discloses shuffled playing cards individually packaged in a state in which playing cards constituting a predetermined number of decks are shuffled. In the packaging of the shuffled playing card, a shuffled playing card ID for accessing information, which can specify a shuffle machine or a shuffle machine group shuffling the shuffled playing card, on database is assigned as an ID code.

SUMMARY

[0005]

However, even if the ID code is assigned to the packaging of the shuffled playing card, when contents are replaced with a set of cards whose arrangement is known, there is no means for ascertaining whether these cards are genuine products, such that even fraudulent acts performed in a game using the set of cards cannot be found.

[0006]

Embodiments of the present invention seek to provide a shuffled playing card and a method of manufacturing a playing card capable of confirming whether or not a playing card is a genuine product correctly manufactured and distributed on a sheet basis of a card base sheet.

[0006a]

An aspect of the present invention provides a playing card set of playing cards constituting one or more decks shuffled and to be used, wherein the playing card set is assigned a playing card ID for distinguishing the playing card set from other playing card sets, a card on which no pair of suit and rank is printed, which is other than the playing cards constituting the decks, is assigned a card ID different

from any card ID assigned to cards of other playing card sets, the card ID and the playing card ID of the playing card set are associated with each other in a database, and the playing card set is uniquely specifiable from the card ID.

[0006b]

Another aspect of the present invention provides a method of manufacturing a playing card set, comprising a card printing step of printing on a base sheet playing cards constituting a deck and a card on which no pair of suit and rank is printed, which is other than the playing cards constituting the deck, wherein at least the card on which no pair of suit and rank is printed is assigned a card ID ; a cutting-out step of cutting out the playing cards constituting the deck and the card on which no pair of suit and rank is printed from the base sheet; a shuffling step of removing the card on which no pair of suit and rank is printed and shuffling the playing cards constituting the deck together with playing cards constituting other decks to obtain the playing card set; an ID assigning step of assigning to the playing card set a playing card ID different from other playing card sets; and a database producing step of storing the playing card ID and the card ID by associating the playing card ID and the card ID with each other in database.

[0007]

A method of manufacturing a playing card according to the present disclosure includes:

a printing step of printing a suit and a rank on one surface of a card base sheet and printing a back pattern on a back

surface;

a sheet ID assigning step of printing different sheet IDs for one card base sheet or each of a plurality of card base sheets on the card base sheet; and

a cutting step of cutting the card base sheet having undergone the printing step and the sheet ID assigning step into individual cards by a cutting machine,

wherein one deck or a plurality of decks are produced from the card base sheet.

[0008]

According to the present disclosure, since the card base sheet on which the different sheet IDs are printed for one card base sheet or each of the plurality of card base sheets is cut to produce the playing card of one deck or a plurality of decks, it is possible to confirm, on the database, the information on when the card is printed and also when the card is inspected by tracing back through the distribution history of the playing card. As a result, it is possible to confirm whether the playing card is a genuine product correctly manufactured and distributed by reading the sheet ID from the contents of the card to confirm the history on the database even if the contents of the packaged shuffled playing card are replaced with a set of cards whose arrangement is known by malicious fraudulent players.

[0009]

In addition, by printing different sheet IDs for each card base sheet or a plurality of card base sheets, the ID management of the card base sheet in the factory becomes possible. For

example, even when the card base sheet is discarded halfway, it is possible to manage at which stage the playing card is discarded in the database. In this way, it is possible to grasp a yield in each process at the manufacturing stage. In addition, even if malicious fraudulent players illegally obtain the discarded card base sheet and cut the obtained card base sheet by themselves to produce a counterfeit card and bring the produced counterfeit card for use in a game, the sheet ID is read from the card to confirm the history on the database, thereby making it possible to easily detect that the playing card is a counterfeit card and enhance the security of the game.

[0010]

In the method of manufacturing a playing card according to the present disclosure,

in the printing step, the suits and the ranks corresponding to one deck or the plurality of decks may be printed on one card base sheet, and a common picture pattern may be printed on the back surface, and

in the sheet ID assigning step, the common sheet ID may be printed on the card base sheets corresponding to the one deck or the plurality of decks.

[0011]

In the method of manufacturing a playing card according to the present disclosure,

the sheet ID may be printed on the card constituting the set of decks.

[0012]

In the method of manufacturing a playing card according to the present disclosure,

the sheet ID may be printed on a card other than the card constituting the set of decks.

[0013]

In the method of manufacturing a playing card according to the present disclosure,

the sheet ID may be printed with transparent UV ink.

[0014]

The method of manufacturing a playing card according to the present disclosure may further include:

a shuffling step of shuffling a plurality of decks of the playing cards by a shuffle machine to produce a set of shuffled playing cards;

a packaging step of packaging a set of shuffled playing cards having undergone the shuffling step; and

an ID assigning step of assigning a shuffled playing card ID as an ID code to the set of shuffled playing cards by generating different shuffled playing card IDs for each set of shuffled playing cards.

[0015]

The method of manufacturing a playing card according to the present disclosure may further include:

a database producing step of storing the shuffled playing card ID and the sheet ID assigned to the playing card constituting the shuffled playing card by associating the shuffled playing card ID and the sheet ID with each other in

the database.

[0016]

In the method of manufacturing a playing card according to the present disclosure,

in the database producing step, the sheet ID of the card base sheet may be stored in the database in association with one or both of recording of a printing date on the card base sheet and recording of a cut date on the individual playing card.

[0017]

In the method of manufacturing a playing card according to the present disclosure,

in the database producing step, before the shuffling step, the sheet ID read from the playing card constituting the set of decks may be stored in the database in association with the shuffled playing card ID of the shuffled playing card to which the deck belongs.

[0018]

There is provided a playing card according to the present disclosure, wherein

a suit and a rank are printed on one surface of a card base sheet, a back pattern is printed on a back surface, different sheet IDs for one card base sheet or each of a plurality of card base sheets are printed on the card base sheet, one deck or a plurality of decks are constituted by individual cards cut from the card base sheet by a cutting machine.

[0019]

In the playing card according to the present

disclosure,

the suit and the rank corresponding to one deck or the plurality of decks may be printed on the one card base sheet, a common back pattern may be printed on the back surface, and a common sheet ID may be printed on one deck or a set of the plurality of decks.

[0020]

In the playing card according to the present disclosure,

the sheet ID may be printed on the playing card constituting the set of decks.

[0021]

In the playing card according to the present disclosure,

the sheet ID may be printed on a card other than the playing card constituting the set of decks.

[0022]

In the playing card according to the present disclosure,

the sheet ID may be printed with transparent UV ink.

[0023]

In the playing card according to the present disclosure,

the sheet ID of the card base sheet may be associated with one or both of recording of a printing date on the card base sheet and recording of a cut date on the individual playing card in the database.

[0024]

There is provided a shuffled playing card according to the present disclosure, wherein

a plurality of decks of the playing card having any of the above features are shuffled by a shuffle machine to form a set of shuffled playing cards, and different shuffled playing card IDs for each set are assigned to the shuffled playing card as ID codes.

[0025]

In the shuffled playing card according to the present disclosure,

the sheet ID of the playing card constituting the shuffled playing card and the shuffled playing card ID may be associated with each other in the database.

[0026]

There is provided a shuffled playing card according to the present disclosure, wherein

a suit and a rank are printed on one surface of a card base sheet, and a back pattern is printed on another surface,

different sheet IDs for one card base sheet or each of a plurality of card base sheets are printed on the card base sheet,

one deck or a plurality of decks are formed by individual cards cut by a cutting machine from the card base sheet,

the one deck or the plurality of decks are shuffled by a shuffle machine to form a set of shuffled playing cards,

different shuffled playing card IDs for each set are

assigned to the shuffled playing card as ID codes, and

the sheet ID of the playing card constituting the shuffled playing card and the shuffled playing card ID are associated with each other in a database.

[0027]

In the shuffled playing card according to the present disclosure,

the sheet ID or the sheet IDs of the playing card constituting the shuffled playing card is specifiable from the shuffled playing card ID, and

the shuffled playing card ID is singularly specifiable from the sheet ID.

[0028]

In the shuffled playing card according to the present disclosure,

the sheet ID is printed on one or a plurality of shuffled playing cards constituting a set of decks.

[0029]

In the shuffled playing card according to the present disclosure,

the sheet ID is printed with ink invisible under a normal condition.

[0030]

In the shuffled playing card according to the present disclosure,

the sheet ID is printed with a transparent UV ink.

[0031]

In the shuffled playing card according to the present disclosure,

the sheet ID of the card base sheet is associated with one or both of recording of a printing date on the card base sheet and recording of a cut date on the individual playing cards in the database.

[0032]

In the shuffled playing card according to the present disclosure,

the sheet ID or the sheet IDs associated in the database are specifiable from the shuffled playing card ID,

a printing plate of the suit and the rank used for the card base sheet is specifiable from the sheet ID, and

if the individual cards are specified, a position or positions of the corresponding suit and rank on the card base sheet are specifiable.

[0033]

In the shuffled playing card according to the present disclosure,

the sheet ID is printed on a site other than a card constituting the set of decks on the card base sheet, but

the sheet ID or the sheet IDs associated in the database are specifiable from the shuffled playing card ID.

[0034]

In the shuffled playing card according to the present disclosure,

the suits or the ranks corresponding to the plurality of

decks are printed on one card base sheet, a common back pattern is printed on the other surface, and different sheet IDs for each deck are printed on the set of the plurality of decks,

the sheet IDs for each deck of the playing card constituting the shuffled playing card are specifiable from the shuffled playing card ID, and

the shuffled playing card ID is singularly specifiable from different sheet IDs for each deck.

[0035]

There is provided a shuffled playing card according to the present disclosure, wherein

a suit and a rank are printed on one surface of a card base sheet, and a back pattern is printed on another surface,

one or each of a plurality of card base sheets have different sheet IDs,

one deck or a plurality of decks are formed by individual cards cut by a cutting machine from the card base sheet,

the one deck or the plurality of decks are shuffled by a shuffle machine to form a set of shuffled playing cards,

the sheet ID is printed on each of the individual cards, and

the card base sheet is specifiable from the sheet ID printed on the individual card.

[0036]

In the shuffled playing card according to the present disclosure,

different shuffled playing card IDs for each set are

assigned to the shuffled playing card as ID codes, and

the sheet ID of the playing card constituting the shuffled playing card and the shuffled playing card ID are associated with each other in a database.

[0037]

In the shuffled playing card according to the present disclosure,

the sheet ID or the sheet IDs of the playing card constituting the shuffled playing card are specifiable from the shuffled playing card ID, and

the shuffled playing card ID is singularly specifiable from the sheet ID.

[0038]

In the shuffled playing card according to the present disclosure,

the sheet ID is printed with ink invisible under a normal condition.

[0039]

In the shuffled playing card according to the present disclosure,

the sheet ID is printed with a transparent UV ink.

[0040]

In the shuffled playing card according to the present disclosure,

the sheet ID of the card base sheet is associated with one or both of recording of a printing date on the card base sheet and recording of a cut date on the individual playing card

in the database.

[0041]

In the shuffled playing card according to the present disclosure,

the sheet ID or the sheet IDs associated in the database are specifiable from the shuffled playing card ID,

a printing plate of the suit and the rank used for the card base sheet is specifiable from the sheet ID, and

if the individual cards are specified, a position or positions of the corresponding suit and rank on the card base sheet are specifiable.

[0042]

In the shuffled playing card according to the present disclosure,

the sheet ID is printed on a site other than a card constituting the set of decks on the card base sheet, but

the sheet ID or the sheet IDs associated in the database are specifiable from the shuffled playing card ID.

[0043]

In the shuffled playing card according to the present disclosure,

suits or ranks corresponding to the plurality of decks are printed on one card base sheet, a common back pattern is printed on another surface, and different sheet IDs for each deck are printed on the set of the plurality of decks,

the sheet IDs for each deck of the playing card constituting the shuffled playing card are specifiable from the

shuffled playing card ID, and

the shuffled playing card ID is singularly specifiable from different sheet IDs for each deck.

[0044]

A method of manufacturing a playing card according to the present disclosure includes:

a printing step of printing a suit and a rank on one surface of a card base sheet and printing a back pattern on another surface;

a sheet ID assigning step of printing different sheet IDs for one card base sheet or each of a plurality of card base sheets on the card base sheet; and

a cutting step of cutting the card base sheet having undergone the printing step and the sheet ID assigning step into individual cards by a cutting machine;

a step of producing one deck or a plurality of decks from the card base sheet;

a shuffling step of shuffling the one deck or the plurality of decks by a shuffle machine to produce a set of shuffled playing cards;

a packaging step of packaging a set of shuffled playing cards having undergone the shuffling step;

an ID assigning step of assigning a shuffled playing card ID as an ID code to the set of shuffled playing cards by generating different shuffled playing card IDs for each set of shuffled playing cards; and

a database producing step of storing the shuffled playing

card ID and the sheet ID assigned to the playing card constituting the shuffled playing card by associating the shuffled playing card ID and the sheet ID with each other in database.

[0045]

In the method of manufacturing a playing card according to the present disclosure,

the sheet ID or the sheet IDs of the playing card constituting the shuffled playing card is specifiable from the shuffled playing card ID, and

the shuffled playing card ID is singularly specifiable from the sheet ID.

[0046]

In the method of manufacturing a playing card according to the present disclosure,

the sheet ID is printed on one or a plurality of shuffled playing cards constituting a set of decks.

[0047]

In the method of manufacturing a playing card according to the present disclosure,

the sheet ID is printed with ink invisible under a normal condition.

[0048]

In the method of manufacturing a playing card according to the present disclosure,

the sheet ID is printed with a transparent UV ink.

[0049]

In the method of manufacturing a playing card according to the present disclosure,

in the database producing step, the sheet ID of the card base sheet is stored in the database in association with one or both of recording of a printing date on the card base sheet and recording of a cut date on the individual playing card.

[0050]

In the method of manufacturing a playing card according to the present disclosure,

in the database producing step, before the shuffling step, the sheet ID read from the playing card constituting the set of decks is stored in the database in association with the shuffled playing card ID of the shuffled playing card to which the deck belongs.

[0051]

In the method of manufacturing a playing card according to the present disclosure,

the sheet ID or the sheet IDs associated in the database are specifiable from the shuffled playing card ID,

a printing plate of the suit and the rank used for the card base sheet is specifiable from the sheet ID, and

if the individual cards are specified, a position or positions of the corresponding suit and rank on the card base sheet are specifiable.

[0052]

In the method of manufacturing a playing card according to the present disclosure,

in the sheet ID assigning step, the sheet ID is printed on a site other than a card constituting the set of decks on the card base sheet, but

the sheet ID or the sheet IDs associated in the database are specifiable from the shuffled playing card ID.

[0053]

In the method of manufacturing a playing card according to the present disclosure,

in the printing step, the suits or the ranks corresponding to the plurality of decks are printed on one card base sheet, a common back pattern is printed on the other surface, and different sheet IDs for each deck are printed on the set of the plurality of decks,

the sheet IDs for each deck of the playing card constituting the shuffled playing card are specifiable from the shuffled playing card ID, and

the shuffled playing card ID is singularly specifiable from different sheet IDs for each deck.

BRIEF DESCRIPTION OF DRAWINGS

[0054]

FIG. 1A is a diagram showing a front surface of a card constituting a set of decks among playing cards according to one embodiment, and FIG. 1B is a diagram showing a back surface of the card;

FIG. 2A is a diagram showing a front surface of a card other than the card constituting a set of decks among playing

CLAIMS

1. A playing card set of playing cards constituting one or more decks shuffled and to be used, wherein

the playing card set is assigned a playing card ID for distinguishing the playing card set from other playing card sets,

a card on which no pair of suit and rank is printed, which is other than the playing cards constituting the decks, is assigned a card ID different from any card ID assigned to cards of other playing card sets,

the card ID and the playing card ID of the playing card set are associated with each other in a database, and the playing card set is uniquely specifiable from the card ID.

2. The playing card set according to claim 1, wherein the card on which no pair of suit and rank is printed is manufactured at the same time as at least a part of a plurality of playing cards constituting the playing card set.

3. The playing card set according to claim 1, wherein the card on which no pair of suit and rank is printed is not shuffled with the playing cards constituting the one or more decks.

4. The playing card set according to claim 1, wherein the playing cards constituting the decks are also assigned the card ID.

5. The playing card set according to any one of claims 1 to 4, wherein the card ID is printed with ink invisible under a normal condition.

6. The playing card set according to claim 5, wherein the card ID is printed with a transparent UV ink.

7. The playing card set according to claim 4, wherein in the database the card ID is further associated with information related to manufacture of the playing card to which the card ID is assigned.

8. The playing card set according to claim 7, wherein the information related to manufacture includes at least one selected from the group consisting of a printing date, a cut date, a factory name, a manufacturing line, and a casino name of the playing cards.

9. The playing card set according to claim 4, wherein it is possible to determine whether the playing card is genuine or

not by referring to the database for the card ID assigned to the playing card.

10. The playing card set according to claim 4, wherein each playing card constituting the playing card set is assigned any of a plurality of card IDs different from any card ID assigned to each playing card constituting other playing card sets.

11. The playing card set according to any one of claims 1 to 10, wherein all the playing cards constituting the playing card set are assigned a common card ID.

12. The playing card set according to any one of claims 1 to 11, wherein the playing card set is shuffled and packaged.

13. A method of manufacturing a playing card set, comprising:

a card printing step of printing on a base sheet playing cards constituting a deck and a card on which no pair of suit and rank is printed, which is other than the playing cards constituting the deck, wherein at least the card on which no pair of suit and rank is printed is assigned a card ID;

a cutting-out step of cutting out the playing cards constituting the deck and the card on which no pair of suit and rank is printed from the base sheet;

a shuffling step of removing the card on which no pair of suit and rank is printed and shuffling the playing cards constituting the deck together with playing cards constituting other decks to obtain the playing card set;

an ID assigning step of assigning to the playing card set a playing card ID different from other playing card sets; and

a database producing step of storing the playing card ID and the card ID by associating the playing card ID and the card ID with each other in database.

14. The method of manufacturing a playing card according to claim 13, wherein in the card printing step, the card ID is printed with ink invisible under a normal condition.

15. The method of manufacturing a playing card according to claim 14, wherein in the card printing step, the card ID is printed with a transparent UV ink.

16. The method of manufacturing a playing card according to any one of claims 13 to 15, wherein in the database producing step, the card ID is further associated with information

related to manufacture of the playing cards which is cut out from the same base sheet as the card to which the card ID is assigned.

17. The method of manufacturing a playing card according to claim 16, wherein the information related to manufacture includes at least one selected from the group consisting of a printing date, a cut date, a factory name, a manufacturing line, and a casino name of the playing cards.