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(54) CARD BACK DESIGN AS A WAY TO PREVENT CARD SORTING

KARTENRÜCKSEITENENTWURF ZUR KARTENSORTIERUNGSVERHINDERUNG

MOTIF DE DOS DE CARTE POUR EMPÊCHER UN TRI DE CARTES

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to playing cards, and more particularly playing card back designs to prevent card sorting.

BACKGROUND OF THE INVENTION

[0002] Playing cards are an essential functional element of many casino table games. Casinos rely on manufacturers of cards to provide defect free products and expect that cards will not be "marked" in any way by printing defects. Playing cards back designs are a critical aesthetic element of table game play for the casino as they contain pleasing patterns and the casino logo.

[0003] The manufacturing process for cards has sources of variance in the final appearance of the artwork on the card. Primary sources of variances occur during printing and when cutting the playing card shapes. These variances can cause the design to be skewed with respect to the card edges as cut and is often referred to in the industry as "cut registration." When this variances occur and a regular pattern is used for the back design, the variances can be obvious to the human eye.

[0004] These variances can be used by unscrupulous players and in combination with dealer handling of the card to sort the cards by value. This is referred to as edge sorting. For example, if all of the high value cards are rotated with respect to the rest of the deck, it will be obvious to the players when viewing the card backs on subsequent games that a high value card is in play before the rank and suit (face) is revealed. Players can use this to their advantage when placing their wagers, or by changing their bets in the middle of game before cards faces are exposed. This gives the players an unfair advantage over normal game odds and can lead to significant losses in revenue for the casino. Patent documents relating to cards include:

JP-A-2007135622 which relates to a gift card system using one card set including cards.

[0005] US-A-5887873 which relates to a unique deck of playing cards.

[0006] US-B1-6659869 which relates to a card manufacturing machine, a card vending machine, and methods therefor.

SUMMARY OF THE DISCLOSURE

[0007] The present invention utilizes playing cards back designs to decrease the ability to perform card edge sorting in a card game. The playing cards each having a back design made up a plurality of irregular design elements. The irregular design elements result in an irregular pattern along the edges of the playing card. This back design masks the variances, making the differing pattern in the edge cuts difficult to detect with the naked

eye.

[0008] The irregular design element can take the form of uncommon polygons with irregular sides, where the uncommon polygons are used in a repeating pattern. The use of the uncommon polygons creates a complex pattern making it difficult to discern the pattern difference along the edges of the playing cards. Using uncommon polygons with greater than five sides serves to make it increasingly more difficult to detect individual elements of the repeating pattern.

[0009] Furthermore, the repetitive design pattern of the uncommon polygons can be skewed at an angle relative to the card edges. The use of the skewing angle substantially prevent the formation of a uniform edge pattern, making it increasingly difficult for the detection of cut registration defects along the edges with the human eye.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010]

FIG. 1 depicts a prior art card back design using regular geometric design elements;

FIG. 2 depicts a first embodiment of a playing card back design using irregular geometric design elements;

FIG. 3 depicts a second embodiment of a playing card back design using irregular geometric design elements;

FIG. 4 depicts a third embodiment of a playing card back design using irregular geometric design elements, include line elements;

FIG. 5 depicts a close up, sectional view of the embodiment of FIG. 4;

FIG. 6 depicts the playing card back design of FIG. 4 with a perfect cut;

FIG. 7 depicts the playing card back design of FIG. 4 with a first imperfect cut

FIG. 8 depicts the playing card back design of FIG. 4 with a second imperfect cut;

FIG. 9. depicts a fourth embodiment of a playing card back design using irregular geometric design elements;

FIG. 10 depicts a fifth embodiment of a playing card back design using irregular geometric design elements; and

FIG. 11 depicts a sixth embodiment of a playing card back design using irregular geometric design elements.

DETAILED DESCRIPTION OF THE INVENTION

[0011] Many playing cards are manufacture with back designs having symmetrical, repeatable, and easily recognizable geometric patterns. During the manufacturing process such designs can be susceptible to cut registration issues. Cut registration issues can arise when the edges of the playing cards display differing patterns, cre-

ating variances in the design along the edges of the playing card.

[0012] Referring to FIG. 1, there is provided a prior art playing card 10. The playing card 10 back design 12 includes a symmetrical, repeatable, geometric pattern made of diamond element 14. The edges 16, 18, 20, and 22 of the playing card 10 includes differing pattern elements (variances). A top edge 16 of the playing card 10 includes a full diamond pattern, a bottom edge 18 of the playing card 10 includes a half diamond pattern, a first side edge 20 of the playing card 10 includes a half diamond pattern, and a second side edge 22 of the playing card 10 includes a full diamond pattern. These variances can be used by unscrupulous players and in combination with dealer handling of the card to sort the cards by value.

[0013] The present invention utilizes playing cards back design made up of irregular design elements. The irregular design elements mask the variances, making the differing pattern in the edge cuts difficult to detect with the naked eye.

[0014] Referring to FIG. 2, there is provide a playing card 30 having a back design 32 made up of uncommon polygons 34 with irregular sides, where the uncommon polygons are used in a repeating pattern. The use of the uncommon polygons 34 creates a complex pattern making it difficult to discern the pattern difference along the edges 36, 38, 40, and 42 of the playing cards. Using uncommon polygons 34 with greater than five sides serves to make it increasingly more difficult to detect individual elements of the repeating pattern.

[0015] Furthermore, the repetitive design pattern of the uncommon polygons 34 can be skewed at specific angle α relative to the card edges 36, 38, 40, and 42. The use of the skewing angle α substantially prevent the formation of a uniform edge pattern, making it increasingly difficult for the detection of cut registration defects along the edges 36, 38, 40 and 42 with the human eye.

[0016] Referring to FIG. 3, there is provide another embodiment of a playing card 50 having a back design 52 made up of uncommon polygons 54 with irregular sides. The uncommon polygons 54 are seemingly provided in a random pattern on the back of the playing card 50. The use of the uncommon polygons 54 and the seemingly random pattern creates a complex pattern making it difficult to discern the pattern difference along the edges 56, 58, 60, and 62 of the playing cards.

[0017] Referring to FIG. 4-5, there is provide a playing card 70 having a back design 72 made up of made up of a symmetrical, repeatable, geometric pattern. However, it is also contemplated that the back design can include uncommon polygons. The design pattern is skewed at specific angle α relative to the card edges 76, 78, 80, and 82, or, be skewed in a curvilinear manner. Line element 86 are further provided across the back design 72, from either between the side edges 80 and 82 or the top and bottom edges 76 and 78 of the playing card 70. Referring to FIGs. 6-8 there is shown the playing card 70 show perfect and more imperfect cut registration. FIG. 6

depicts a perfect cut playing cards 70', FIG. 7 depicts an imperfect cut playing card 70" having a cut registration of 0.12", and FIG. 8 depicts a second imperfect cut playing card 70''' having a cut registration of 0.24". As can be seen in the figure is in difficult to discern the cut registration difference along the edges of the playing cards 70', 70", and 70'''.

[0018] Referring to FIG. 9, in a further embodiment, there is provide a playing card 90 having a back design 92 with irregular repeating patterns 94. For example, the irregular repeating patterns 94 can be in the form of a kaleidoscope effect. Line elements 96, purposeful skew relative to playing card edges 98, 100, 102, and 104, can further be includes to make it increasingly difficult for the detection of cut registration defects along the edges 98, 100, 102, and 104 with the human eye.

[0019] Referring to FIG. 10, in another embodiment of irregular pattern, a playing card 100 is provided with a swirl design 102.

[0020] Referring to FIG. 11, in another embodiment of irregular pattern, a playing card 120 is provided with a digital design 122.

[0021] It will be appreciated by persons skilled in the art that the present invention is not limited to what has been particularly shown and described herein above. In addition, unless mention was made above to the contrary, it should be noted that all of the accompanying drawings are not to scale. A variety of modifications and variations are possible in light of the above teachings without departing from the scope of the invention, which is limited only by the following claims.

Claims

1. A plurality of playing cards (30, 50, 70, 90, 100, 120) each comprising:
a face side and a backside, each respective backside includes a back design (32, 52, 72, 92) having a plurality of irregular shaped design elements that result in an irregular pattern along the edges of the playing cards, **characterized in that** the irregular shaped design elements are configured to mask from the human eye the variances in the irregular pattern on the edges of the plurality of playing cards.
2. The plurality of playing cards (70, 90) as set forth in claim 1, wherein the back design (72, 92) further comprises a plurality of line elements (86, 96).
3. The plurality of playing cards (70) as set forth in in claim 2, wherein the plurality of line elements (86) are linear or curvilinear across the backside of the playing cards.
4. The plurality of playing cards (70) as set forth in claim 3, wherein the plurality of line elements (86) are skewed at an angle α with respect a side edge (76,

78, 80, 82) of a respective playing card.

5. The plurality of playing cards (30, 50, 70) as set forth in claim 1, wherein the plurality of irregular design elements are uncommon polygons (34, 54, 74) having more than five sides. 5
6. The plurality of playing cards (30, 50, 70) as set forth in claim 5, wherein the plurality of irregular design elements are provided in an irregular pattern. 10
7. The plurality of playing cards (30, 70) as set forth in claim 1, wherein the irregular design elements (32, 72) are skewed at an angle α with respect a side edge of a respective playing card (36, 38, 40, 42, 76, 78, 80, 82). 15
8. The plurality of playing cards (90, 100, 120) as set forth in claim 1, wherein the irregular design elements are selected from a group consisting of a kaleidoscope design (94), a swirl design (102), and a digital design (122). 20
9. A method of manufacturing a plurality of playing cards (30, 50, 70, 90, 100, 120) to prevent card edge sorting, comprising: 25

providing a plurality of playing cards, each including a face side and a backside, and placing a plurality of irregular shaped design elements on the backside of the respective playing cards, wherein the plurality of irregular shaped design elements being arranged to create an irregular pattern (32, 52, 72, 92) along a plurality of side edges of the respective playing cards, and being **characterized in that** the irregular shaped design elements are configured to mask from the human eye the variances in the irregular pattern on the edges of the plurality of playing cards. 30 35 40
10. The method of manufacturing a plurality of playing cards (70, 90) to prevent card edge sorting as set forth in claim 9, further comprising placing a plurality of line elements (86, 96) across the backside of the respective playing cards. 45
11. The method of manufacturing a plurality of playing cards (70) to prevent card edge sorting as set forth in claim 10, wherein the plurality of line elements (86) are linear or curvilinear. 50
12. The method of manufacturing a plurality of playing cards (70) to prevent card edge sorting as set forth in claim 11, wherein the plurality of line elements (86) are skewed at an angle α with respect at least one side edge of the respective playing cards. 55

13. The method of manufacturing a plurality of playing cards (30, 70, 90) to prevent card edge sorting as set forth in claim : 9, wherein the irregular design elements are skewed at an angle α with respect at least one of the side edges (36, 76, 98) of the respective playing cards.

Patentansprüche

1. Mehrere Spielkarten (30, 50, 70, 90, 100, 120), die jeweils umfassen:
eine Vorderseite und eine Rückseite, wobei jede jeweilige Rückseite ein Rückseitendesign (32, 52, 72, 92) mit mehreren unregelmäßig geformten Designelementen beinhaltet, die zu einem unregelmäßigen Muster entlang der Ränder der Spielkarten führen, **dadurch gekennzeichnet, dass** die unregelmäßig geformten Designelemente dazu ausgestaltet sind, die Abweichungen in dem unregelmäßigen Muster an den Rändern der mehreren Spielkarten vor dem menschlichen Auge zu verbergen.
2. Mehrere Spielkarten (70, 90) nach Anspruch 1, wobei das Rückseitendesign (72, 92) ferner mehrere Linienelemente (86, 96) umfasst.
3. Mehrere Spielkarten (70) nach Anspruch 2, wobei die mehreren Linienelemente (86) über die Rückseite der Spielkarten linear oder krummlinig sind.
4. Mehrere Spielkarten (70) nach Anspruch 3, wobei die mehreren Linienelemente (86) in einem Winkel α in Bezug auf einen Seitenrand (76, 78, 80, 82) einer jeweiligen Spielkarte geneigt sind.
5. Mehrere Spielkarten (30, 50, 70) nach Anspruch 1, wobei die mehreren unregelmäßigen Designelemente ungewöhnliche Polygone (34, 54, 74) mit mehr als fünf Seiten sind.
6. Mehrere Spielkarten (30, 50, 70) nach Anspruch 5, wobei die mehreren unregelmäßigen Designelemente in einem unregelmäßigen Muster bereitgestellt sind.
7. Mehrere Spielkarten (30, 70) nach Anspruch 1, wobei die unregelmäßigen Designelemente (32, 72) in einem Winkel α in Bezug auf einen Seitenrand einer jeweiligen Spielkarte (36, 38, 40, 42, 76, 78, 80, 82) geneigt sind.
8. Mehrere Spielkarten (90, 100, 120) nach Anspruch 1, wobei die unregelmäßigen Designelemente aus einer Gruppe bestehend aus einem Kaleidoskopdesign (94), einem Wirbeldesign (102) und einem digitalen Design (122) ausgewählt sind.

9. Verfahren zum Herstellen von mehreren Spielkarten (30, 50, 70, 90, 100, 120), um das Sortieren von Kartenrändern zu verhindern, umfassend:

Bereitstellen von mehreren Spielkarten, die jeweils eine Vorderseite und eine Rückseite beinhalten, und

Platzieren von mehreren unregelmäßig geformten Designelementen auf der Rückseite der jeweiligen Spielkarten, wobei die mehreren unregelmäßig geformten Designelemente angeordnet sind, um ein unregelmäßiges Muster (32, 52, 72, 92) entlang mehrerer Seitenränder der jeweiligen Spielkarten zu erzeugen, und **dadurch gekennzeichnet sind, dass** die unregelmäßig geformten Designelemente dazu ausgestaltet sind, die Abweichungen in dem unregelmäßigen Muster an den Rändern der mehreren Spielkarten vor dem menschlichen Auge zu verbergen.

10. Verfahren zum Herstellen von mehreren Spielkarten (70, 90), um das Sortieren von Kartenrändern zu verhindern, nach Anspruch 9, ferner umfassend das Platzieren von mehreren Linienelementen (86, 96) über die Rückseite der jeweiligen Spielkarten.

11. Verfahren zum Herstellen von mehreren Spielkarten (70), um das Sortieren von Kartenrändern zu verhindern, nach Anspruch 10, wobei die mehreren Linienelemente (86) linear oder krummlinig sind.

12. Verfahren zum Herstellen von mehreren Spielkarten (70), um das Sortieren von Kartenrändern zu verhindern, nach Anspruch 11, wobei die mehreren Linienelemente (86) in einem Winkel α in Bezug auf mindestens einen Seitenrand der jeweiligen Spielkarten geneigt sind.

13. Verfahren zum Herstellen von mehreren Spielkarten (30, 70, 90), um das Sortieren von Kartenrändern zu verhindern, nach Anspruch 9, wobei die unregelmäßigen Designelemente in einem Winkel α in Bezug auf mindestens einen der Seitenränder (36, 76, 98) der jeweiligen Spielkarten geneigt sind.

Revendications

1. Pluralité de cartes à jouer (30, 50, 70, 90, 100, 120) comprenant chacune :
un côté face et un côté dos, chaque côté dos respectif comprend une conception de dos (32, 52, 72, 92) ayant une pluralité d'éléments de conception de forme irrégulière qui se traduisent par un motif irrégulier le long des bords des cartes à jouer, **caractérisée en ce que** les éléments de conception de forme irrégulière sont configurés pour dissimuler de

l'œil humain, les variations du motif irrégulier sur les bords de la pluralité de cartes à jouer.

2. Pluralité de cartes à jouer (70, 90) selon la revendication 1, dans laquelle la conception de dos (72, 92) comprend en outre une pluralité d'éléments de ligne (86, 96).

3. Pluralité de cartes à jouer (70) selon la revendication 2, dans laquelle la pluralité d'éléments de ligne (86) sont linéaires ou curvilignes d'un côté à l'autre du côté dos des cartes à jouer.

4. Pluralité de cartes à jouer (70) selon la revendication 3, dans laquelle la pluralité d'éléments de ligne (86) sont obliques selon un angle α par rapport à un bord latéral (76, 78, 80, 82) d'une carte à jouer respective.

5. Pluralité de cartes à jouer (30, 50, 70) selon la revendication 1, dans laquelle la pluralité d'éléments de conception irréguliers sont des polygones (34, 54, 74) non communs ayant plus de cinq côtés.

6. Pluralité de cartes à jouer (30, 50, 70) selon la revendication 5, dans laquelle la pluralité d'éléments de conception irréguliers sont prévus selon un motif irrégulier.

7. Pluralité de cartes à jouer (30, 70) selon la revendication 1, dans laquelle les éléments de conception irréguliers (32, 72) sont obliques selon un angle α par rapport à un bord latéral d'une carte à jouer (36, 38, 40, 42, 76, 78, 80, 82) respective.

8. Pluralité de cartes à jouer (90, 100, 120) selon la revendication 1, dans laquelle les éléments de conception irréguliers sont sélectionnés dans un groupe comprenant une conception de kaléidoscope (94), une conception de tourbillon (102), et une conception numérique (122).

9. Procédé pour fabriquer une pluralité de cartes à jouer (30, 50, 70, 90, 100, 120) pour empêcher le tri de bord de carte, comprenant les étapes suivantes :

prévoir une pluralité de cartes à jouer, comprenant chacune un côté face et un côté dos, et placer une pluralité d'éléments de conception de forme irrégulière sur le côté dos des cartes à jouer respectives, dans lequel la pluralité d'éléments de conception de forme irrégulière est agencée pour créer un motif irrégulier (32, 52, 72, 92) le long d'une pluralité de bords latéraux des cartes à jouer respectives, et étant **caractérisé en ce que** les éléments de conception de forme irrégulière sont configurés pour dissimuler de l'œil humain, les variations du motif irrégulier sur les bords de la pluralité de cartes à

jouer.

10. Procédé pour fabriquer une pluralité de cartes à jouer (70, 90) pour empêcher le tri de bord de carte selon la revendication 9, comprenant en outre le fait de placer une pluralité d'éléments de ligne (86, 96) à travers le côté dos des cartes à jouer respectives. 5
11. Procédé pour fabriquer une pluralité de cartes à jouer (70) pour empêcher le tri de bord de carte selon la revendication 10, dans lequel la pluralité d'éléments de ligne (86) sont linéaires ou curvilignes. 10
12. Procédé pour fabriquer une pluralité de cartes à jouer (70) pour empêcher le tri de bord de carte selon la revendication 11, dans lequel la pluralité d'éléments de ligne (86) sont obliques selon un angle α par rapport à au moins un bord latéral des cartes à jouer respectives. 15
- 20
13. Procédé pour fabriquer une pluralité de cartes à jouer (30, 70, 90) pour empêcher le tri de bord de carte selon la revendication 9, dans lequel les éléments de conception de forme irrégulière sont obliques selon un angle α par rapport à au moins l'un des bords latéraux (36, 76, 98) des cartes à jouer respectives. 25

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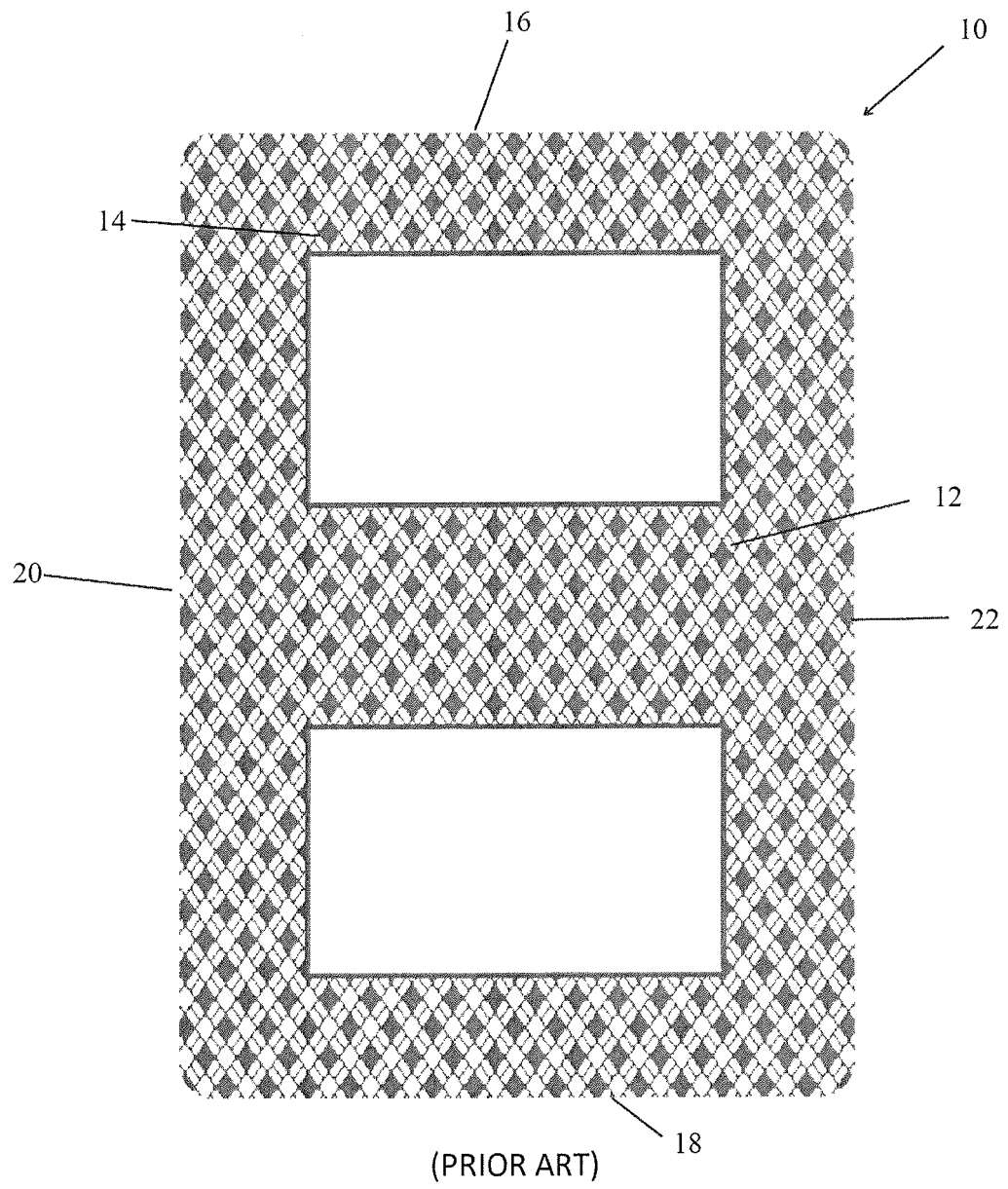


FIG. 1

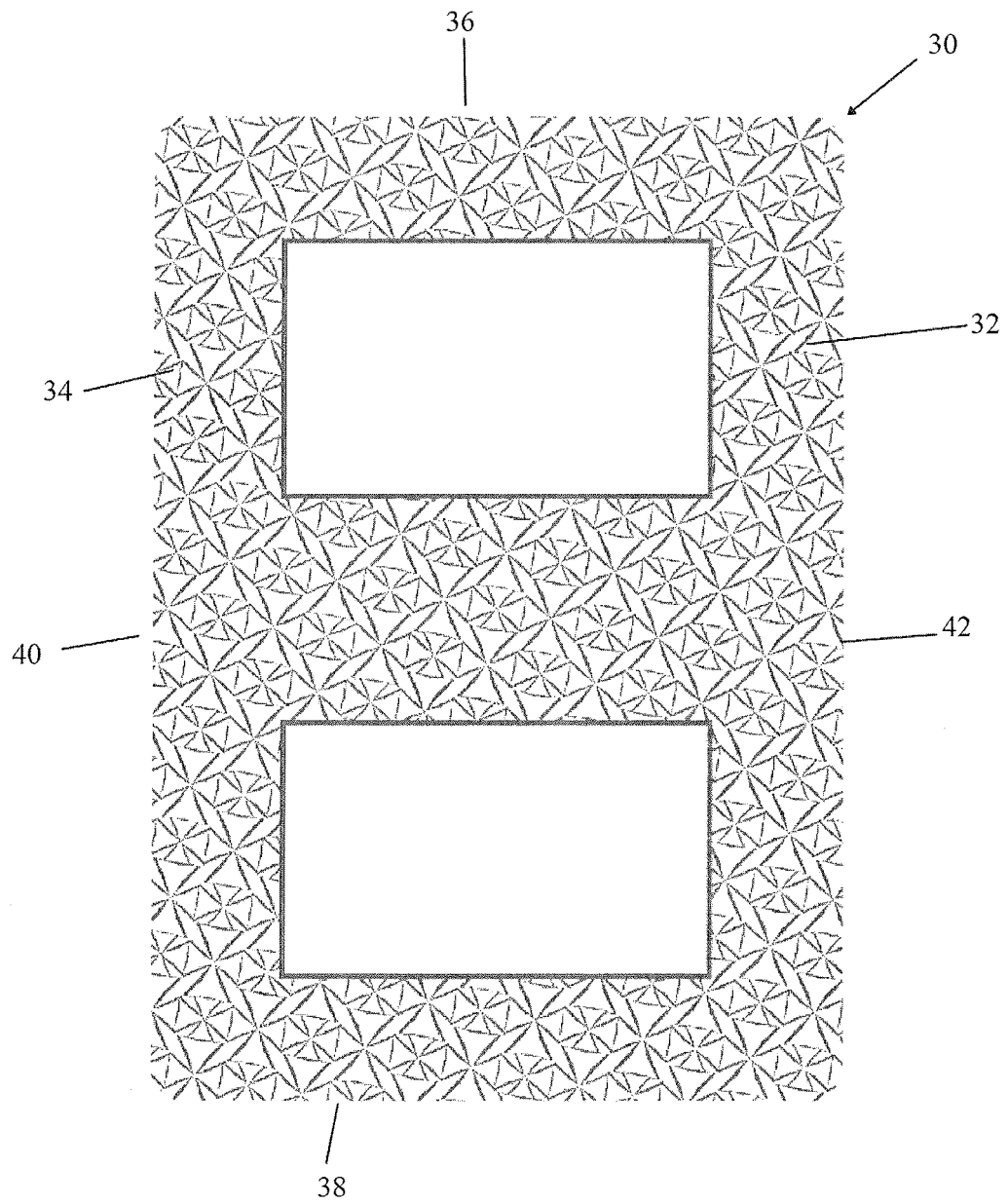


FIG. 2

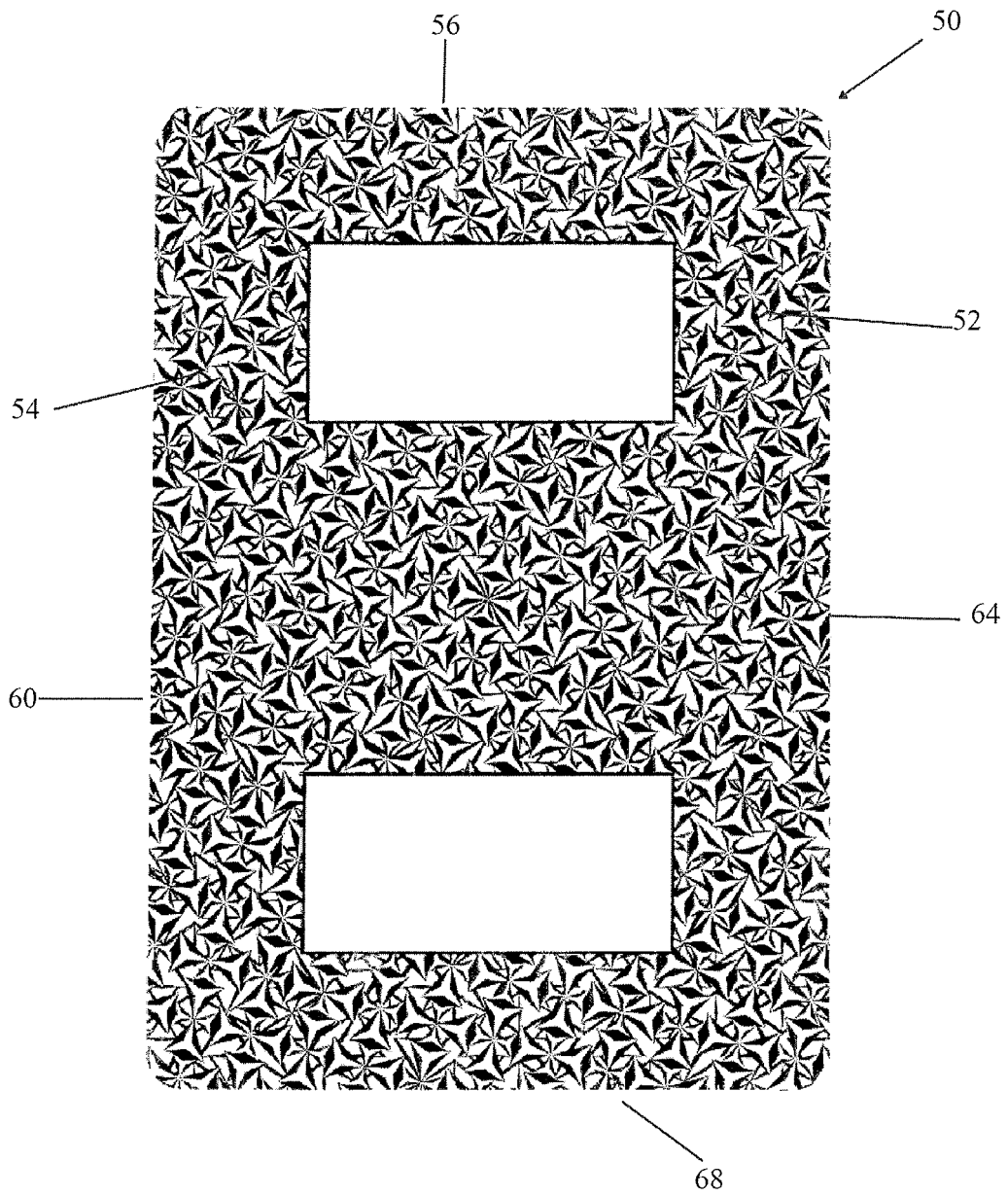


FIG.3

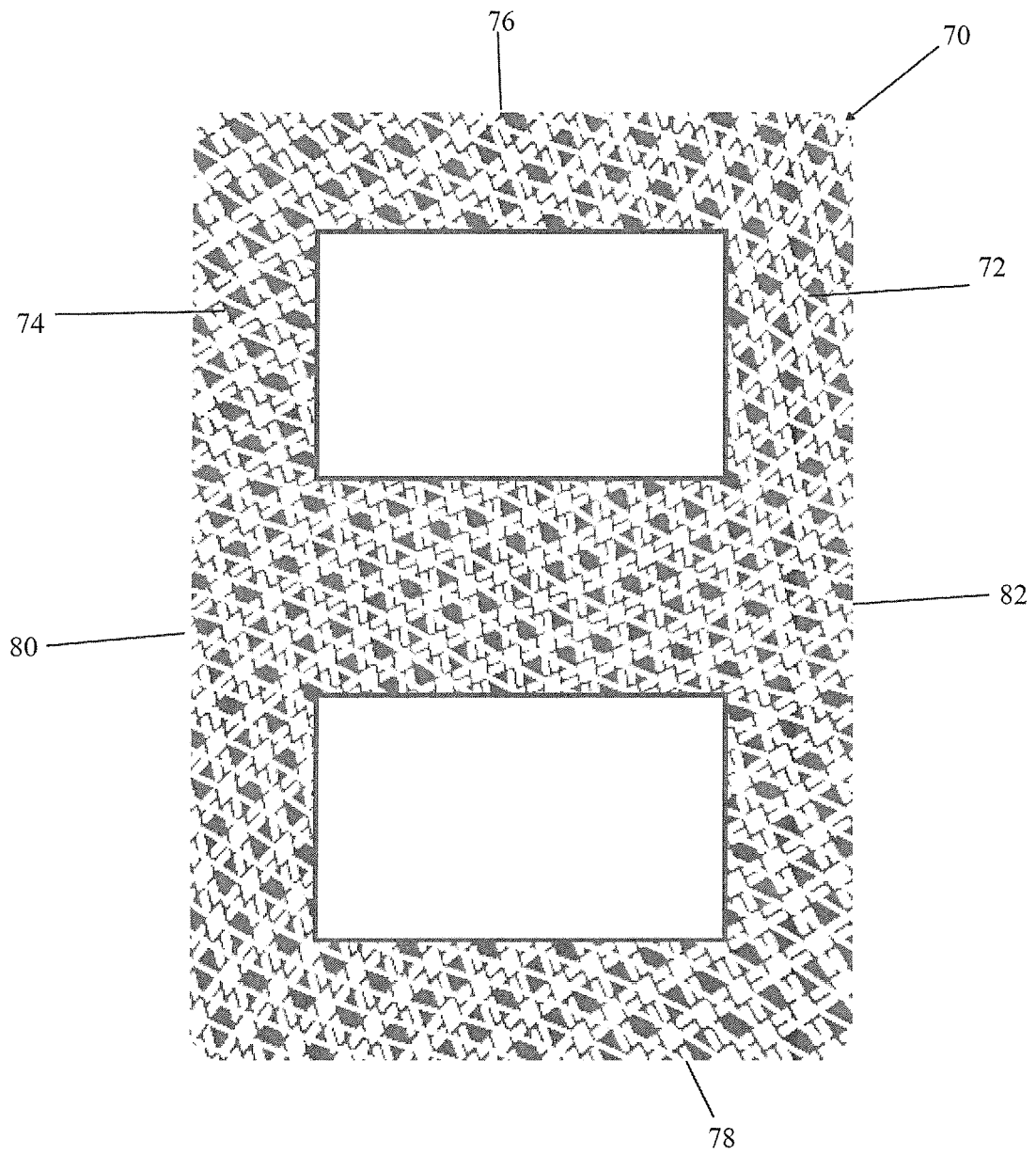


FIG. 4

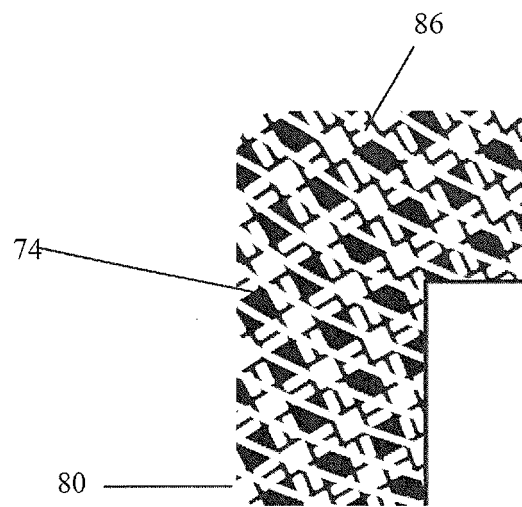


FIG. 5

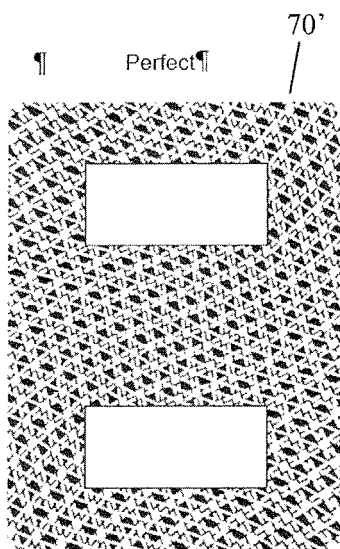


FIG. 6

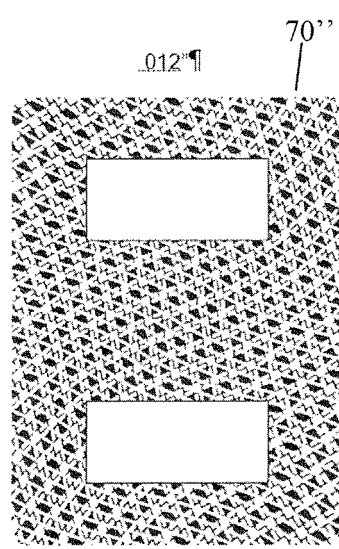


FIG. 7

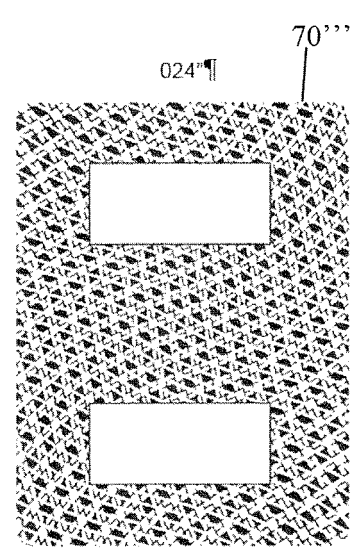


FIG. 8

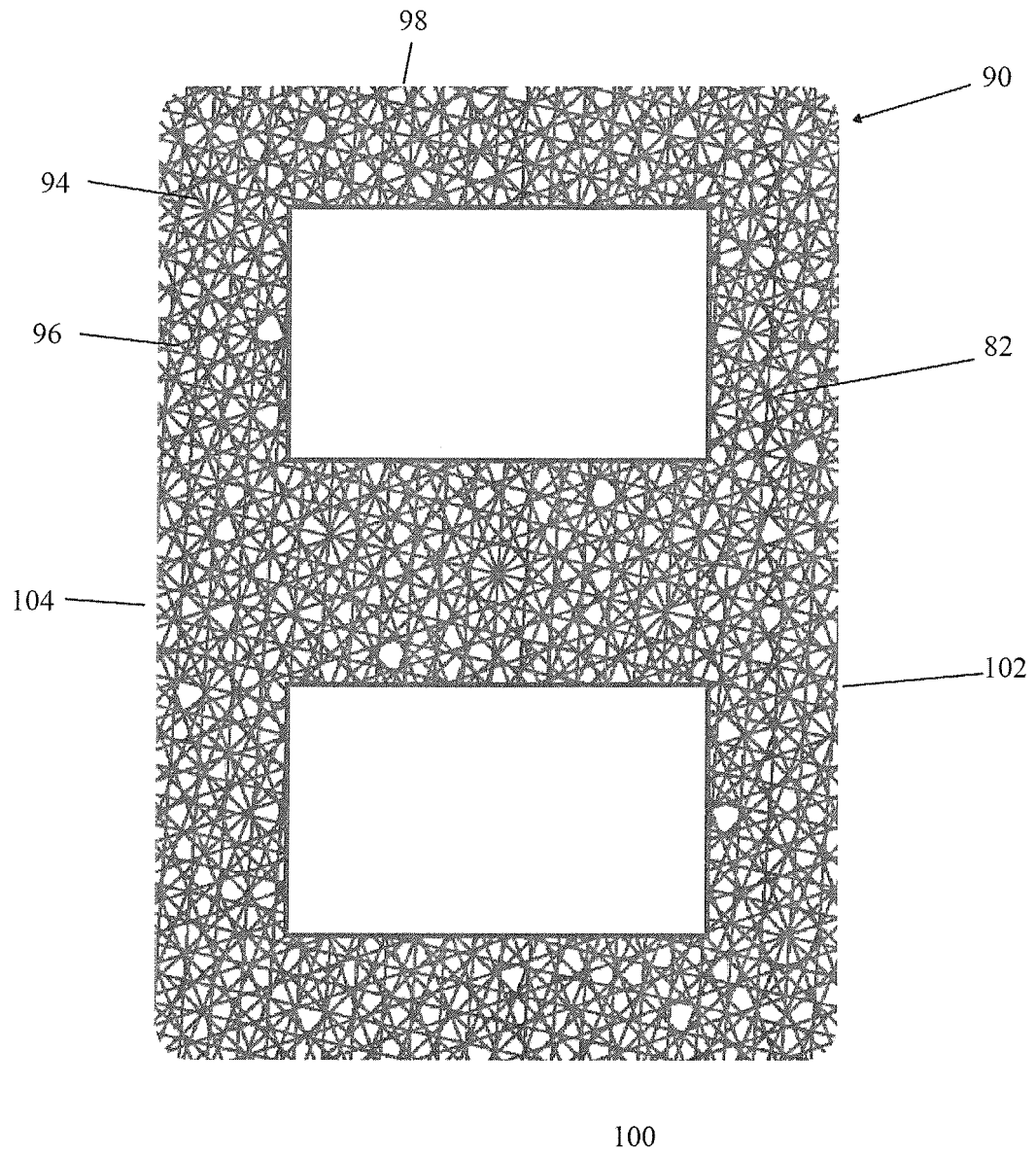


FIG. 9

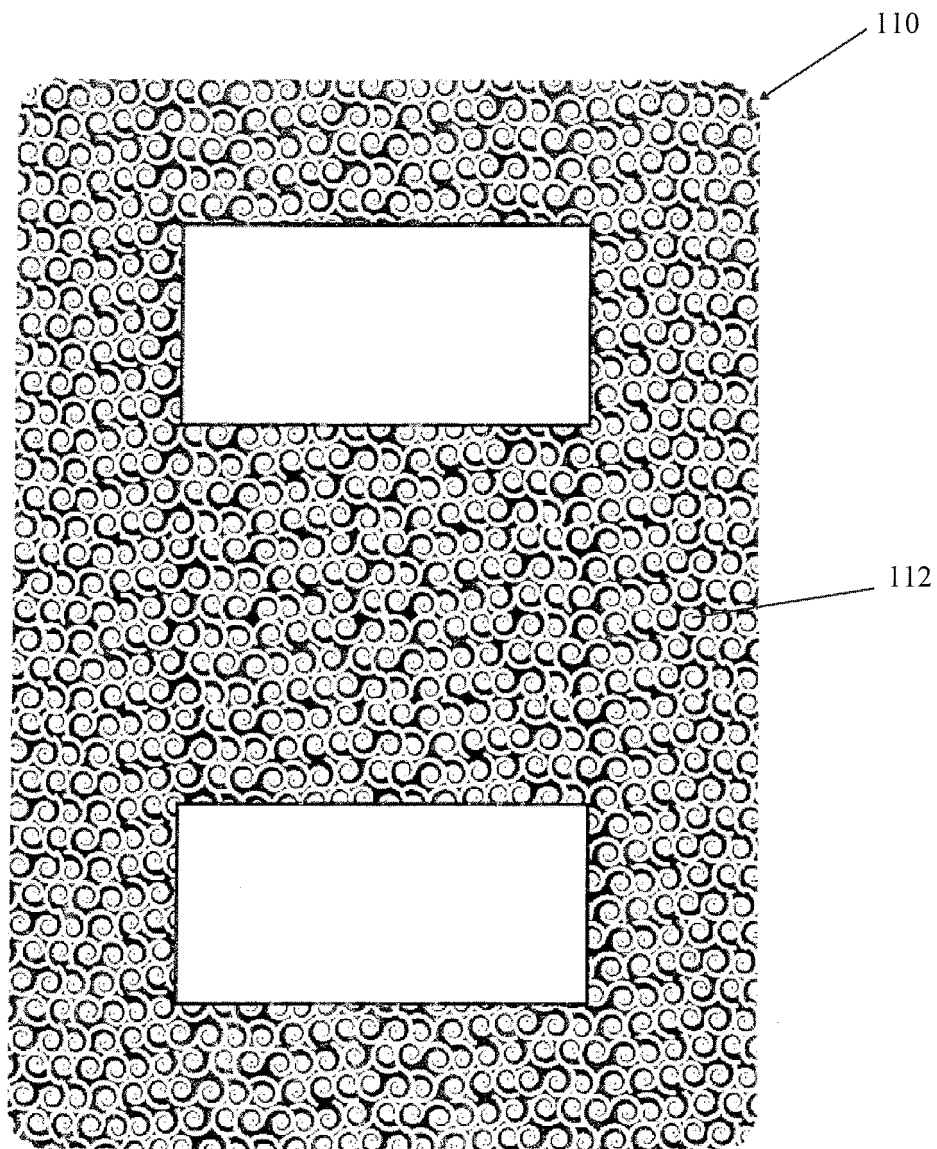


FIG. 10

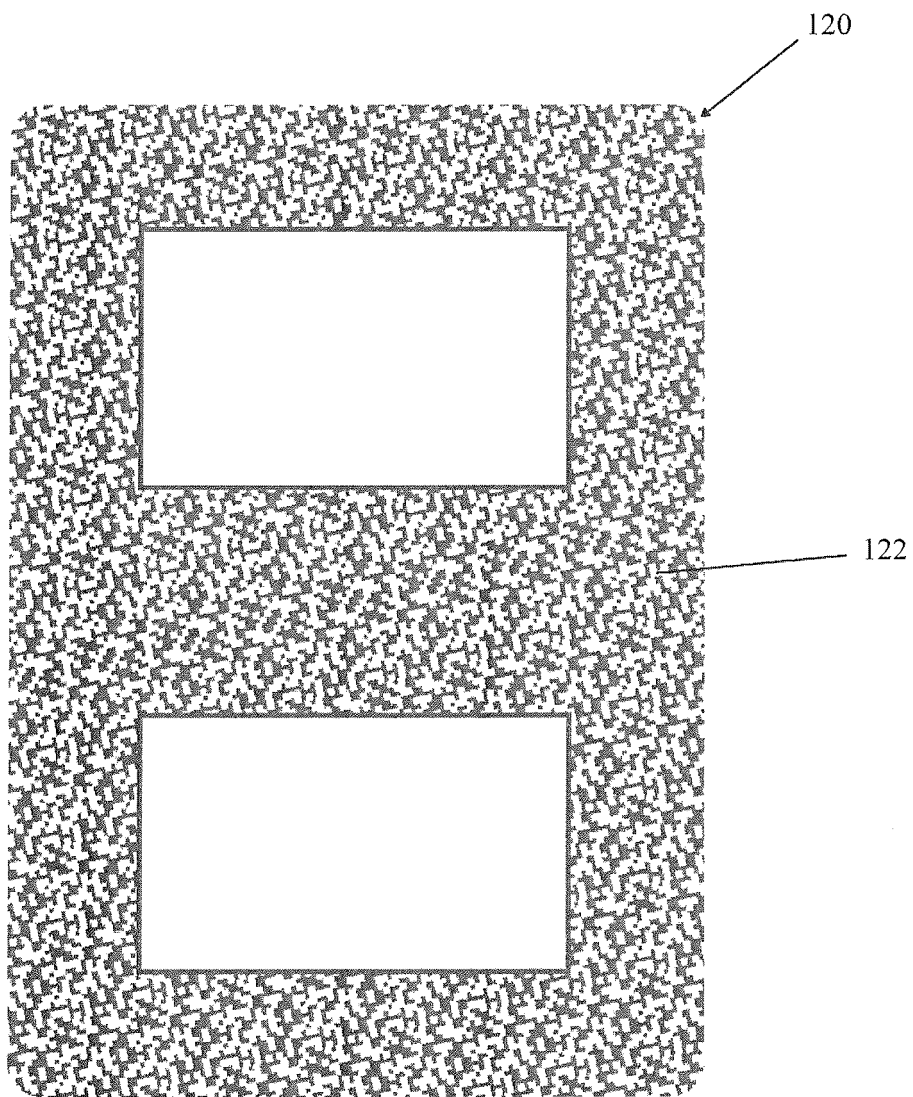


FIG. 11

REFERENCES CITED IN THE DESCRIPTION

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