 9, wherein the sign code is attached to the card at a position not overlapping a mark showing a rank or a suit of the card.

[Claim 12]

The card according to any of claims 9 to 11, wherein the group information is coded by at least one or a plurality of sign codes among a plurality of types of sign codes.

[Claim 13]

The card according to any of claims 9 to 12, wherein the group information indicating the group of the card includes at least one of a manufacturer, a manufacturing date, a manufacturing lot and a manufacturing number.

[Claim 14]

The card according to any of claims 9 to 13, wherein the group information indicating the group of the card is set to a plurality of decks