(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 4 494 514 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
22.01.2025 Bulletin 2025/04

(21) Application number: **24185638.4**

(22) Date of filing: **01.07.2024**

(51) International Patent Classification (IPC):
A45C 11/18 *(2006.01)*

(52) Cooperative Patent Classification (CPC):
A45C 11/182

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
GE KH MA MD TN

(30) Priority: **18.07.2023 IT 202300014982**

(71) Applicant: **Damaschelli, Cristoforo**
93012 Gela (CL) (IT)

(72) Inventor: **Damaschelli, Cristoforo**
93012 Gela (CL) (IT)

(74) Representative: **Fiammenghi, Eva et al**
PRAXI Intellectual Property S.p.A.
Via Leonida Bissolati, 20
00187 Roma (RM) (IT)

(54) **CARD HOLDER**

(57) Card holder (100) adapted to house at least a card (1) in a case (101) in which a U-shaped frame (110) is inserted with a first and a second rail (111') and (111") and a bar (112), at least a lever (120) placed on said frame (110) adapted to have a protruding end (121) outside of said case (101) and an arm (122) with one or more cards (1) inside said case (101); said card holder (100) characterized in that it further comprises:

- a chamfer (113) on said first rail (111'), adapted to facilitate the insertion of said cards (1);
- a block (140) placed on said second rail (111") adapted to prevent the cards (1) from exiting from the case (101);
- tabs (150) adapted to provide friction and prevent a sudden exit of said cards (1) from the case (101) when the lever (120) is pressed.

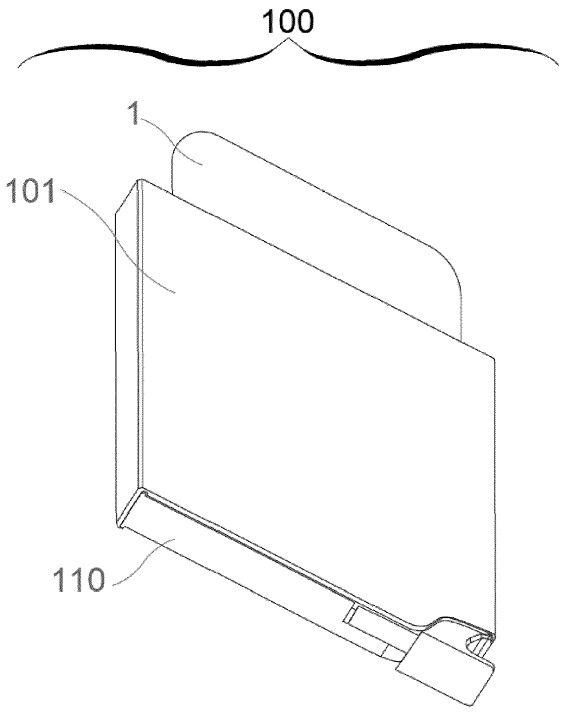

Fig. 1

EP 4 494 514 A1

Description

Field of the invention

[0001] The invention relates to the field of wallets and card holders and more specifically provides a compact rigid card holder that allows an easy extraction and insertion of credit cards, membership cards, documents and/or other cards preferably in the ISO 7810 and ISO 7813 format.

Prior art

[0002] Credit cards, membership cards, documents, business cards are all elements which can be used in everyday life and which it is best to always carry. These cards are often bulky when placed in wallets together with coins and banknotes. Card holders have therefore been created, whether they are rigid (made of plastic, metal and/or even wood) or flexible (made for example of leather and/or fabric) which allow carrying a certain number of cards and take up limited space.

[0003] As regards rigid card holders, there are many inventions which have provided various types of solutions for the creation of increasingly comfortable products suited to users' needs.

[0004] An example is the subject of patent application US2022312918A1 of A. BRYANT and P.E.K. BRYANT. The invention describes a wallet which can be assembled which includes an outer body, rails attached thereto and accessories which can be attached and detached to the body through the rails. The wallet also includes a lever which allows making the previously inserted cards exit from the body.

[0005] However, the invention, like many other similar inventions, has the problem of not having special retaining elements which mechanically prevent (and not only by friction) the cards contained inside the product from falling outside the product itself when subjected to an impact, vibrations, repeated actions such as those generated by a person's steps. The same problem characterizes, for example, the invention in application CN210124393U by G. GAN. Another technical problem lies in the structure of many card holders available on the market; in fact, they are assembled by means of welding, rivets or pressure interlocking, all systems which do not allow the disassembly and reassembly of the credit card holder in the event of a malfunction of one of the components of the structure, thus forcing the end user to replace the entire product.

[0006] Other examples such as patent applications US7918335B1 by M. KITCHEN and FR2811522A3 by J. MONVOISIN include elements or even a particular type of assembly such as to prevent the cards from exiting due to accelerations or stresses on the card holder; however, like the other products on the market, they require carrying out manual operations (such as pressing a lever, opening a button, opening a door) to be able to insert one or more cards inside a special housing.

[0007] The object of the present invention is to provide a rigid and compact card holder which solves the aforementioned technical problems, avoiding:

- the involuntary exit of cards or documents from the card holder;
- the uncontrolled expulsion (with excessive force) of credit cards or documents from the card holder even when there is only one card or in any case their number is less than the maximum number of cards which can be inserted inside the card holder;
- carrying out manual operations before inserting one or more cards inside the card holder.

[0008] The advantages offered by the present invention will be clearer in light of the detailed descriptions which follow.

Description of the invention

[0009] According to the present invention, a card holder is created which is adapted to house at least a card, the word card meaning a credit card, a membership card, a personal document, business cards and/or other rectangular cards preferably of a format compliant with ISO 7810 - ISO 7813. The card holder comprises a case made of metal, plastic and/or other rigid material, i.e., such as to be self-supporting and to withstand external stresses proportional to its thickness without irreversibly deforming, having a rectangular tubular shape with two openings inside which a U-shaped frame is inserted. At least a lever is placed on the frame, which has an end protruding outside of said case and an arm with one or more cards inside said case. Said lever assumes an initial (or rest) position in which said arm is in contact with the frame and does not exert a thrust on any card, a final position in which said arm, through the pressure of said protruding end, moves away from the frame, rotating and pushing said cards outside of said case, a plurality of intermediate positions between said initial position and said final position in which said arm exerts an increasing thrust on said cards to make them exit from said case. The lever is always returned to its initial position thanks to a spring.

[0010] The card holder of the present invention is characterized by having:

- a chamfer on a first rail of said triangular-shaped frame (i.e., adapted to ensure that the first rail has a thinner part facing the free end and thus towards the opening of the case, and a thicker part facing the inside of the case) with an extension equal to at least 20% of the length of said first rail, adapted to facilitate the insertion of said cards;
- a block placed at the free end, i.e., at the end which faces the direction of entry and exit of the cards in the

case, of a second rail with a protrusion facing, in a rest position, the inside of said case preventing said cards from exiting. Said block is constrained to said second rail by means of a pin which allows its rotation by rotating said protrusion towards the outside of said case and by means of an elastic element which returns said block to said rest position by elastic return. The block is rotated towards the outside of said case by one or more cards which are inserted in said card holder by manually pushing them against said chamfer of said first rail and which push against said protrusion on the second rail;

- said tabs made of flexible plastic material, preferably of rubber, placed on said first rail and said second rail facing the inside of said case and in contact with the cards to provide friction and prevent a sudden exit thereof due to the pressure of the protruding end of the lever.

[0011] The advantages offered by the present invention are evident in the light of the description presented thus far and will be even clearer thanks to the attached figures and the related detailed description.

Description of the figures

[0012] The invention will be described hereinafter in at least a preferred embodiment by way of non-limiting example with the aid of the appended figures, in which:

- FIGURE 1 shows a bottom axonometric view of the card holder 100 according to the present invention;
- FIGURE 2 shows a bottom axonometric view of the card holder 100 with a frame 110 partially extracted from a case 101 according to the present invention;
- FIGURE 3 shows a view of a frame 110 according to the present invention;
- FIGURE 4 shows a view of a frame 110 at the moment in which a card 1 is inserted therein;
- FIGURE 5 shows a view of a frame 110 with a card 1 therein;
- FIGURE 6 shows a view of a frame 110 at the moment in which a card 1 is expelled from its interior through the operation of a lever 120;
- FIGURE 7 shows a view of a frame 110 with a lever 120 operated;
- FIGURE 8 shows a view of a frame 110 and a detail of a block 140;
- FIGURE 9 shows an exploded axonometric view of a card holder 100 with a case 101, a frame 110 and screws 160 according to the present invention;
- FIGURE 10 shows a frame 110 of a card holder 100 with six levers 120.

Detailed description of the invention

[0013] The invention describes a card holder 100 which allows cards 1 to be inserted therein without pressing buttons, levers, and in general without the need to perform further actions beyond pushing a card 1 therein. The card holder 100 of the present invention also allows one or more cards 1 to be taken from therein, avoiding sudden exits thereof thanks to the presence of tabs 150, preferably made of rubber, which keep the cards 1 inside the card holder by friction. Furthermore, the card holder 100 of the present invention allows the problem linked to cards 1 falling from therein to be overcome. In fact, even if the card holder 100 is shaken, it does not allow the cards 1 to fall from therein, as it is provided with a special block 140 made of plastic and/or metallic material. The card holder 100 also includes an assembly with screws 160 which can be screwed and unscrewed from the outside with a common screwdriver, thus allowing a user to be able to carry out repairs and/or replacements of internal parts avoiding throwing away the entire card holder 100 in the event of malfunction.

[0014] Some embodiments of the card holder 100 according to the present invention are also provided with a lever 120 for each card 1 inserted therein, thereby the user can directly press the lever 120 of interest to take a single card 1, thus avoiding making all the cards 1 exit from the card holder 100 and then having to look for the one of interest.

[0015] The advantages just described will be even more apparent in light of the descriptions which follow.

[0016] The present invention will now be illustrated by way of a purely non-limiting or binding example, resorting to the figures which illustrate some embodiments with respect to the present inventive concept.

[0017] FIG. 1 shows a bottom axonometric view of a card holder 100 according to the present invention. In FIG. 1 as in the following description, the embodiment of the present invention currently considered the best is illustrated.

[0018] The invention describes a card holder 100 adapted to house at least a card 1, meaning by card a credit card, a membership card, a personal document, business cards and/or another rectangular card preferably of a format compliant with ISO 7810 and ISO 7813 (which provides, for example, dimensional limits for cards equal to 54 mm wide and 86 mm long). The card holder 100 according to the present invention comprises:

- a case 101 of metallic, plastic and/or other rigid material, or such as to be self-supporting and to withstand external stresses proportional to its thickness without irreversibly deforming, having a rectangular tubular shape with two openings 102 (one of which, the lower one, is shown in FIG. 2);
- a U-shaped frame 110 inserted in said case 101 with a first and second rail 111' and 111" parallel to the direction of greatest length of the case 101 and a bar 112 adapted to occlude an opening 102. In FIG. 2 the frame 110 is shown partially extracted from said case 101 for the sole purpose of a clearer depiction of the card holder 100. In the final assembly configuration

the frame 110 is inserted entirely inside the case 101 with said bar 112 occluding the opening 102 shown in FIG. 2;

- at least a lever 120 placed on said frame 110 adapted to have a protruding end 121 outside of said case 101 and an arm 122 with one or more cards 1 inside said case 101.

[0019] FIG. 3 shows a frame 110 in which it is possible to observe how it comprises:

- a chamfer 113 on said first rail 111' of said triangular-shaped frame 110 with an extension equal to at least 20% of the length of said first rail 111', adapted to facilitate the insertion of said cards 1;
- a block 140 placed at the free end (i.e., at the end opposite that connected to the bar 112) of said second rail 111" with a projection 141 facing, in a rest position, the inside of said case 101 preventing said cards 1 from exiting. Said block 140 is shown in detail in FIG. 8, in which it is possible to observe how it is constrained to said second rail 111" by means of a pin which allows the rotation thereof, rotating said protrusion 141 towards the outside of said case 101 and by means of an elastic element 142 (such as a spring) which returns said block to said rest position by elastic return. As shown in FIG. 4, said block 140 is rotated towards the outside of said case 101 by one or more cards 1 which are inserted in said card holder 100 (the arrow shown downwards on said card 1 is to be considered representative of the movement which the card 1 is carrying out). The card 1 which is manually pushed against said chamfer 113 of said first rail 111' also pushes against the protrusion 141 of the block 140 on the second rail 111", causing the block 140 to rotate. Once the block 140 rotates (so that the protrusion 141 moves towards the outside of the case 101, or, as shown in FIG. 4, upwards), the card 1 can be inserted in the frame 110 and thus in the case 101. FIG. 5 shows a card 1 inserted inside the frame 110, the case 101 is not shown for the sole purpose of a clearer depiction of how the card 1 and the frame 110 appear therein. Furthermore, FIG. 5 shows that which is defined here as the initial position of the lever 120 in which the arm 122 is in contact with said bar 112 and does not exert any pressure on any card 1;
- tabs 150 made of flexible plastic material, preferably rubber, placed on said first rail 111' and said second rail 111" facing the inside of said case 101 and in contact with the cards 1 to provide friction and prevent a sudden exit of said cards 1 from the case 101 when pressing the protruding end 121 of the lever 120.

[0020] FIG. 6 shows the instant in which said lever 120 is operated by pressing said protruding end 121 and thus causing said arm 122 to move. The dashed arrows shown in FIG. 6 are to be understood as representative of the movement which, when carried out at said protruding end 121 (for example by pressing it with a finger), is transmitted to the arm 122, and of how the upward movement of the card 1 generates an upward rotation of said block 140. The arm 122, which moves by rotating around the pin which couples the lever 120 to the bar 112, pushes the card 1 out of the case 101 (not depicted only for the purpose of clarity) and therefore, in FIG. 6, upwards. The movement of the card 1 causes it, when pushed upwards (or rather, out of the case 101) to exert pressure against the protrusion 141 of the block 140, causing it to rotate (as shown by the dotted arc arrow) and thus allowing the card 1 itself to exit from said frame 110 and said case 101 (following the direction of the arrow depicted at the top on the card 1). FIG. 7 shows the same condition presented in FIG. 6 but without the card 1 to show how, by elastic return, said block 140 closes inwards following the rotation of the dotted arc arrow shown on block 140 in FIG. 7. The final position (shown in FIGS. 6 and 7) of the lever 120 is the one in which said arm 122, through the pressure of said protruding end 121, has moved away from said bar 112, pushing said cards 1 outside of said case 101. A plurality of intermediate positions are those which the lever 120 assumes between said initial position and said final position in which said arm 122 exerts an increasing thrust on said cards 1 to make them exit from said case 101.

[0021] As shown in FIGS. 5, 6 and 7, said lever 120 is further connected to said frame 110 by means of a spring 130 which returns, by elastic return, said arm 122 close to said bar 112 every time the lever 120 is in an intermediate position or in said final position.

[0022] FIG. 9 shows a case 101, a frame 110, shown partially extracted from said case 101 for the sole purpose of a clearer graphic depiction, and six screws 160 used for their union. The screws 160 are screwable from the outside of said case 101 at said first rail 111' and said second rail 111".

[0023] In some embodiments of the present invention, the lever 120 is a step lever in which each step pushes a card 1. Said steps push said cards 1 to different heights, in a staggered arrangement, i.e., ensuring that the ends of the cards 1 which protrudes outside the case 101 are not aligned but are staggered from each other to facilitate viewing or extraction.

[0024] In other embodiments of the present invention, as for example shown in FIG. 10, the card holder 100 comprises a lever 120 for each card 1 insertable inside said case 101. FIG. 10, for greater depiction clarity does not show said case 101 but shows a frame 110 with six levers 120 each corresponding to a card 1. In the example shown in FIG. 10, specifically, pressure is applied on the protruding end 121 of the second lever from the left, thus allowing the extraction (upwards as shown by the arrow on the card 1) of the relative card 1. Said levers 120 each have a protruding end 121, an arm 122 and a spring

130. Said protruding ends 121 are of a different color to allow a user to recognize the lever 120 to be pressed to make the desired card 1 exit from said case 101 (for example a user can choose to insert their identity document at a light blue lever 120 and press only that to remove it).

[0025] In some embodiments of the invention, the case 101 is made in part or completely with transparent plastic material to allow the first cards 1 to be seen from each side therein.

[0026] In some embodiments of the invention, the case 101 comprises an RFID and NFC shielding circuit which is believed to be known to a person skilled in the art and therefore will not be described in detail.

[0027] Finally, it is clear that modifications, additions or variations that are obvious to a person skilled in the art can be made to the invention described so far, without thereby departing from the scope of protection provided by the attached claims.

Claims

1. Card holder (100) suitable for housing at least a card (1) and comprising:

- a case (101) having a rectangular tubular shape with two openings (102);
- a U-shaped frame (110) inserted in said box (101) with a first and second rail (111') and (111") parallel to the direction of greatest length of the case (101) and a bar (112) adapted to occlude an opening (102);
- at least a lever (120) placed on said frame (110) able to have a protruding end (121) outside of said case (101) and an arm (122) with one or more card (1) inside of said case (101);
- said lever (120) further connected to said frame (110) by means of a spring (130) which returns, by elastic return, said arm (122) in the vicinity of said bar (112);

said card holder (100) **characterized in that** it further comprises:

- a chamfer (113) on said first rail (111') of said triangular-shaped frame (110) with an extension equal to at least 20% of the length of said first rail (111'), capable of facilitating the insertion of said cards (1);
- a block (140) placed at the free end of said second rail (111") with a protrusion (141) facing, in a rest position, towards the inside of said case (101) preventing said cards (1) to go out; said block (140) adapted to be constrained to said second rail (111") by means of a pin which allows its rotation by rotating said protrusion (141) towards the outside of said case (101) and by means of an elastic element (142) which returns said block to said rest position by elastic return; said block (140) able to be rotated towards the outside of said case (101) by one or more cards (1) which are inserted in said card holder (100) by manually pushing them against said chamfer (113) of said first rail (111') and pushing against said protrusion (141) on the second rail (111");
- tabs (150) made of flexible plastic material, placed on said first rail (111') and said second rail (111") facing the inside of said case (101) and in contact with the cards (1) for provide friction and prevent a sudden exit of said cards (1) from the case (101) during pressure of the protruding end (121) of the lever (120).

2. Card holder (100), according to the preceding claim 1, **characterized in that** said frame (110) is connected to said case (101) through at least a screw (160) which can be screwed and unscrewed from the outside of said case (101) on said first rail (111') and/or said second rail (111").

3. Card holder (100), according to the preceding claims 1 and 2, **characterized in that** it comprises a lever (120) and a step lever in which each step pushes a card (1); said steps adapted to push said cards (1) to different heights, in staggered arrangement, to allow viewing and extraction of one or more tiles from said case (101).

4. Card holder (100), according to any one of the preceding claims, **characterized in that** it comprises a lever (120) for each card (1) which can be inserted inside said case (101); said levers (120) adapted to each have a projecting end (121), an arm (122) and a spring (130); said protruding ends (121) being of a different color to allow a user to recognize the lever (120) to be pressed to make the desired card (1) come out of said case (101).

5. Card holder (100), according to any one of the preceding claims, **characterized in that** said case (101) is made in part or completely with transparent plastic material to allow the first cards (1) to be seen from each side inside it.

6. Card holder (100), according to any one of the preceding claims, **characterized in that** said case (101) comprises an RFID and NFC shielding circuit.

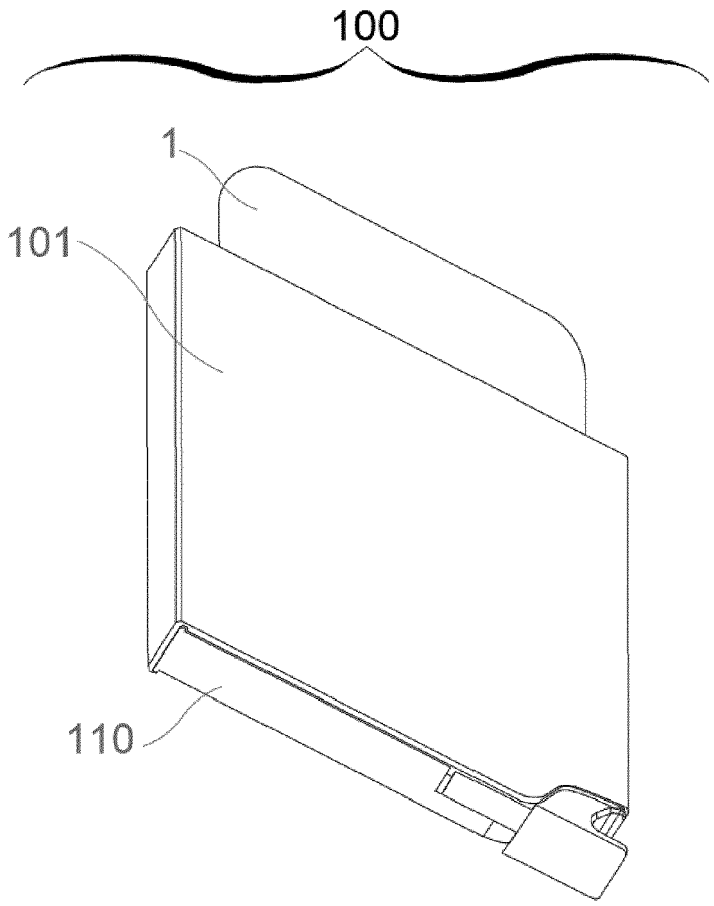

Fig. 1

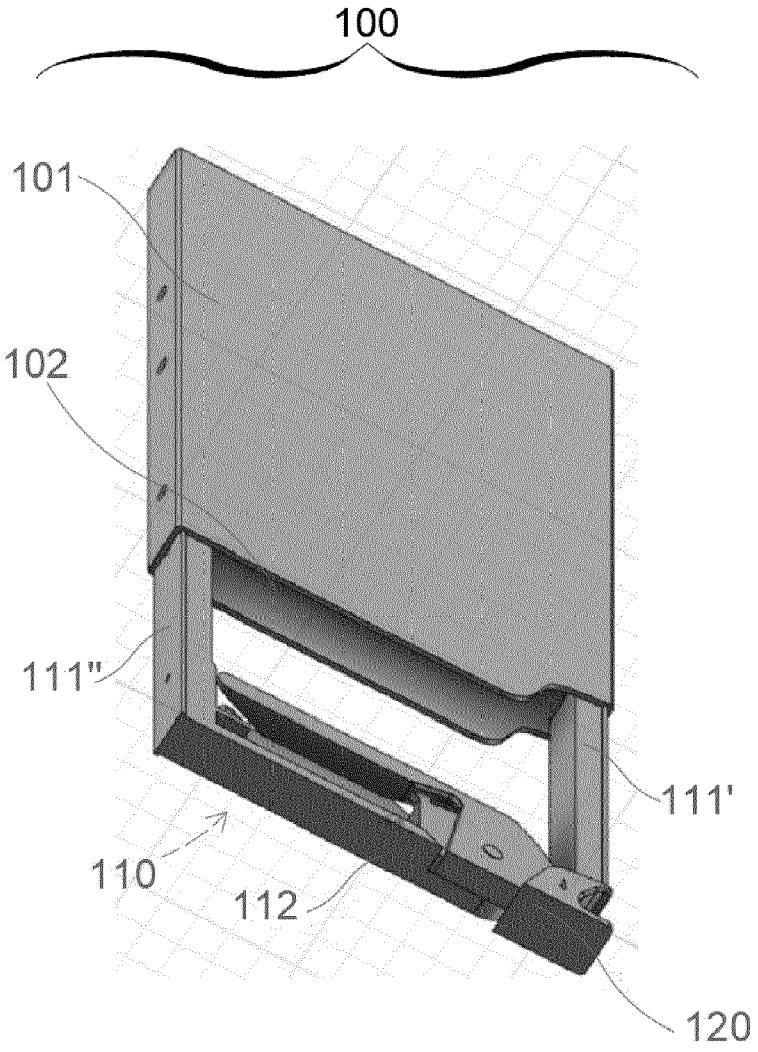

Fig. 2

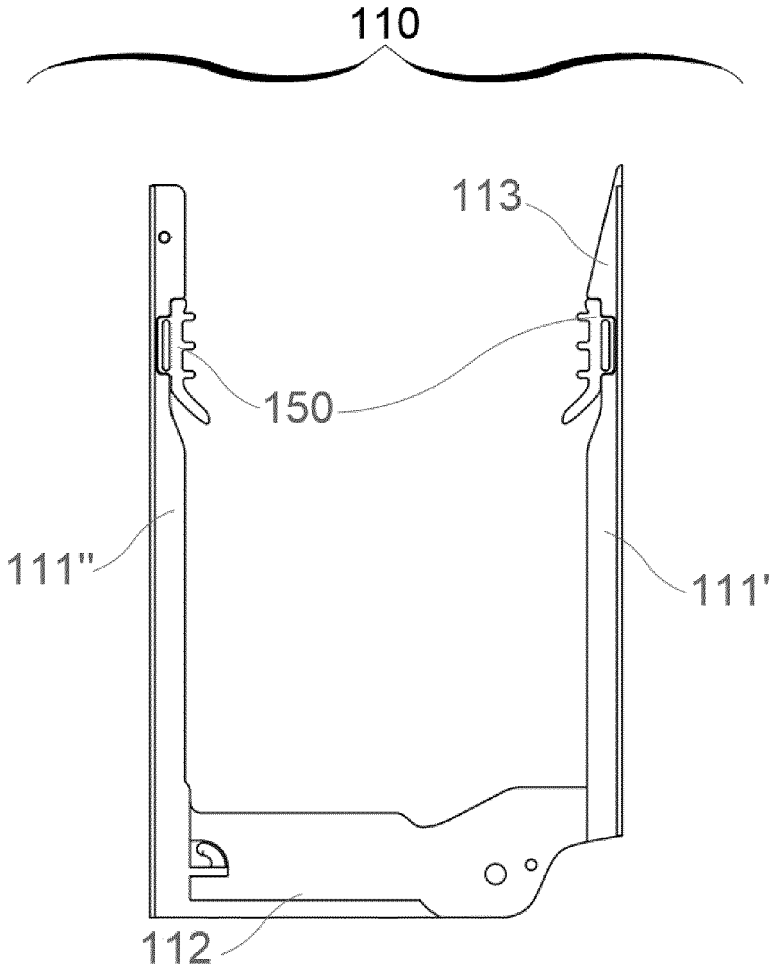

Fig. 3

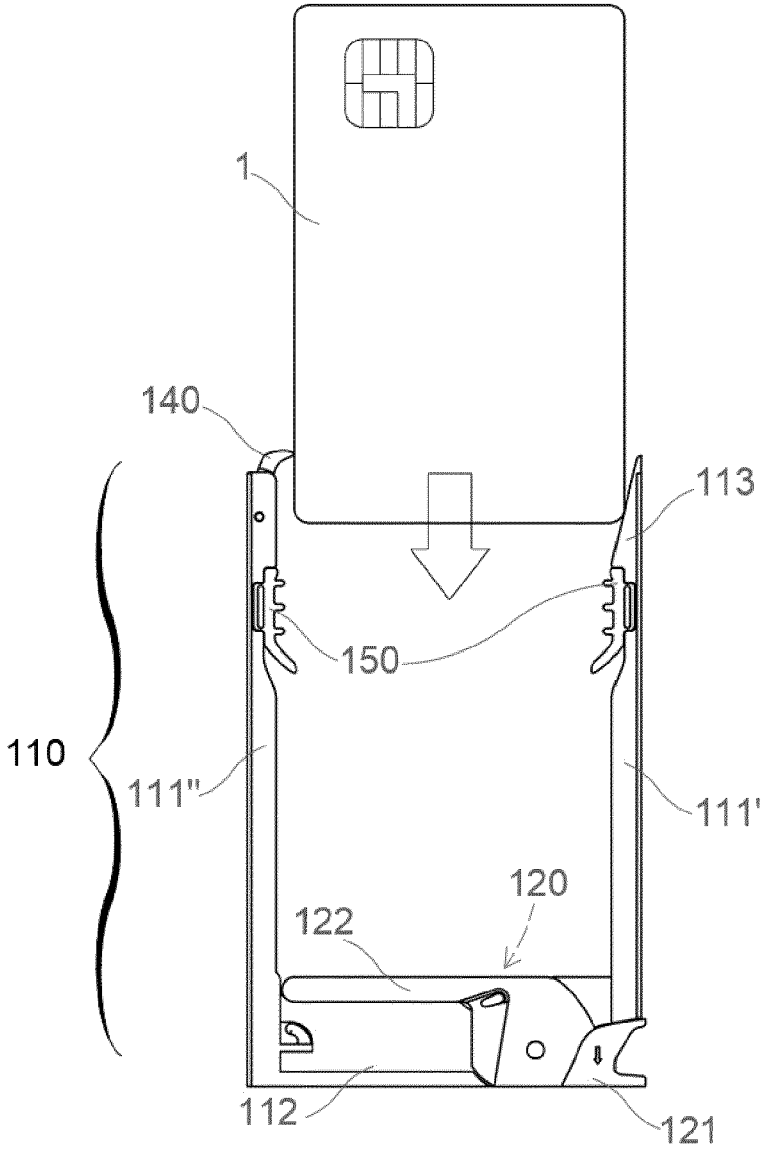

Fig. 4

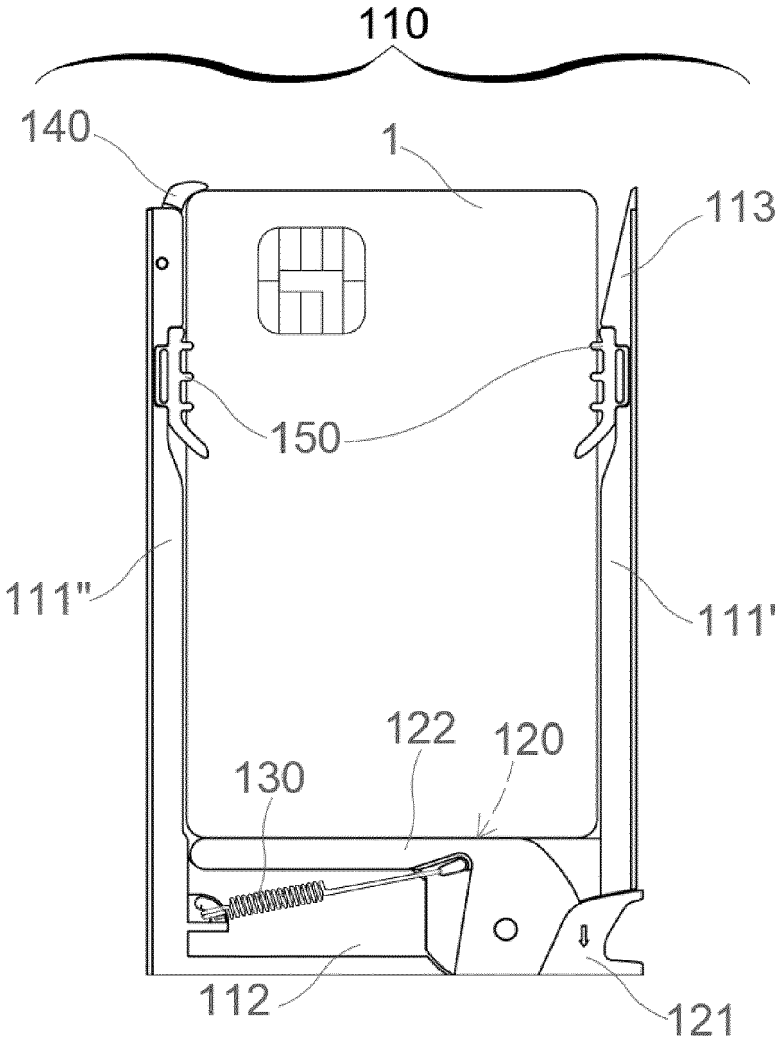

Fig. 5

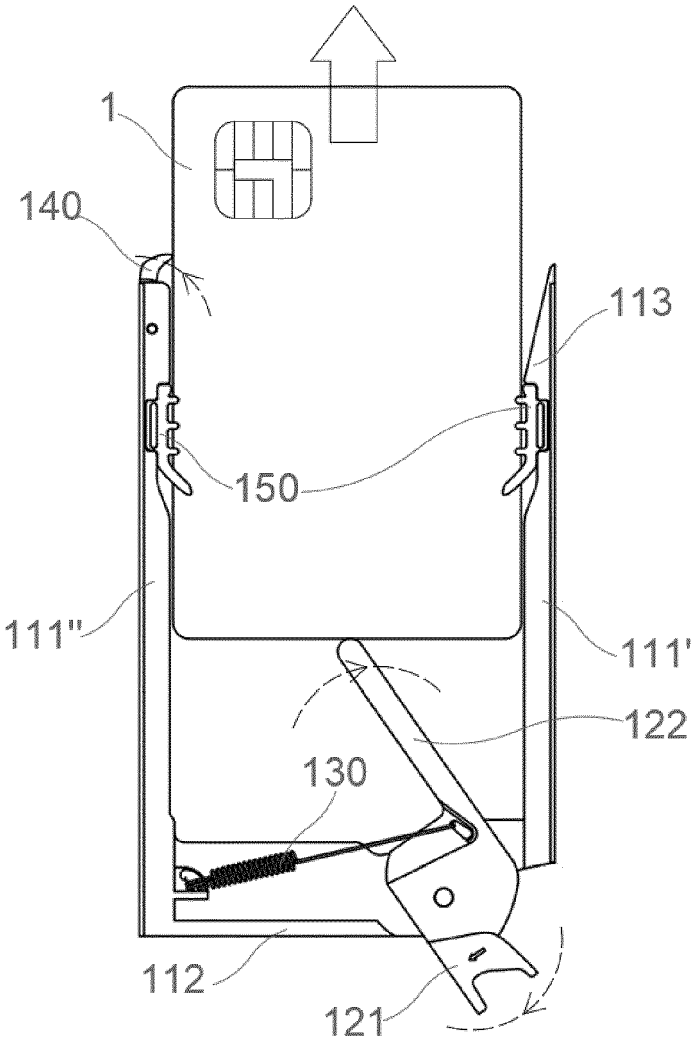

Fig. 6

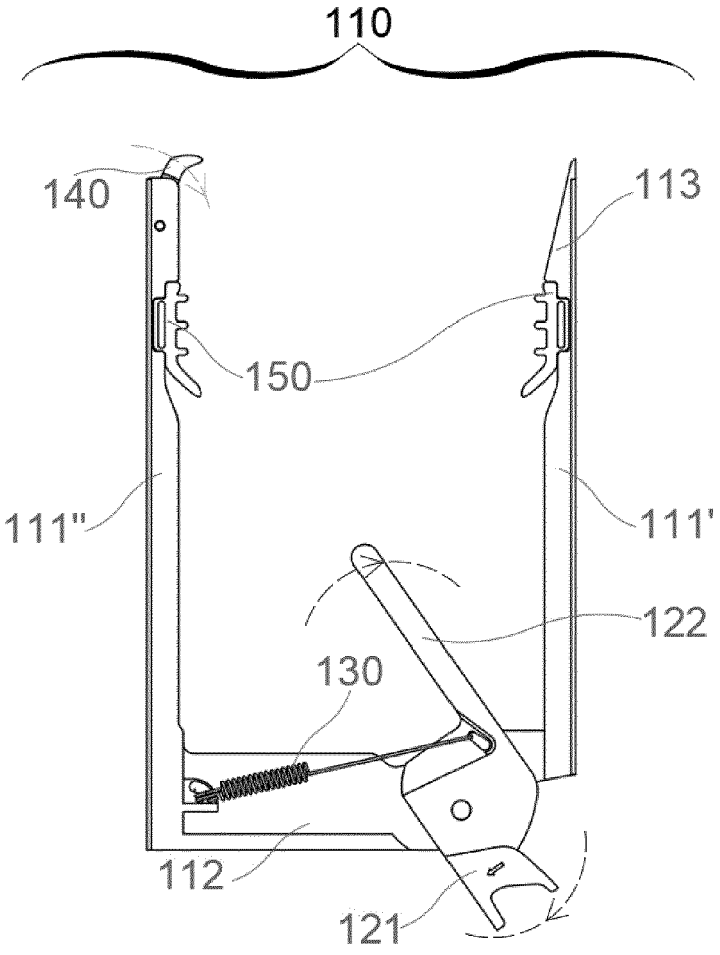

Fig. 7

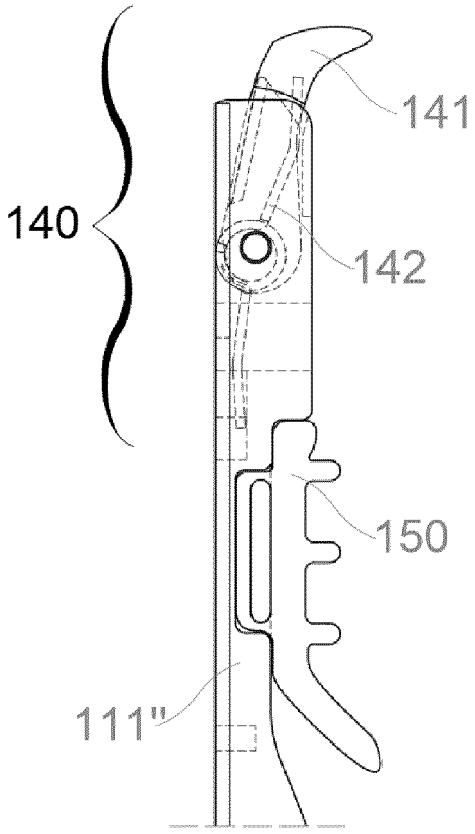

Fig. 8

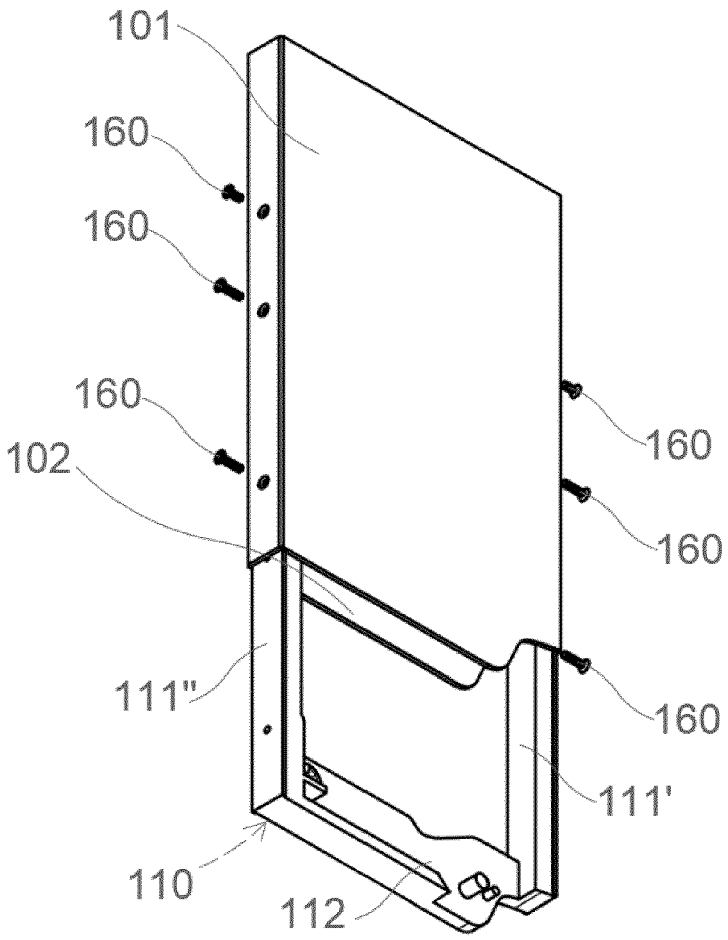

Fig. 9

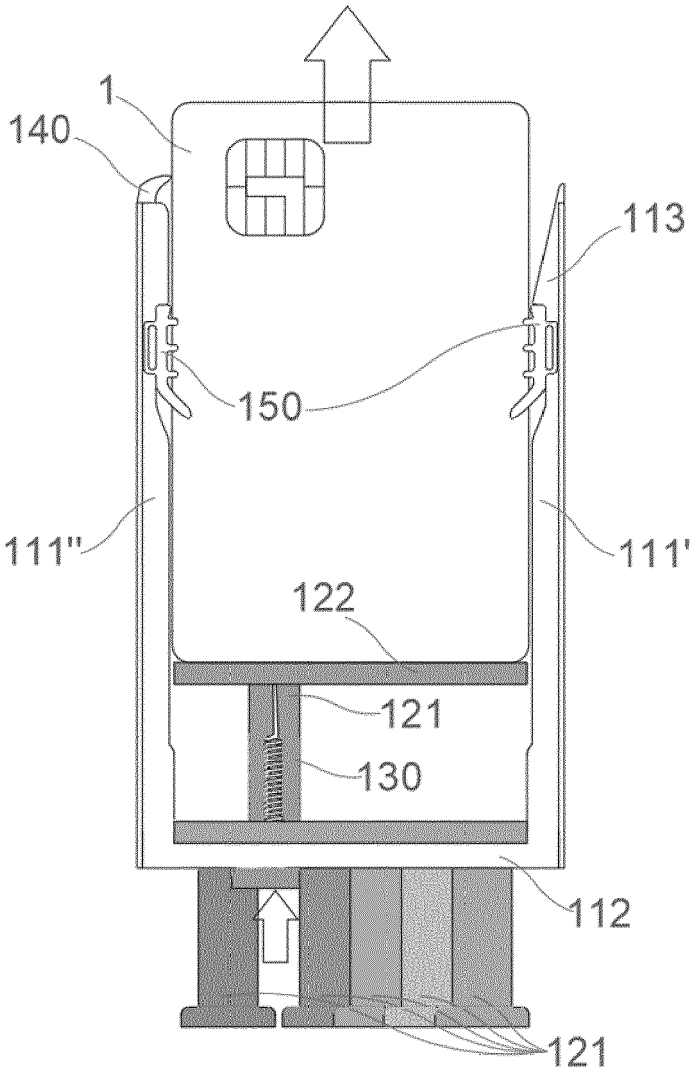

Fig. 10

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 24 18 5638

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	CH 719 243 B1 (ALLALEEN GMBH [CH]) 30 June 2023 (2023-06-30) * paragraph [0010] - paragraph [0023]; figures 1-12 *	1-6	INV. A45C11/18
A	EP 2 322 051 A1 (MURPHY GERALD P [US]) 18 May 2011 (2011-05-18) * paragraph [0020] - paragraph [0036]; figures 1-5 *	1-6	
A	US 9 681 721 B2 (MOON ERIK P [US]; DECADENT MINIMALIST INC [US]) 20 June 2017 (2017-06-20) * column 2, line 55 - column 4, line 53; figures 1A-1D *	1-6	
			TECHNICAL FIELDS SEARCHED (IPC) A45C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	7 November 2024	Ehrsam, Sabine

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 24 18 5638

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

07-11-2024

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CH 719243 B1	30-06-2023	NONE	
EP 2322051 A1	18-05-2011	NONE	
US 9681721 B2	20-06-2017	CA 2994398 A1	18-02-2016
		CN 106793853 A	31-05-2017
		EP 3179879 A1	21-06-2017
		JP 6609080 B2	20-11-2019
		JP 2018503406 A	08-02-2018
		JP 2019141623 A	29-08-2019
		KR 20170093778 A	16-08-2017
		US D809792 S	13-02-2018
		US 2016045006 A1	18-02-2016
		US 2017280846 A1	05-10-2017
		WO 2016025622 A1	18-02-2016

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 2022312918 A1, A. BRYANT and P.E.K. BRYANT **[0004]**
- CN 210124393 U, G. GAN **[0005]**
- US 7918335 B1, M. KITCHEN **[0006]**
- FR 2811522 A3, J. MONVOISIN **[0006]**