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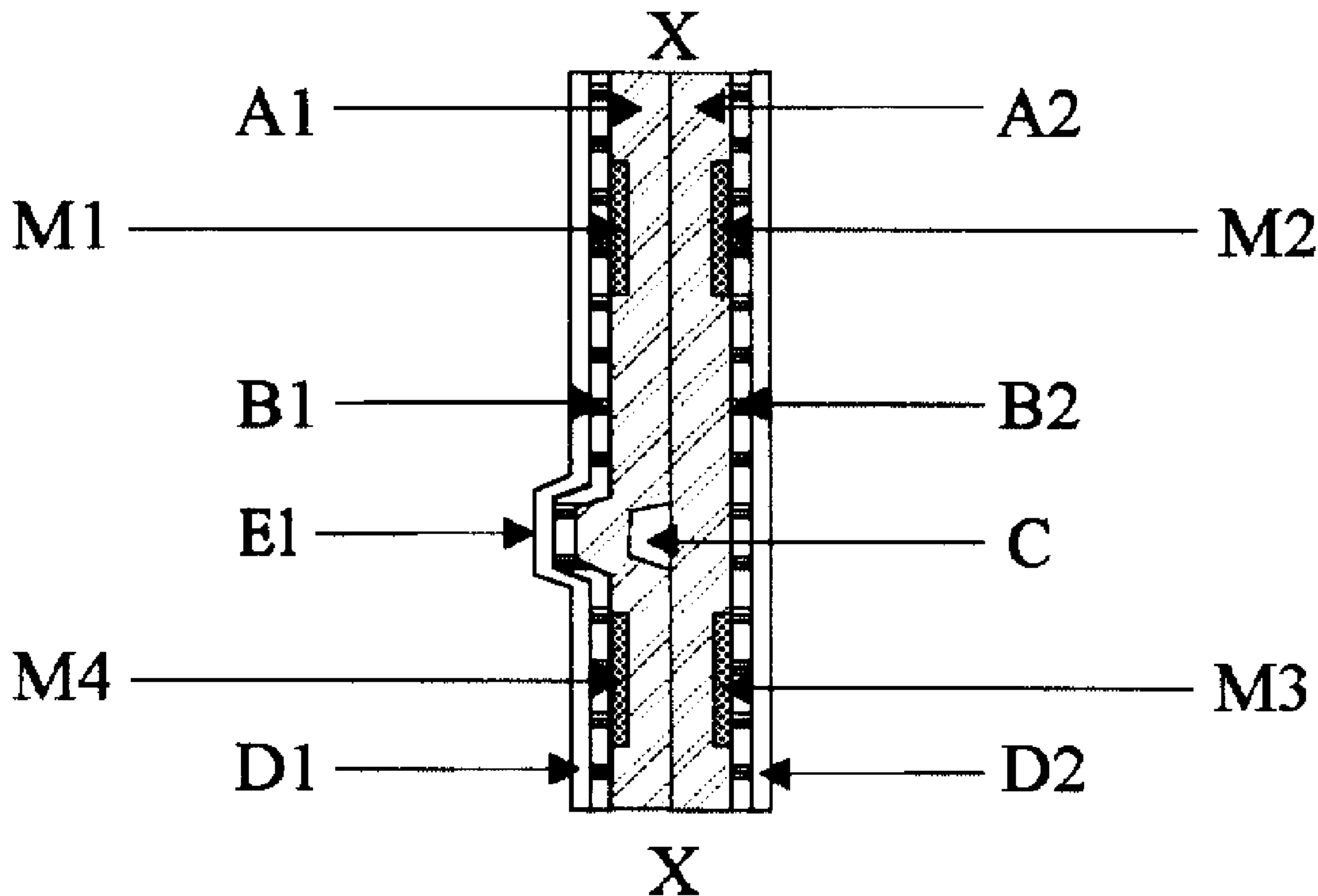
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(54) Titre : CARTE DE TRANSACTION A DOUBLE FONCTION

(54) Title: DUAL FUNCTION TRANSACTION CARD



(57) Abrégé/Abstract:

This invention provides more than one function to the transaction card by utilising the back and front surfaces of the transaction card for informational content, and uses more than one magnetic stripe hidden underneath the surfaces. These magnetic stripes are readable by existing transaction card readers and are identified by multiple indicia at or near the magnetic stripes' location. Each of the magnetic stripes contains electronic information pertaining to one of the surfaces. The indicia indicates the magnetic stripe's location and informs the user that the information contained in that magnetic stripe corresponds to one of the surfaces. A separate indicia with text could be located next to the embossed lettering of the transaction card to instruct the user that the imprinted account number created from the embossed lettering should be modified to match the information on the reverse side of the embossed surface.

DUAL FUNCTION TRANSACTION CARD

ABSTRACT OF THE DISCLOSURE

This invention provides more than one function to the transaction card by utilising the back and front surfaces of the transaction card for informational content, and uses more than one magnetic stripe hidden underneath the surfaces. These magnetic stripes are readable by existing transaction card readers and are identified by multiple indicia at or near the magnetic stripes' location. Each of the magnetic stripes contains electronic information pertaining to one of the surfaces. The indicia indicates the magnetic stripe's location and informs the user that the information contained in that magnetic stripe corresponds to one of the surfaces. A separate indicia with text could be located next to the embossed lettering of the transaction card to instruct the user that the imprinted account number created from the embossed lettering should be modified to match the information on the reverse side of the embossed surface.

1 DUAL FUNCTION TRANSACTION CARD

2 This invention provides multiple functionalities to a transaction card. In particular, the
3 invention relates to the inclusion of more than one magnetic stripe that contains information on the
4 two surfaces of the transaction card, and to the method to modify the imprint of the embossed
5 lettering to match the one of the surfaces on the transaction card.

6 BACKGROUND OF THE INVENTION

7 In the recent years, the use of a plastic card that contains electronic information—henceforth
8 referred to as “transaction card”—has exploded. Some of such transaction cards include credit
9 cards, debit cards, Automated Teller Machine (ATM) cards, loyalty cards, government health and
10 S.I.N. cards, retail and gas company cards, and the public transit cards. The frequent use of such
11 transaction card has given the consumer a large quantity of transaction cards to carry around. What
12 is needed is a way to reduce the number and bulk of transaction cards in the consumer wallet.

13 U.S. Pat. No. 3,601,913 to Pollock shows a magnetic transaction card with both surfaces
14 impregnated with magnetic materials. Customised information is then imprinted onto the surface.
15 The imprinting action deforms the magnetic layer underneath to create an indentation that disrupts
16 the magnetic field pattern. A magnetic reader reads the disruptions in the magnetic field to
17 determine the information on the magnetic transaction card. The drawback in this design is the
18 unnecessary magnetisation of the whole surface of the card when the majority of the current
19 magnetic stripe readers are designed to comply with International Standards ISO 7810, 7811, and
20 7813. The second drawback is the method of imprinting of pattern onto the magnetic layer to
21 produce detectable unique information. This could result to wrong information over time when the
22 magnetic layer reverts back to its original position, reducing the indentation gap, which gives a
23 faulty reading. Currently, the merchant creates a manual copy of the transaction card by making an
24 imprint of the transaction card’s embossed letters, which is impossible in this proposed magnetic
25 transaction card.

26 U.S. Pat. No. 4,443,027 to McNeely shows multiple miniaturised credit indicators affixed to
27 one common plate. Each of the miniaturised credit indicators represents a separate issuer and is
28 equipped with a microchip to contain all the necessary information for the transaction to occur. A
29 single magnetic stripe on the common plate holds coded information about the user, but special
30 equipment is used to read the rest of the information on these miniaturised credit indicators. The
31 drawback is the high cost in creating the miniaturised credit indicators, the high manual dexterity

1 required from the user to insert these credit indicators, and the high infrastructure investment for
2 both card issuers and merchants.

3 U.S. Pat. No. 5,530,232 to Taylor shows a data card with a single magnetic stripe and solid-state
4 circuitry (or 'smart card'). The smart card accommodates multi-application only if a smart card
5 reader is available. Otherwise, the single magnetic stripe is used to contact an intermediate
6 transaction processor company to retrieve the information. The drawback is setting up the
7 infrastructure to accept the smart card, and setting up an intermediate transaction processor company
8 to handle multi-application information.

9 U.S. Pat. No. 5,585,787 to Wallerstein shows a computer built into the credit card with a
10 magnetic inductor connected to a single magnetic stripe and a thumbwheel to modify the last two
11 digits of the embossed account number on the front of the card. By rotating the thumbwheel, the
12 card information is altered accordingly along with the information on the magnetic stripe. The
13 patent also proposes a clearinghouse set-up to track multiple accounts and a machine on the
14 merchant side to interact with that clearinghouse. The drawbacks of this model include: the high
15 precision required in incorporating the thumbwheel into the already thin credit card, the high cost of
16 miniaturising computer components into a credit card size dimension, and the high cost of creating
17 the clearinghouse system and the equipment that communicates with it.

18 There is a need, which has not heretofore been meet, for a product that reduces the number of
19 transaction cards carried by the consumer, is inexpensive to produce, and does not impose additional
20 cost to the infrastructure of both the issuer and the merchant.

1 SUMMARY OF THE INVENTION

2 This invention provides more than one function to the transaction card by utilising the back
3 surface of the transaction card for informational content in addition to the front surface, and includes
4 the use of more than one magnetic stripe hidden underneath the surfaces of the transaction card.
5 These magnetic stripes are readable by existing transaction card readers (for example credit/debit
6 card readers, loyalty card readers, or automated teller machines - ATMs) and are identified by
7 multiple indicia at or near the location of the magnetic stripes. One of the magnetic stripes contains
8 information of the one of the surfaces while another magnetic stripe contains the information of the
9 reverse surface. The indicia indicates the location of magnetic stripe underneath the transaction card
10 surface and informs the user that the information contained in that magnetic stripe corresponds to
11 one of the surfaces. A separate indicia with text could be located next to the embossed lettering of
12 the transaction card to inform the user that the imprinted account number created from the embossed
13 lettering should be modified to match the information on the reverse side of the transaction card's
14 embossed surface.

1 DETAILED DESCRIPTION OF THE INVENTION

2 In drawings which illustrate embodiments of the invention,

3 Fig. 1 is a cross-sectional view, on an exaggerated scale taken generally on line X-X in

4 Fig. 2;

5 Fig. 2 is a frontal view of the dual function transaction card;

6 Fig. 3 is a side view of the dual function transaction card;

7 Fig. 4 is a back view of the dual function transaction card;

8 Fig. 5 is the illustration of a transaction receipt made by imprinting the dual function

9 transaction card;

10 Fig. 6 and 7 are respectively, the front and back design of one possible arrangement for the
11 dual function transaction card;

12 Fig. 8 and 9 are respectively, the front and back design of the second possible arrangement
13 for the dual function transaction card; and

14 Fig. 10 and 11 are respectively, the front and back design of the third possible arrangement
15 for the dual function transaction card.

16 The dual function transaction card is an informational piece of material that is commonly
17 associated as credit card. The dual function transaction card—henceforth referred to as “dual-
18 card”—has more than one magnetic stripe embedded underneath the surfaces. Fig. 1 shows the
19 exaggerated cross section of the dual-card. A1 and A2 are the PVC cores. PVC is mentioned
20 because this material is commonly used and is easily embossed. Other materials, such as
21 polycarbonate or polyester, can be used in place of PVC. Up to four magnetic stripes, M1, M2, M3,
22 and M4 can be embedded on the dual-card. A dual-card has at least two magnetic stripes and has a
23 combination of any of the four magnetic stripes—M2 M3, M1 M2, M1 M2 M3, M1 M2 M3 M4,
24 etc... B1 and B2 are the layers that have printed information of the cardholder. Information such as,
25 but not limited to, issuer’s logo, card holder’s picture, card holder’s signature, expiry/start date,
26 account numbers, address, blood type, etc. that are designed by the issuer. These printed layers also
27 contain indicia that will be discussed in subsequent paragraphs. D1 and D2 are thin layers of PVC
28 overlay that protect the printed layer underneath. E1 is an embossed portion of the dual-card. C is
29 the gap created after embossing is done to the dual-card. This can be filled in with plastic filler, or
30 left alone, as the gap is relatively small.

31 Fig. 2 shows the front of the dual-card where the embossed letters E1 are the account number of
32 the cardholder, additional embossed user information E2, and the two magnetic stripes M1 M4

1 embedded underneath the front surface. The locations of the magnetic stripes M1 M4 are indicated
2 by indicia I1 I4 at or near the edge of the dual-card. The indicia I1 I4 are produced from a
3 combination of shapes, words, and logo(s) to show the information contained in the magnetic stripes
4 M1 M4. For example, if the magnetic stripe M1 contains information of airline ZZY then I1 could
5 be the word ZZY, or the logo of airline ZZY, or a coloured rectangle, or any combination of these
6 elements. Another indicia I5 tells the user that when he signs U2 on the imprinted receipt Fig. 5, he
7 must write in the number 2 (two) U1 next to the account number made by the embossed letters E1 if
8 he wants to charge the transaction to the account G1 at the back of the dual-card. The number 2 is
9 used here as an example; the issuer of the dual-card can use any alphanumeric characters to
10 differentiate the account number G1 at the back of the dual-card from the account number E1 at the
11 front of the dual-card. The location of these alphanumeric characters can be at the front, or at the
12 end of the embossed account imprint.

13 Fig. 3 is the side view of the dual-card that shows the locations of the four magnetic stripes M1
14 M2 M3 M4. Again, at least two magnetic stripes are embedded on the dual-card and not all four
15 magnetic stripes have to be there. A1 and A2 are the PVC cores. B1 and B2 are the layers that have
16 printed information of the cardholder. D1 and D2 are the PVC overlay for protecting the printed
17 layer underneath. E1 and E2 are the embossed letters.

18 Fig. 4 shows the back of the dual-card. M2 and M3 are two magnetic stripes that locate beneath
19 the surface of the dual-card. The indicia I2 I3 mark the location of the magnetic stripes and inform
20 the merchant which magnetic stripe contains information that corresponds to the front and which
21 corresponds to the back. The peeled-away section shows the PVC core A2, the magnetic stripe M2,
22 and the printed layer B2.

23 Fig. 5 shows a sample receipt made by imprinting the front surface of Fig. 2 where the user
24 wants to charge the \$100 to the 00000 0000 0000 00000 2 account G1, and according to the issuer's
25 instruction in this example, the modify digit 2 (two) is to be written after the imprinted account
26 number. When the merchant makes an imprint of the dual-card in Fig. 2, the embossed information
27 E1 E2 on the front surface will appear as F1 and F2 on the receipt. The user must write the number
28 2 (two) U1 and sign the receipt U2 for the receipt to be valid for account number G1 listed in the
29 back of the dual-card.

30 Fig. 6 and 7 illustrates one possible use of the dual-card. The front of this first dual-card
31 example is a credit card of the fictitious Moon Bank. The function on the back of this dual-card is
32 that of a purchase card from the same Moon Bank, with the difference in account numbers of the
33 two cards being the one extra digit on the purchase card. The back, in this example, also has the

1 user's photo, name, and signature in the design H. The credit card on the front has the embossed
2 number 123 456 789 E3 along with the embossed user name and from/to dates E4. The purchase
3 card on the back has the account number 7 123 456 789 G2. The indicia I5 on the front instructs the
4 user to manually write in the number 7 (seven) in the front of the imprinted numbers for the amount
5 to get charge to the purchase card. When the magnetic stripe along the top edge of the dual-card M5
6 is read by a credit card reader, the machine will read 123 456 789, and when the magnetic stripe
7 along the bottom edge of the dual-card M6 is read by a credit card reader, the machine will read
8 7 123 456 789. The indicia I6 informs the merchant that the magnetic stripe underneath the surface
9 will contain information for the credit card, while the indicia I7 informs the merchant that the
10 magnetic stripe underneath contains information for the purchase card. When the user wants to
11 charge to the purchase card account through a manual transaction process, the merchant would make
12 an imprint of the front of the dual-card which reads 123 456 789 and the user would then write in a
13 number 7 (seven) before the imprinted numbers made by E3 then sign the receipt. If the user does
14 not write in the number 7 (seven), the transaction gets billed to the account on the front of the
15 dual-card, which is the credit card. Writing the extra digit in front of the imprinted account number
16 is not a significant addition to the effort on the user's part since the user still needs to sign the
17 receipt; putting an extra number on the imprinted account number takes only an extra second.
18 Another alternative would be to have the front of the dual-card containing the purchase card of one
19 account (e.g. equipment purchase), while the back containing the purchase card of another account
20 (e.g. meal and accommodation). In this case, the issuer's computer system is set up for 123 456 789
21 as the equipment purchase account, while 7 123 456 789 as the meal and accommodation account.

22 Fig. 8 and 9 illustrates another possible use of dual-card. The front of this second dual-card
23 example is a credit card of Moon Bank and has the regular embossed account number E5, and user
24 name and from/to dates E6. The function of the back of this dual-card is that of the ZZY Airline,
25 such as information for the air miles program, frequent flier program, or information for automatic
26 check-in. The back would contain information K such as the user's photo, name and signature, and
27 the user's account number G3 at ZZY Airline. The indicia I9, on the back of the dual-card, shows
28 the location of the magnetic stripe M8. In this example, the indicia I9 is a triangular shape with the
29 word MOON to indicate that the magnetic stripe M8 beneath the surface contains information of
30 Moon Bank credit card. The indicia I8, on the front of the dual-card, shows the location of the
31 magnetic stripe M7. The indicia I8 is a triangular shape with the word ZZY to indicate that the
32 magnetic stripe M7 beneath the surface contains information of ZZY airline.

1 Fig. 10 and Fig. 11 illustrates a variation of the dual-card in Fig. 8 and Fig. 9. The function in
2 the front the dual-card in Fig. 10 and Fig. 11 is Moon Bank credit card while the back function is
3 ZZY airline loyalty program. The front of this dual-card example is a credit card of Moon Bank and
4 has the regular embossed account number E7, and embossed user name and from/to dates E8. The
5 back would contain information such as the user's photo, name and signature N, and the user
6 account number G4 in ZZY Airline loyalty program. The indicia I10 on the back of the dual-card
7 shows the location of the magnetic stripe M9. In this example, the indicia I9 is a moon logo to
8 indicate that the magnetic stripe M9 underneath the surface contains information of Moon Bank
9 credit card. The indicia I11, on the bottom edge of the dual-card, shows the location of the magnetic
10 stripe M10 underneath the surface. The indicia I10 is an aeroplane to indicate that the magnetic
11 stripe M10 contains information of ZZY airline program.

12 Fig. 6 to Fig. 11 illustrated 3 possible combinations for the front and back of the dual-card.
13 Combining more than one of the functions below can make other possible combinations for the
14 dual-card.

- 15 • Credit card
- 16 • Debit card
- 17 • Charge card
- 18 • Bank card
- 19 • Health card
- 20 • Insurance card
- 21 • Student/library card
- 22 • Supermarket/gas/airline/retailer loyalty card
- 23 • Airport automatic check-in card
- 24 • Driver's license
- 25 • Club membership

26 The functions above are not the only functions that can be incorporated into the dual-card. The
27 dual-card's functions can expand to accommodate new combinations as more merchants and issuers
28 find creative ways to retain the user's information electronically through the use of multiple
29 magnetic stripes.

1 THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR
2 PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

- 3 1. A transaction card consisting of multiple (i.e. more than one) magnetic stripes that are attached
4 to the card in accordance with International Standard ISO 7810, 7811, and 7813.
- 5 2. The multiple magnetic stripes in claim 1 are embedded underneath the printed surfaces of the
6 transaction card.
- 7 3. Multiple indicia comprised of words, shapes, logos or a combination of words, shapes, and
8 logos, are used to identify the location of the magnetic stripes in claim 1.
- 9 4. The multiple indicia in claim 3 indicate the electronic information contained in the magnetic
10 stripes pertaining to the corresponding surface of the transaction card.
- 11 5. Another indicia can be located before or after the embossed letters on the transaction card to
12 inform the user that additional alphanumeric character(s) are needed to be manually written onto
13 the imprinted receipt in front or behind of the imprinted account number, dependent on the
14 issuer's instructions, to match the account number on the surface opposite the embossed surface.

Fig. 6

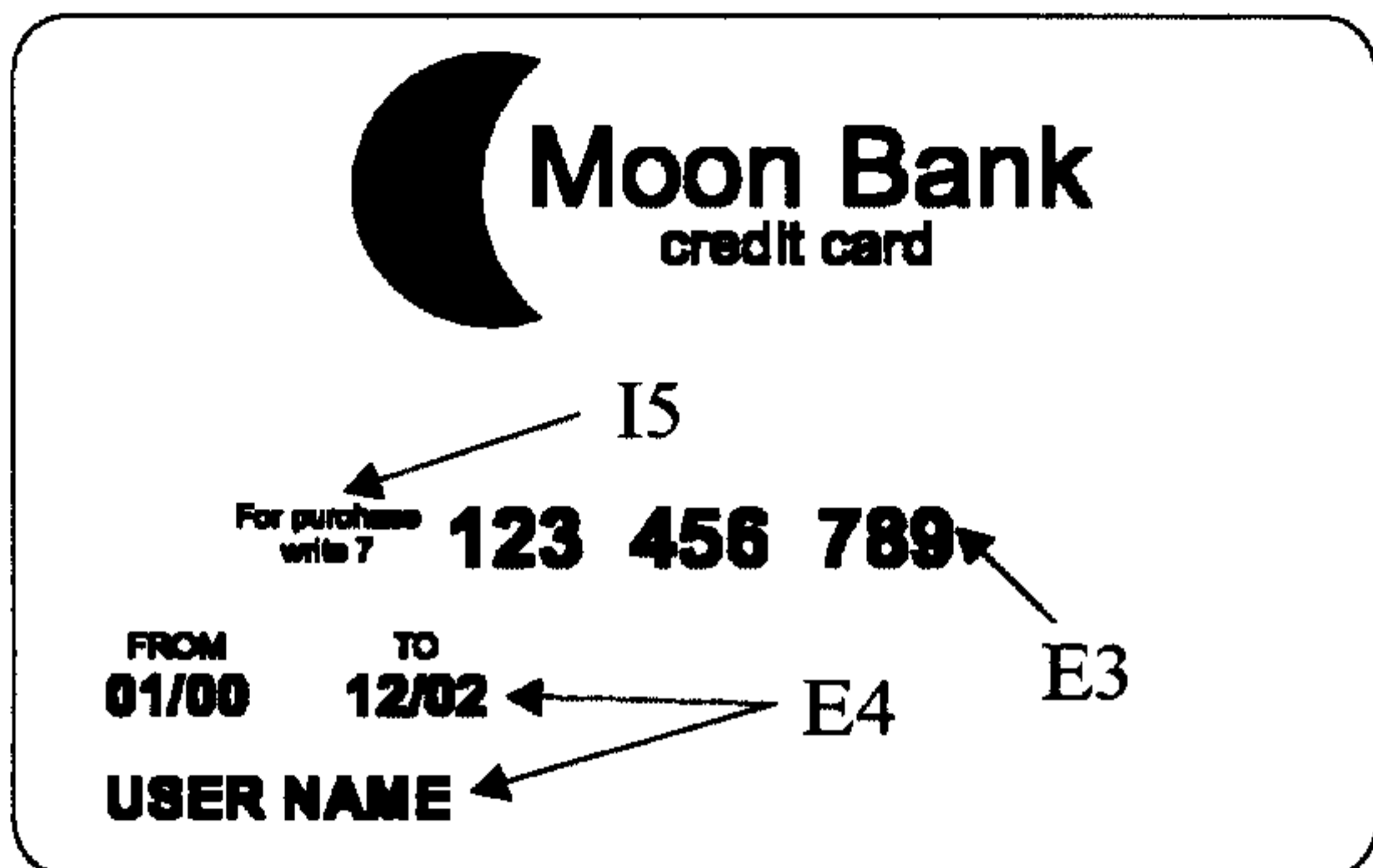


Fig. 7

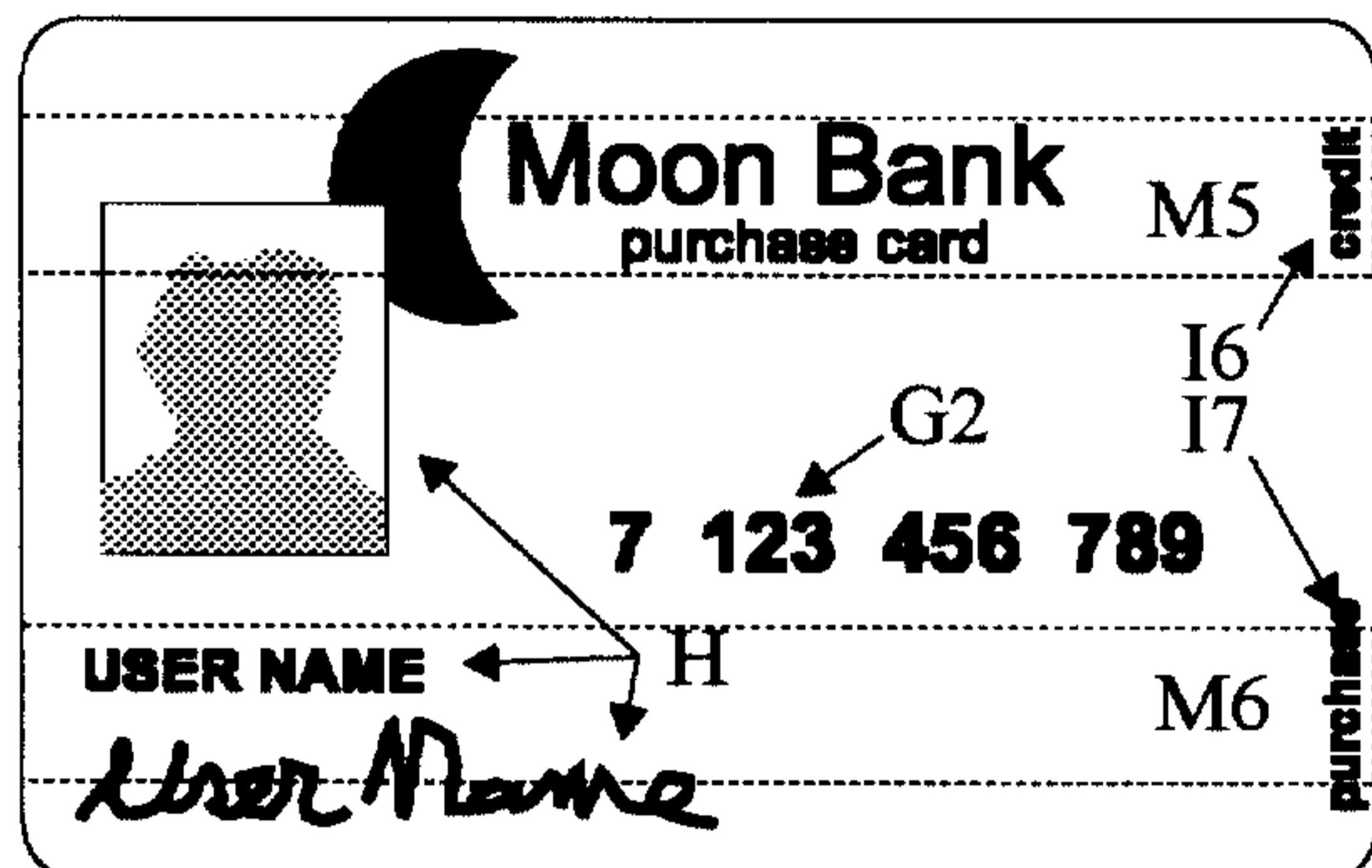


Fig. 8

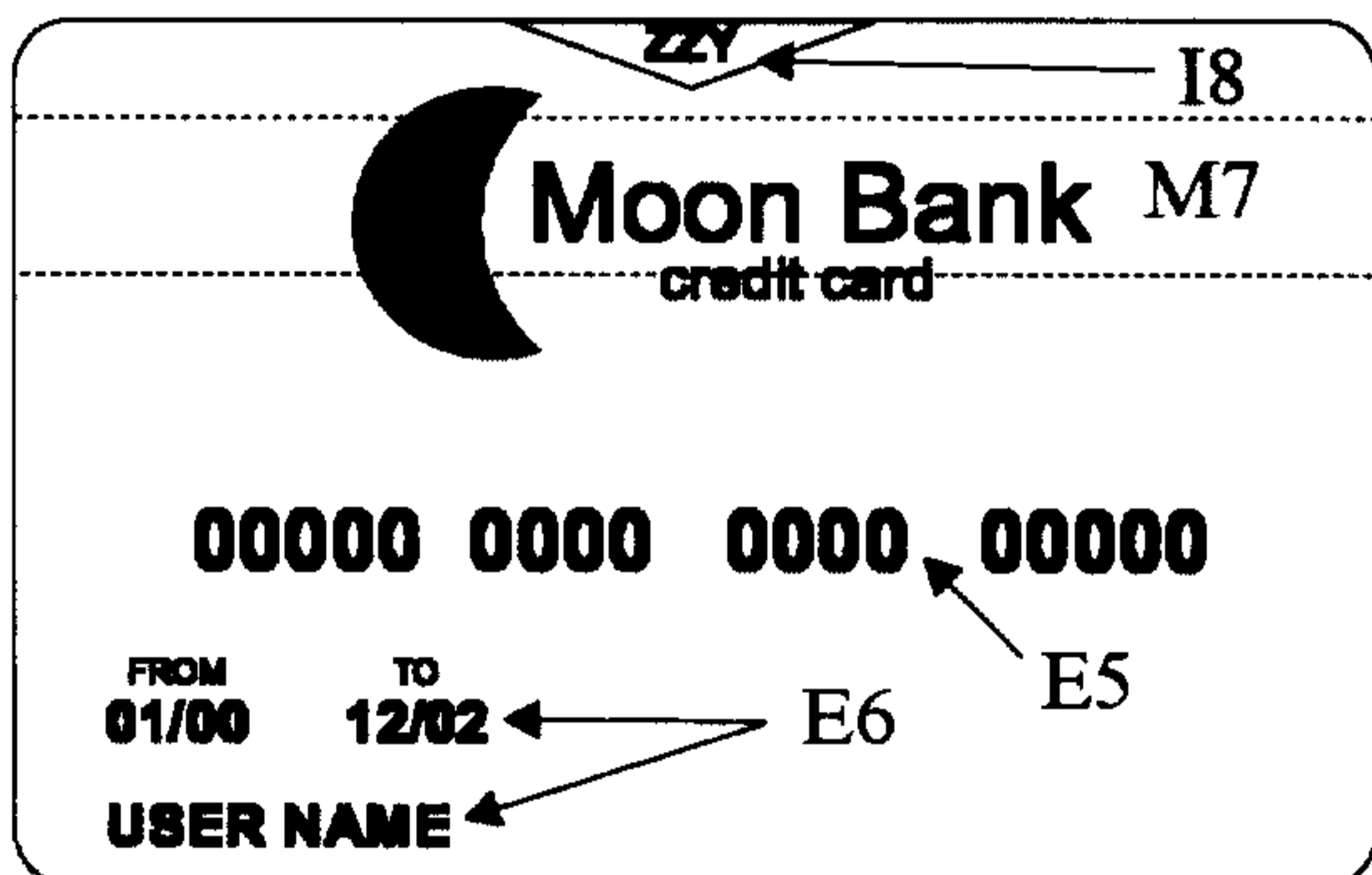


Fig. 9

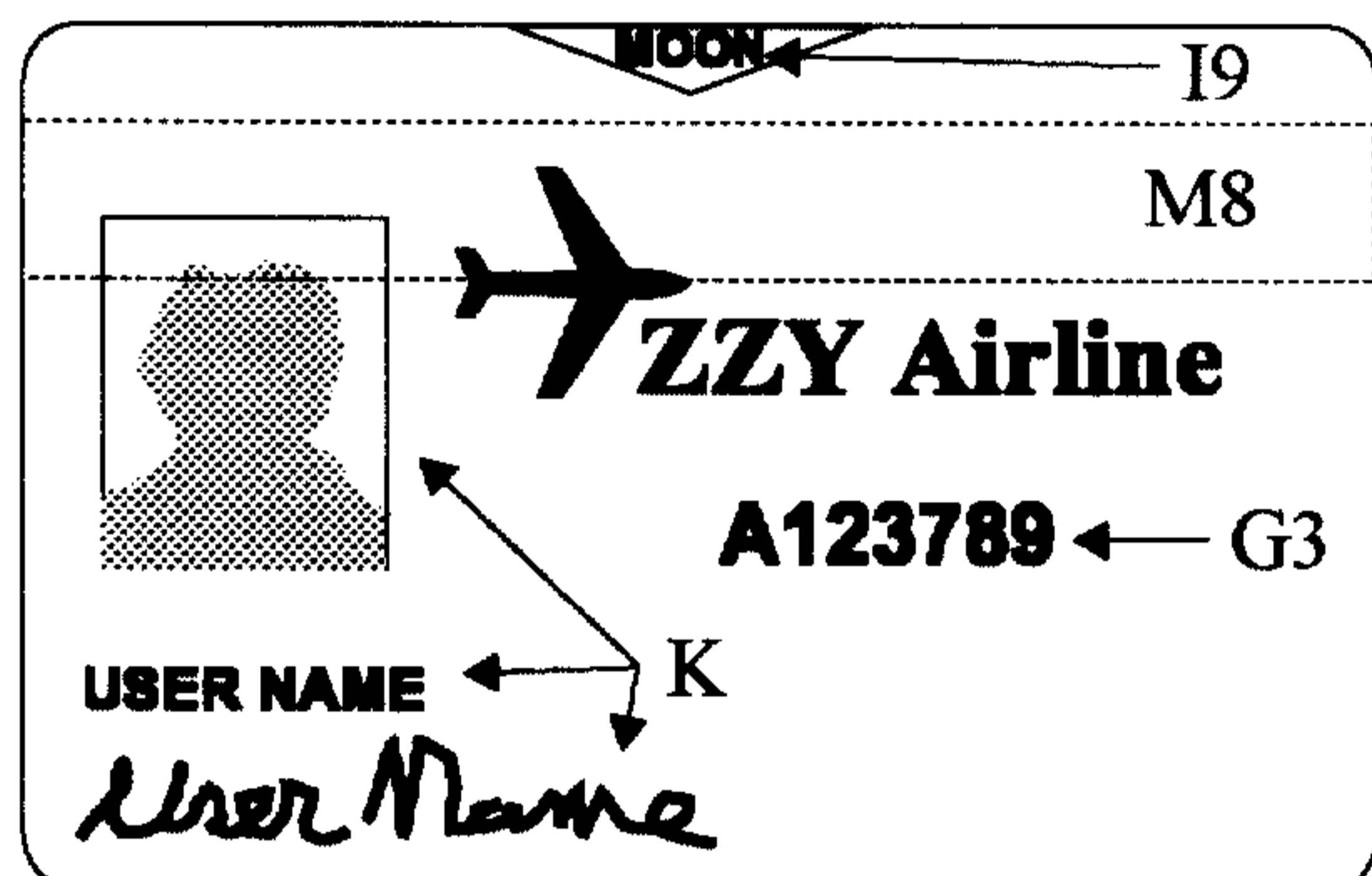


Fig. 10

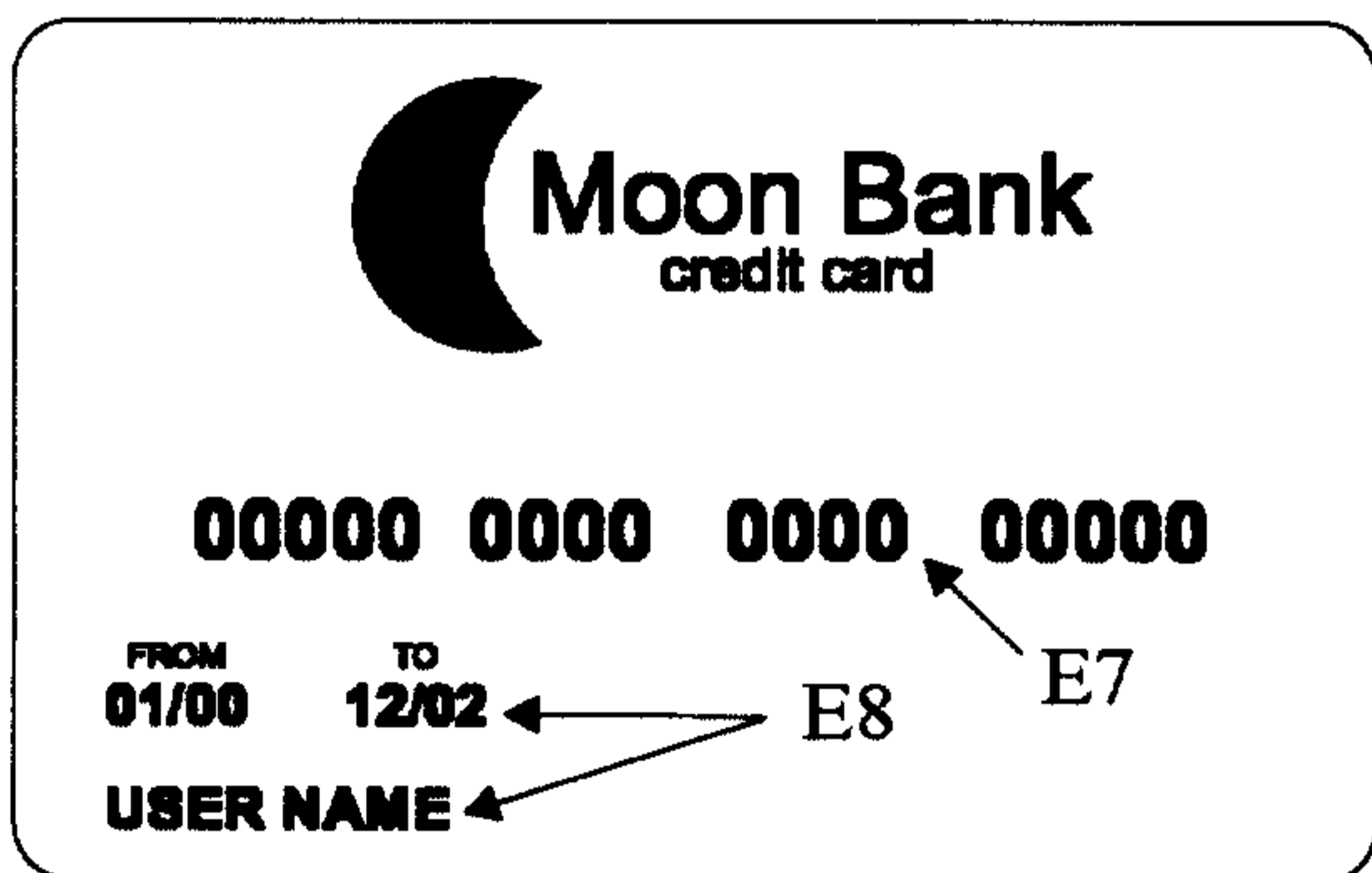


Fig. 11

