

[54] IDENTIFICATION AND/OR CREDIT CARD WITH FLUSH MOUNTED PANELS

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[58] Field of Search 40/2.2, 135; 283/7; 235/61.12 M

[56] References Cited

UNITED STATES PATENTS

3,152,901 10/1964 Johnson 40/2.2

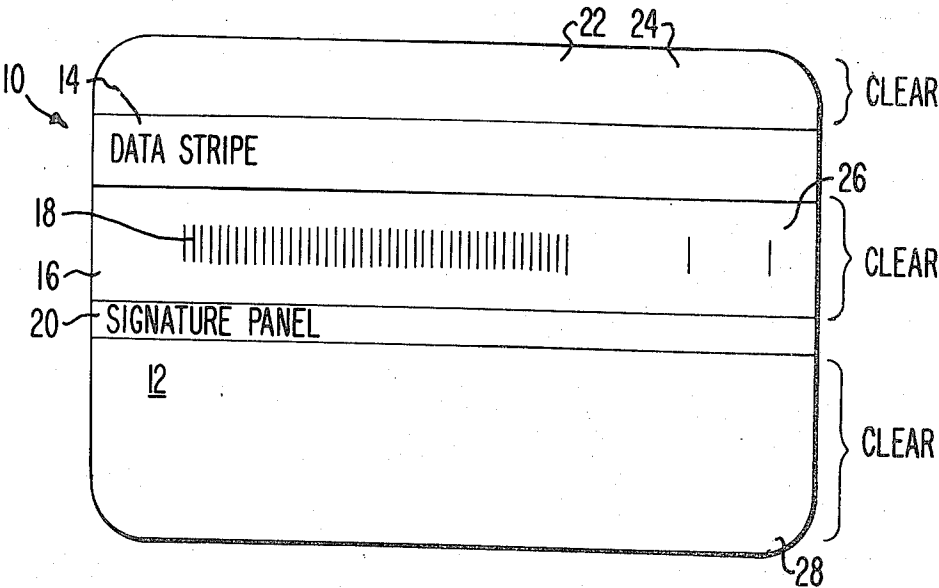
3,533,176	10/1970	Weitzberg et al.	40/2.2
3,601,913	8/1971	Pollock	40/2.2
3,732,640	5/1973	Changnon	40/2.2
3,758,970	9/1973	Annenberg	40/2.2
3,790,754	2/1974	Black	235/61.12 M
3,802,101	4/1974	Scantlin	40/2.2

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[57] ABSTRACT

A document such for example as a personal identification or credit card is provided with a plurality of parallel abutting panels or stripes of material at least some of which are or may be information carrying devices and all of which are applied simultaneously to the base material of the document, to provide a flush surface thereon.

5 Claims, 6 Drawing Figures



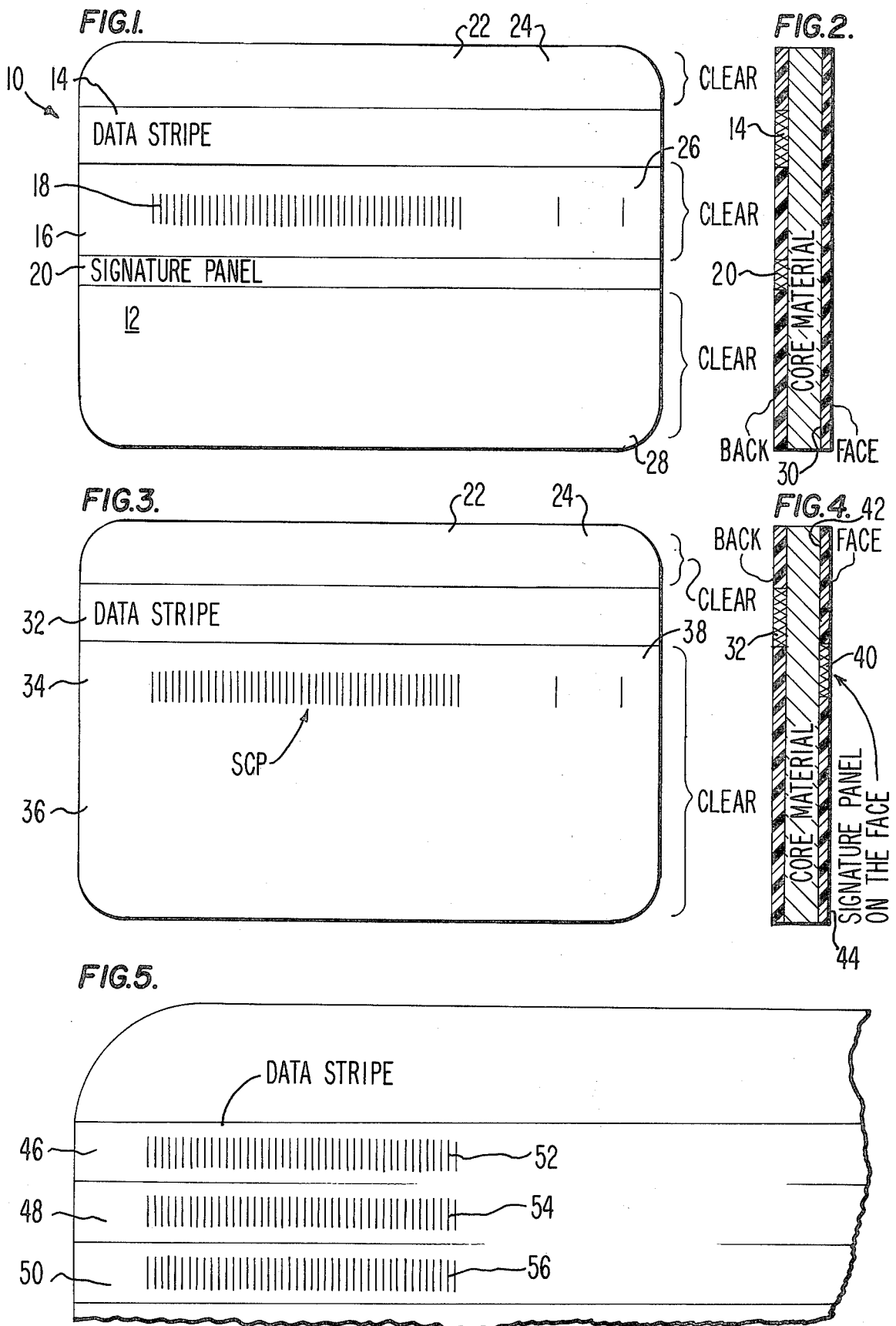
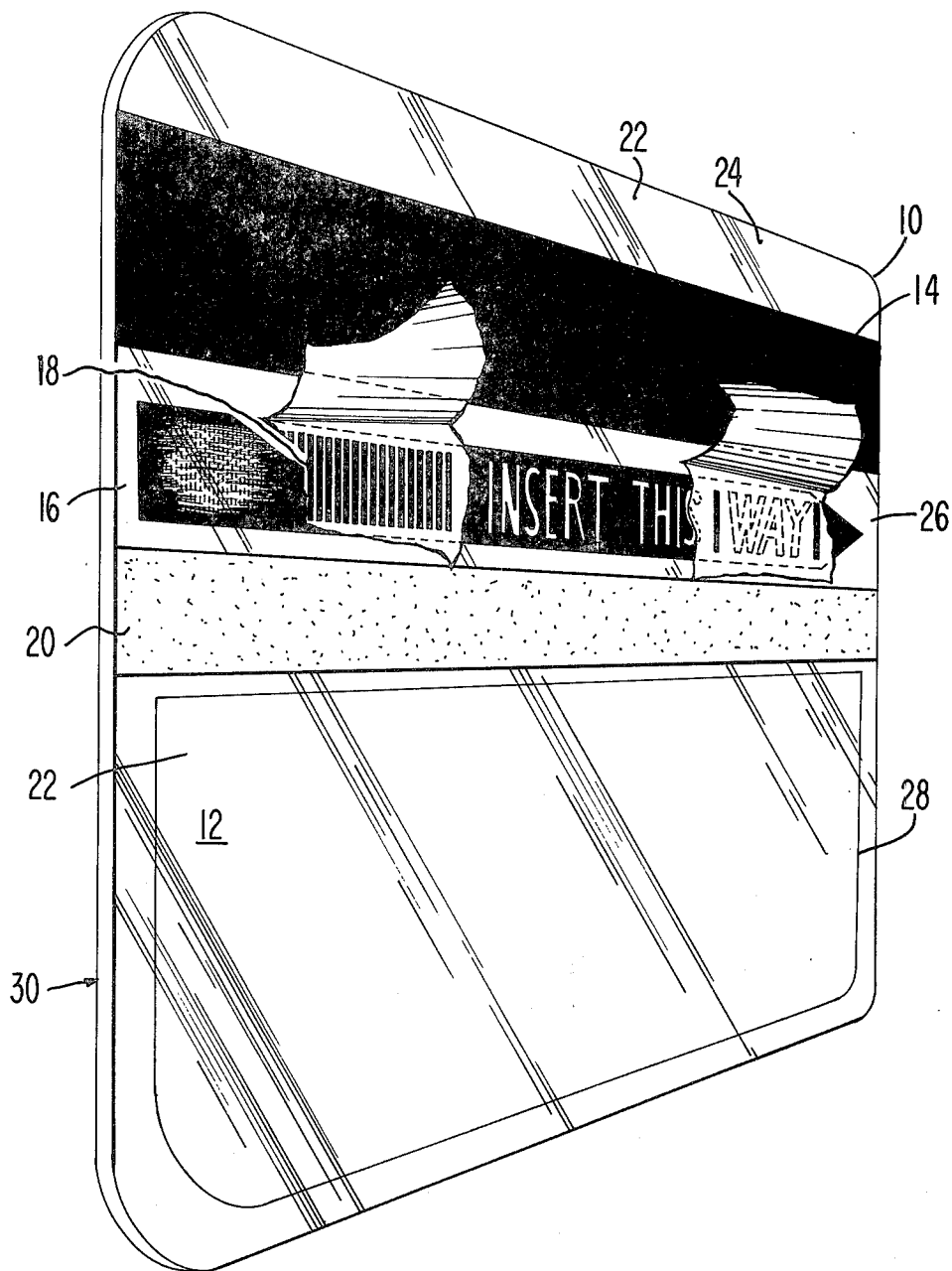


FIG. 6.



# IDENTIFICATION AND/OR CREDIT CARD WITH FLUSH MOUNTED PANELS

## FIELD OF THE INVENTION

The invention is concerned with the manufacture and/or security of documents such as credit and/or identification cards and with such documents having individual flush parallel surface areas which may include magnetic data areas, signature areas, clear areas, etc.

## BACKGROUND OF THE INVENTION

Most, if not all, of the present day credit and/or identification documents or cards are of the variety in which one or more layers of varying materials in sheet or web form are overlaid together and compressed under heat and pressure or adhesively bonded to produce a relatively flat document. Many such documents utilize separate individual stripes or bands of magnetizable material for the information area or areas and separate bands or stripes for the signature area. These stripes must be accurately positioned on the surface of the material covering the base material and thereafter adhesively bonded or secured as by heat and/or pressure to the surface material.

Currently most credit cards are constructed from three layers of material; a relatively thick opaque core which bears the printing sandwiched between two thin transparent layers. When appliques such as magnetic stripes are desired they are placed over one of the transparent layers in a variety of ways.

- a. They can be hot stamped on.
- b. They can be applied wet via silk screen or other coating technique.
- c. They can be applied by adhering and fusing on a piece of magnetic tape which has a film base suitable for such fusing.

In many cases, such appliques are visibly not a part of the polished surface of the card, however, if the cards are press polished after application, they are flush with the surface and to the casual eye appear to be an integral part of the card.

Another type of I.D. card employs a longitudinal trench or groove which is formed in the base material of the document and into which a magnetizable strip is deposited and adhesively secured or bonded by heat or pressure.

The former system often suffers not only from the expense of the lamination stack-up process which is generally hand labor and relatively costly but card distortion often occurs due to the heat and applied pressure. Stripe positioning and misalignment are additional problems encountered. The magnetic layer or layers many times are not completely flush with the surface of the document. This causes undue wear to the stripe and head. It also causes head bounce and/or chatter during operation or use. This non flush area with its raised edges are more exposed to mechanical damage.

The latter system while possibly producing a flush panel is costly and requires accurate alignment of the various fabricating devices which in turn can lead to problems of accuracy of reproduction and reproducibility which in turn tends to place a high burden on quality control.

## SUMMARY OF THE INVENTION

The present invention solves the foregoing and other

problems in a unique, novel, unobvious and heretofore undisclosed manner. Plastic material of suitable dimensional size and desired color is printed in a desired location with a repeating pattern of vertical bars of magnetizable material forming a transversely extending magnetizable area of alternate blank and magnetic material. This composite area provides a secure credit card property for the document which forms no part of the present invention but may be part of the overall structural assemblage. Thereafter the card issuer's identification data is printed on the base material in color or black and white as prescribed. The document is then coated on one or both sides with similar material to a predetermined thickness. Each of the coated formulation is applied to the surface of the document in side by side parallel arrangement of a consistency so as to adhere to the base material without additional processing. The coated stripes include a clear, transparent material, a magnetizable material and a material which is visually opaque and may be slightly colored which upon drying provides a signature panel or area for the document.

Where for aesthetic reasons, and also by reason of usage in the trade, a higher degree of surface gloss or other special finish or surface pattern is required, then, after the material on the card has solidified it may be run through a polishing apparatus which produces a clean, bright and highly glossy surface on both sides of the card.

It is important to note that the present invention does not rely on nor employ conventional laminations or laminating techniques, nor is the document grooved or trenched to produce the approximately flush planar obverse and reverse surface. On the contrary, the present invention utilizes a simultaneous and continuous contiguous coating technique which produces a flush obverse and reverse surface automatically as a result of the technique employed.

Other modifications, features and advantages of the present invention will be apparent from the following detailed description taken in conjunction with the accompanying drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings,

FIG. 1 is a plan view of a preferred embodiment of the present invention illustrating the various panels or stripes used therewith;

FIG. 2 is a cross sectional view along the line 2 — 2 of FIG. 1;

FIG. 3 is a plan view of an additional preferred embodiment of the invention;

FIG. 4 is a cross sectional view taken along the line 3 — 3 of FIG. 4;

FIG. 5 is a highly schematic and greatly enlarged plan view of the data stripe of the document illustrated in FIG. 1, and,

FIG. 6 is a greatly enlarged perspective view of the article of the present invention.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring first to FIG. 1 of the drawings, there is shown a preferred embodiment of one form of document, e.g. credit or I.D. card, in accordance with the teaching of the present invention. The document or card may be and usually is of semi-rigid plastic ma-

terial such as vinyl or other suitable support material which may be die cut, printed and/or embossed as required. In addition to any printed or embossed information which may be applied to the area 12 of the card and which provides a visual means of identification such as name, address, account number, etc., the card 10 is or may be provided with a data stripe 14. The data stripe 14 is formed of magnetizable material and usually extends transversely from one edge of the card to the opposite edge thereof. Adjacent to and contiguous with data stripe 14 is an area 16 similar to the area 14 but printed with a repeating pattern of vertical bars of magnetic material 18 extending substantially throughout the length of the area. This portion of the card provides a security feature therefor and generally forms no part of the present invention per se.

Adjacent to and in abutting relationship to area 16 is a signature area or panel 20 extending from side edge, to side edge of the card. The material of the panel 20 is such as to permit the employment therewith of a wide variety of writing materials such as ball-point pens, pen and ink or graphite pencils.

Simultaneously with the application of the materials to the data stripe 14, security area 16 and the signature area 20, a clear transparent material 22 is applied to the areas 24, 26 and 28 of the card. The data stripe and the signature panel are not coated with a clear material 22 since with respect to the data stripe the magnetizable material should be as close as possible to the transducing mechanism and with respect to the signature panel it is desirable to have the panel completely exposed as a writing surface. The card fabrication is completed by having the reverse surface of the card coated with a clear material as indicated at 30.

The construction shown in FIGS. 3 and 4 is similar to but not identical with the construction of FIGS. 1 and 2. In the embodiment illustrated in FIG. 3 it is noted that the data stripe 32 extends from one edge of the card to the opposite edge thereof and is positioned in approximately the same location as the data stripe of FIG. 1. However, the security area of the card of FIG. 3 has the secure magnetic material 34 positioned in substantially the same location as that of FIG. 1 but the remainder of the card surface provides an area 36 for name, address and account number information but with the signature panel being present on the opposite surface of the card. Clear material 22 is applied to the area 24 above the data stripe and the entire area 38 extending from the bottom edge of the data stripe to the bottom edge of the card as viewed in FIG. 3 is provided with the clear material.

Turning to the sectional view of FIG. 4, it is seen that the signature panel 40 is applied to the opposite or front surface of the card from the rear or back surface carrying the data stripe and the areas 42 and 44 above and below the signature panel respectively are provided with a clear transparent material 22.

In certain instances, it has been determined to be desirable to subdivide the data stripe area of the card into two or more separate, individual transversely extending areas 46, 48 and 50 as shown in the top plan view of FIG. 5. The tripartite division of the data stripe area illustrated in FIG. 5 is or may be required to satisfy the individual location of the electromagnetic transducer (not shown) which is employed by various individual users of the document. Conversely it may, for reasons of particular specifications, be desirable to subdivide the single data stripe electronically into multiple tracks or channels 52, 54 and 56 in which case areas of the

stripe shown as vertical bars are not in fact visible to the naked eye since the bars represent in this case the magnetic polarization due to the magnetizing force applied.

The clear coatings may contain a colored and/or invisible but fluorescent material to provide special effects enabling counterfeit detection. This material may also act as an optical brightener which makes the card appear whiter and brighter under normal lighting. This material acts as an anti-counterfeiting feature since its presence is detectable and its absence is an indication that the card is not genuine.

There has thus been described a new, novel and heretofore undisclosed I.D./credit card having both front and back surfaces flush or planar and which can be produced at extremely high speed by means of automatic apparatus utilizing a relatively simple coating technique employing a multiple orifice coating head and solidifying means as described illustrated and claimed in copending U.S. patent application entitled "MULTIPLE, CONTIGUOUS STRIPE, EXTRUSION COATING APPARATUS," filed 19 Dec. 1973, Ser. No. 426,022, in the names of Dunham B. Seeley and James A. Colegrove.

What is claimed is:

1. A card comprising: a relatively thin core member having a pair of back-to-back planar surfaces which are substantially parallel relative to each other; at least a first coating of magnetizable material covering a portion of one of said pair of planar surfaces; at least a second coating covering a portion of one of said pair of planar surfaces, said second coating being adapted for having information written thereon; third and fourth coatings covering said pair, respectively, of said planar surfaces at the locations which are not covered by said first and second coatings; at least one of said third and fourth coatings and at least one of said first and second coatings being in contiguous, flush relationship on at least one of said pair of planar surfaces thereby forming a new and continuous planar surface which covers said one of said planar surfaces of said core member, the other of said third and fourth coatings and the other of said first and second coatings, if any, also being in contiguous, flush relationship on the other of said planar surfaces thereby forming another new and continuous surface thereon, said core member being adapted for receiving said first, second, third and fourth coatings thereon concurrently and simultaneously.

2. The card set forth in claim 1 wherein one of said pair of planar surfaces of said core member includes at least a portion thereof which has information printed in magnetizable material thereon, and wherein one of said third and fourth coatings also covers said portion having said information printed in magnetizable material thereon, and wherein said core member is adapted for receiving said first, second, third and fourth coatings thereon concurrently and simultaneously subsequent to the printing of said magnetizable material on said portion of said one of said pair or planar surfaces of said core member.

3. The card set forth in claim 2 wherein said information printed in magnetizable material on said portion of one of said planar surfaces is comprised of parallel bars of magnetizable material.

4. The card set forth in claim 1 wherein said first and second coatings are appliques.

5. The card set forth in claim 1 wherein at least one of said third and fourth coatings includes a portion thereof including fluorescent material for providing counterfeit detection means when exposed to ultraviolet radiation.