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(54) **PAPER PRODUCTS DISPENSER**

(57) A dispenser (1) for paper products, comprising at least one container (2), provided with an internal volume (3) and at least one opening (4) which allows access to said internal volume (3), and at least one drawer (5), housed in said internal volume (3), comprising at least one compartment (7) for housing paper products (P), and at least one window (6a) through which the user can manually pick up the paper products (P); the drawer (5) is

selectively removable through said opening (4), so as to allow for feeding/refilling paper products (P). The distributor (1) comprises magnetic retention means (13) of said drawer (5) inside said container (2) in use, as well as of retention of the compacting means (10) of paper products (P) at the rear end (8a) of the drawer (5), during refilling of the same paper products (P).

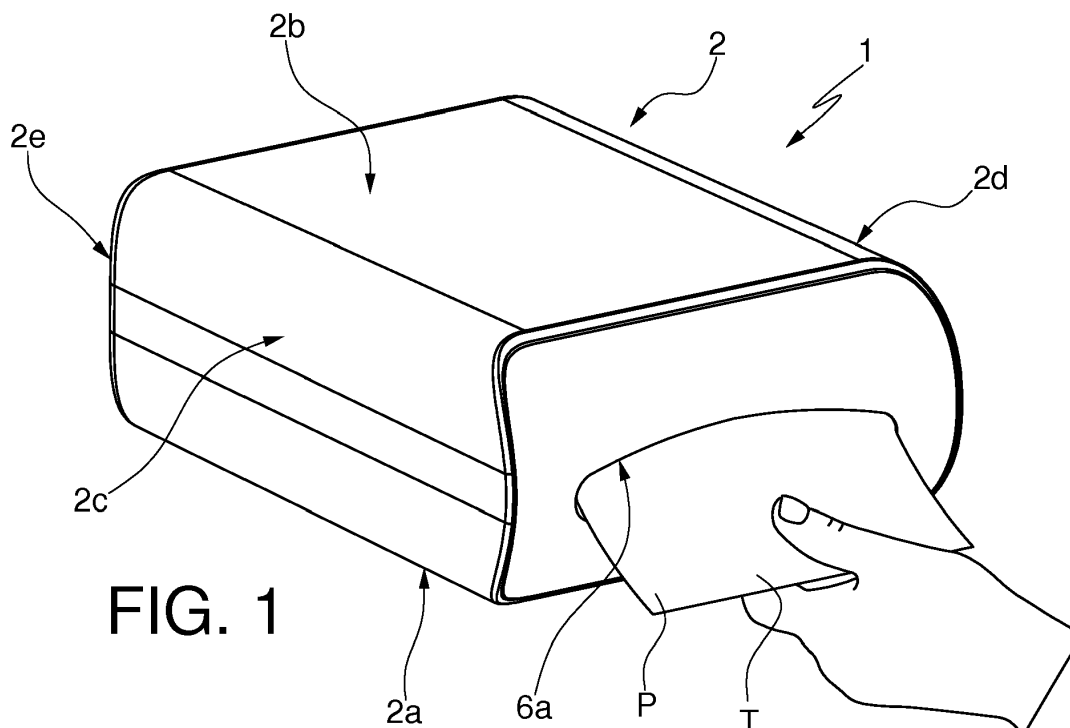


FIG. 1

Description

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention concerns to a paper products dispenser.

[0002] More specifically, the present invention concerns a dispenser of paper products such as napkins, tissues and the like.

BACKGROUND ART

[0003] There are various types of dispensers of paper products on the market, such as napkins, tissues and the like which are designed to be placed, for example, on tables, counters, furniture or other surfaces to allow such products to be freely picked up by users.

[0004] Normally a dispenser of the above-mentioned type comprises a container of a box-like shape, inside which is a compartment housing a pack of napkins or tissues, to be picked up one after the other in succession; picking up is done through a special window or slot which can be provided in various positions of the container, for example in the frontal position, or in the top position, or others.

[0005] The napkins or tissues are often arranged to be interleaved, i.e. each is folded and positioned in relation to the other so that when one product is picked up, it drags the leading end of the product immediately following it: the latter can thus be easily grabbed by the user.

[0006] In the event that the products are arranged interleaved, the end of the first product available for picking up protrudes from the aforementioned window.

[0007] Usually the container can be opened, to allow the paper products to be refilled inside the housing compartment.

[0008] There are various types of opening mechanisms of the aforesaid compartment, possibly associated with locks that can be opened with a special key.

[0009] A very common type of dispenser includes a container or box-like case, provided with a base for support on any surface (for example a table, a piece of furniture) and a front - or a side or top - opening.

[0010] In this opening a pull-out drawer is inserted, which includes the aforesaid compartment for housing paper products.

[0011] The drawer and the container can be coupled to each other by means of sliding guides.

[0012] The drawer can also comprise thrust means, usually driven by a spring, which allow the product pack to be kept constantly close to the pick-up opening, regardless of the number of products actually housed in the compartment.

[0013] This configuration of the dispenser is particularly convenient for refilling products, as it allows full access to the compartment once the drawer has been fully pulled out; the drawer can also be separated from the container, to facilitate replacement/maintenance opera-

tions.

[0014] In this type of dispenser, the container and the drawer are in some way linked to each other during normal use of the dispenser, mainly to prevent the drawer from accidentally opening with the risk of products coming out, as due to hygienic reasons, they should not come into contact with the outside before use.

[0015] The fixing of the drawer to the container can be achieved in various ways.

[0016] For example, in some known dispensers, the aforesaid fixing is provided by portions of the container and of the drawer which are interlocked or mutually engaged.

[0017] More in detail, such portions may comprise, for example, seats provided in the container in which respective raised portions of the drawer engage, shaped like pushbuttons; said raised portions are elastically flexible, so that to open the drawer the user must press the same portions with fingers, so as to disengage them from their respective seats and to release the two parts.

[0018] Often, for reasons of symmetry in the shape of the object, these mutually interlocking portions are provided on both sides or side walls of the dispenser, and therefore, to open the drawer the user must simultaneously press the two pushbuttons, and at the same time, cause the drawer to slide with respect to the container.

[0019] This is therefore a rather inconvenient opening operation, which becomes even more difficult if the compartment provided in the drawer is full, or almost completely full, of products.

[0020] This inconvenience is felt in particular when one same operator has to provide, in a short time, for the refilling of paper products in a given number of dispensers.

[0021] In dispenser types the fixing between the drawer and the container can be implemented, as mentioned, through a lock, which normally requires the use of a special key to be opened by the operator.

[0022] Also in this case, although there are no mutually interlocking parts to be manually unlocked/released, the drawer opening is not immediate, as a key must in any case be used, which may also be accidentally lost.

[0023] It should also be noted that nowadays there is a tendency to provide dispensers for paper products of the described type with an aesthetically pleasing appearance and/or conforming to certain style or design criteria, since they are items that are mainly integrated in given interior decoration settings.

[0024] As a consequence, given design requirements require the creation of items with mainly a plain and clean design: this requirement is often in contrast with the presence of external fixing/closing elements of various types.

OBJECTS OF THE INVENTION

[0025] The technical aim of the present invention is therefore to improve the state of the art in the field of paper products dispensers.

[0026] Within such technical aim, it is an object of the present invention to develop a dispenser which allows quicker and easier access to the compartment housing the paper products to be dispensed.

[0027] Another object of the present invention is to provide a dispenser that allows to retain the drawer, which comprises the compartment for housing paper products, safely inside the respective container, during its normal use.

[0028] A further object of the present invention is to provide a dispenser of paper products of simple, practical and intuitive use.

[0029] Yet another object of the present invention is to make a dispenser of paper products available which allows the above objects to be entirely fulfilled, albeit with a clean and regular exterior appearance and design.

[0030] This aim and these objects are achieved by the paper products dispenser according to the attached claim 1.

[0031] The dispenser comprises at least one container, provided with an internal volume and at least one opening which allows access to the internal volume, and at least one drawer, housed in the internal volume, comprising at least one compartment for housing paper products, and at least one window through which the user can manually pick up the paper products.

[0032] The drawer is selectively extractable through the container opening, so as to allow for feeding/refilling paper products as they are picked by users.

[0033] According to the invention, the dispenser comprises magnetic retention means of the drawer inside the container; these magnetic retention means, although safe and stable, are configured so as to allow easy and fast operation by the operator in charge of refilling of the products, even with one hand, so as to considerably reduce the time required to perform such operations.

[0034] These advantages cannot be achieved with the dispensers currently on the market. The proposed solution is, as will be seen, constructively very simple.

[0035] Dependent claims refer to preferred and advantageous embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0036] The features of the invention will be better understood by any man skilled in the art from the following description and accompanying drawings, provided by way of non-limiting example, wherein:

Figure 1 is an axonometric view of the paper products dispenser, according to the invention;

Figure 2 is an axonometric view of the same dispenser, with the drawer housing the paper products partially open;

Figure 3 is an exploded view of the same dispenser;

Figure 4 is a schematic view of the opening of the dispenser container;

Figure 5 is a view of the dispenser base, in the hor-

izontal variant;

Figure 6 is a rear view of the dispenser, in the horizontal variant;

Figure 7 is an axonometric view of several dispensers according to the invention, mutually superimposed horizontally;

Figure 8 is an axonometric view of several dispensers according to the invention, vertically associated with each other;

Figure 9 is a top detail view of part of the rear of the dispenser drawer, in the horizontal variant;

Figures 10, 11 are perspective detail views of part of the magnetic retention means, in two different configurations of use;

Figure 12 is a detailed perspective view of the compacting means of the paper products inside the drawer;

Figure 13 is a side cross-section view of the dispenser container;

Figure 14 is a detailed view of the shaped side support, which can be inserted into one of the side housings of the dispenser container, wherein sheets containing information and/or advertising messages can be placed;

Figure 14A is a side view of the shaped side support of figure 14;

Figure 15 is a detail view of the shaped middle support, which can be inserted into the middle housing of the dispenser container, wherein sheets containing information and/or advertising messages can be placed;

Figure 15A is a side view of the shaped middle support of figure 15.

EMBODIMENTS OF THE INVENTION

[0037] With reference to the accompanying Figure 1, a paper products dispenser according to the present invention is wholly indicated with 1.

[0038] Any type of paper products can be dispensed by the dispenser 1, without particular limitations to the objects of this invention.

[0039] For example, such paper products may be napkins, tissues or the like, of any shape and/or size.

[0040] The dispenser 1 comprises a container for paper products, wholly indicated with 2. The container 2 has a substantially box-like shaping.

[0041] In the specific embodiment of the invention illustrated in the accompanying figures, the container 2 has a substantially parallelepiped shape (for example with rounded off corners), but it could also have any other shape suitable for the purpose.

[0042] The container comprises, more in detail, a first side wall 2a, a second side wall 2b, a third side wall 2c, a fourth side wall 2d and a bottom wall 2e.

[0043] The first side wall 2a and the second side wall 2b are mutually opposite each other, as are the third side wall 2c and the fourth side wall 2d; the first side wall 2a

and the second side wall 2b constitute the larger surface sides of the aforesaid parallelepiped.

[0044] Each of the side walls 2a, 2b, 2c, 2d or the bottom wall 2e, are suitable for supporting the dispenser 1 on any supporting surface (for example a table, a piece of furniture, a shelf, etc., without limitations).

[0045] The container 2 can be made of any material suitable for this application.

[0046] For example, in an embodiment of the invention of particular practical interest, the container 2 is made of a light but strong plastic material.

[0047] The container 2 comprises at least one internal volume 3, which houses the paper products P.

[0048] Furthermore, the container 2 comprises at least one opening 4 allowing access to the inner volume 3.

[0049] The opening 4 is provided at the parallelepiped face opposed to the bottom wall 2e. The container further comprises a drawer 5.

[0050] The drawer 5, in use, is housed in the inner volume 3 of the container 2.

[0051] The drawer 5, more in detail, is selectively extractable through the opening 4 of the container 2.

[0052] The drawer 5 comprises a front wall 6; the front wall 6 of the drawer 5 is accessible from the outside.

[0053] A window 6a, or slot, is provided in the front wall 6, through which the user can manually pick up the paper products P.

[0054] The window 6a can have any shape and size, without any limitation.

[0055] The container 5 comprises at least one compartment 7, which houses the paper products P.

[0056] The paper products P are preferably arranged to be interleaved, i.e. each is folded and positioned in relation to the other so that, when one product is picked up, it drags the leading end T of the product immediately following it.

[0057] The compartment 7 is open at the top, to allow for easy feeding/refilling of paper products P.

[0058] More in detail, the drawer 5 comprises a lower wall 8 and side walls 9.

[0059] The front wall 6, the lower wall 8 and the side walls 9 define the compartment 7 for housing the paper products P.

[0060] The lower wall 8 of the drawer 5 defines a rear end 8a, opposed to the front wall 6. The drawer 5 can be made of any material suitable for this application.

[0061] For example, in an embodiment of the invention of particular practical interest, the drawer 5 is made of a light but strong plastic material.

[0062] The drawer 5 may also include compacting means, globally indicated with 10, which allow the paper products P to be kept constantly in contact with the front wall 6, and therefore in a condition such as to be easily picked up through said window 6a, whatever the filling level of the compartment 7.

[0063] The compacting means 10 comprise, more particularly, at least one pusher member 11, which applies a pressure on the paper products P, keeping them always

in contact with the front wall 6.

[0064] In the embodiment shown in the figures, the pusher member 11 comprises, in turn, (or consists of) a wall which is movable in a direction parallel to the side walls 9 of the drawer 5, suitable for direct contact with the paper products P.

[0065] The pusher member 11 may, for example, be associated with the lower wall 8 or with the side walls 9 of the drawer 5 by means of guides, or other similar sliding coupling means.

[0066] More particularly, the pusher member 11 - visible in the detail of Figure 9 - comprises a wall 11a provided with appendages 11b which are slidable along respective guides 9a provided in the side walls 9 of the drawer 5.

[0067] Moreover, the pusher member 11 comprises a portion 11c, associated with the wall 11a, suitable for contact with the paper products P.

[0068] The portion 11c has a given thickness, and possibly also a slightly tapered shaping, to ensure optimal contact of the paper products P with the front wall 6 of the drawer 5 in all conditions of use, and therefore also in the case where the paper products P in the compartment 7 are in very small numbers.

[0069] The compacting means 10 further comprise at least one elastic member 11d, which acts on the aforesaid pusher member 11 towards the front wall 6 of the drawer 5; this elastic member 11d can be of any type suitable for the application, for example a spring, a spring system, or others.

[0070] By way of example only - and again with reference to Figure 9 - the compacting means 10 may comprise two elastic members 11d, consisting of spiral springs or other suitable type springs, connected to the pusher member 11 at its ends.

[0071] The container 2 and the drawer 5 are mutually slidably coupled through guides 12a, 12b.

[0072] In the embodiment of the invention shown in the figures, the guides 12a, 12b are provided in the first side wall 2a of the container 2, and correspondingly in the lower wall 8 of the drawer 5.

[0073] In other embodiments of the invention, the guides 12a, 12b could be otherwise positioned and/or configured.

[0074] In the embodiment of the invention illustrated in the figures, the guides 12a, 12b have a dovetail cross section, to ensure better coupling stability between the two parts and to prevent them from accidentally splitting during the sliding of the drawer 5, but they could have any other suitable shape.

[0075] In yet other embodiments of the invention, the sliding coupling between the container 2 and the drawer 5 could be obtained by different means, but suitable for obtaining the same result.

[0076] The container 2 comprises, in the first side wall 2a, a window 2f, wherein a tab 8b formed in the rear end 8a of the lower wall 8 of the drawer 5 can be engaged: the tab 8b is visible, for example, in Figures 9, 12.

[0077] The engagement of the tab 8b in the window 2f occurs during pulling out of the drawer 5, and prevents the latter from accidentally becoming released from the container 2: in order to fully separate the drawer 5 from the container 2, it is necessary to apply a slight manual rotation to the drawer 5 to disengage the tab 8b from the window 2f.

[0078] As shown, for example, in Figures 5,6, the container 2 comprises support elements 12c, 12d at the first side wall 2a.

[0079] These support elements 12c, 12d are adapted to prevent the dispenser 1 from slipping or inadvertently moving during normal use.

[0080] The support elements 12c, 12d can consist of strips of rubber, or other similar material; said support elements 12c, 12d can, for example, be inserted into respective seats provided in the guides 12a of the container 2, so as to protrude slightly from the surface of the first side wall 2a.

[0081] The support elements 12c, 12d could however be positioned elsewhere within the first side wall 2a, and/or have a different shape from the one indicated above.

[0082] In order to ensure support of the dispenser 1 at the bottom wall 2e - so as to obtain the configuration of use shown in Figure 8 - the container 2 can comprise additional support elements 12e, provided in the bottom wall 2e itself.

[0083] Such additional support elements 12e may consist of feet of rubber, or other similar material; they may be, for example, four in number, fixed to the bottom wall 2e at the four corners thereof.

[0084] The support elements 12e can consist of, for example, rubberized circular adhesives of sufficient thickness to make the dispenser 1 steady when used in a vertical position.

[0085] According to an aspect of the invention, the dispenser 1 comprises magnetic retention means, indicated as a whole with 13, of the drawer 5 inside the container 2.

[0086] According to another aspect of the invention the same magnetic retention means 13, during the filling phase of the paper products P, have the function of retaining the pusher member 11 at the rear end 8a of the drawer 5; in this way, the pusher member 11 will not constitute an obstacle for the operator during the feeding of the products P, as better explained here below.

[0087] As previously mentioned, one of the functions of the magnetic retaining means 13 is to keep the rear end 8a of the drawer 5 (i.e. the one opposed to the front wall 6), in use, in contact with the bottom wall 2e of the container 2.

[0088] Moreover, the magnetic retention means 13 prevent the drawer 5 from accidentally opening, i.e. sliding and coming out of the internal volume 3 of the container 2, during normal use.

[0089] In fact, in the absence of the aforementioned magnetic retention means 13, even the simple act of picking up a paper product P through the window 6a could

cause the accidental sliding of the drawer 5 with respect to the container 2.

[0090] At the same time, however, the magnetic retention means 13 allow the easy opening of the drawer 5 for feeding/refilling requirements of the paper products P inside the containment compartment 7.

[0091] More particularly, and according to an important aspect of the present invention, the magnetic retention means 13 allow the operator in charge of feeding/refilling the dispenser 1, or in any case the maintenance operator of the dispenser 1, to easily open the drawer 5 with a simple gesture, using even just one hand.

[0092] The magnetic retention means 13 comprise a first member 14.

[0093] The first member 14 is fixed to the container 2; more in detail, the first member 14 is positioned at the bottom wall 2e of the container 2.

[0094] The magnetic retention means 13 additionally comprise a second member 15.

[0095] The second member 15 is fixed to the drawer 5; more in detail, the second member 15 is positioned at the rear end 8a of the drawer 5.

[0096] The second member 15 and the first member 14 are subjected to a mutual magnetic attraction force, when they are one close to the other.

[0097] Therefore, when they are brought close to each other - and therefore during the complete closure of the drawer 5 - the first member 14 and the second member 15 mutually attract each other until they are joined, in a stable coupling configuration; this configuration is modified only when the operator pulls the drawer 5 in its opening direction, with a force such as to pull apart the two members 14,15.

[0098] The first member 14 comprises, for example, at least one permanent magnet 14a. The first member 14 - as shown schematically in Figure 4 - is engaged in a respective first seat 16.

[0099] The first seat 16 is provided in the bottom wall 2e of the container 2, opposite to the opening 4; alternatively, the first seat 16 may be provided in one of the side walls 2a, 2b, 2c, 2d of the container 2 at, or in the immediate vicinity of, the same bottom wall 2e.

[0100] In particular, the first seat 16 can be provided at the centre of one of the sides of the bottom wall 2e; or, said first seat 16 may be provided at the centre of one of the sides, opposite to the opening 4, of one of the side walls 2a, 2b, 2c, 2d.

[0101] The first seat 16 can be obtained directly in the construction phase (through moulding, or other technology) of the entire container 2.

[0102] More in detail, the container 2 can comprise a support 17 defining the first seat 16, wherein the permanent magnet 14a is inserted in turn.

[0103] This solution allows the first member 14 to be easily replaced with another of a different type, if necessary, without having to replace the container 2 as well.

[0104] The second member 15 is engaged in a second seat 18.

[0105] The second seat 18 is provided at the rear end 8a of the lower wall 8 of the drawer 5.

[0106] The second seat 18 can be obtained directly in the construction phase (e.g. moulding, or other technology) of the drawer 5.

[0107] The second member 15 comprises, for example, one metal element 15a.

[0108] The metal element 15a is preferably made of ferromagnetic material, so as to obtain the desired mutual attraction force.

[0109] The metal element 15a can be constituted, for example, by a block (cube- or parallelepiped-shaped, or of other suitable shape) appropriately sized so as to obtain the desired mutual attraction with the first member 14.

[0110] The metal element 15a may, for example, be press-fitted into the second seat 18, or it may be housed therein during the drawer construction phase (for example by moulding).

[0111] In other embodiments of the invention, the role of the first member 14 and the second member 15 of the magnetic retention means 13 could be reversed, i.e. in other words, the first member 14 could comprise a metal element, while the second member 15 could include a permanent magnet, obtaining the same technical result. In still other embodiments of the invention, the first member 14 and the second member 15 of the magnetic retention means 13 could comprise two respective permanent magnets, with the poles positioned and oriented so as to obtain an attraction between the two.

[0112] The positioning of the first member 14 and of the second member 15 could be different from that described and illustrated in the accompanying figures, without limitation to the objects of the present invention.

[0113] In some embodiments of the invention, the magnetic retention means 13 could comprise more than one first member 14 and, correspondingly, more than one second member 15.

[0114] For example, multiple first and second members 14,15 could be provided, distributed in container 2 and in drawer 5 - respectively.

[0115] This could make it possible to design the dispenser in the way best suited to specific requirements, taking into account various factors, such as the desired force of attraction of the magnetic retention means 13 (i.e. the force which must be applied to pull out the drawer 5, also taking into account the frictions that hinder the sliding of same) the position and the dimensions of the first, second members 14,15, and others.

[0116] Another important function of the magnetic retention means 13, as mentioned, is to retain the pusher member 11 at the rear end 8a of the drawer 5, during the filling phase of the paper products P.

[0117] For this purpose, the magnetic retention means 13 comprise a third member 23, suitable for being attracted by the second member 15, or capable of attracting the second member 15.

[0118] In other words, the third member 23, when

placed near the second member 15 (Figure 10), is submitted to a magnetic attraction force which causes it to adhere to the latter (Figure 11).

[0119] As was mentioned, this situation occurs when the pusher member 11 is manually moved to near the rear end 8a of the drawer 5: in this configuration of use the operator can introduce the paper products P into the compartment 7 of the drawer 5 without the pusher member 11 being an impediment (it being forced by the elastic members 11d to translate towards the front wall 6).

[0120] The third member 23 is fixed to the pusher member 11.

[0121] More particularly, the third member 23 comprises a metal element 24 (or a magnet, or another element having ferromagnetic properties) engaged in a housing 24a provided in the pusher member 11.

[0122] The housing 24a is provided in the wall 11a, on the opposite face with respect to that in which the portion 11c is located.

[0123] The housing 24a is defined between two appendages 11e of the pusher member 11, of mirror-image shaping and integral with the wall 11a (on the opposite face to that in which the portion 11c is located).

[0124] In other embodiments of the invention, the housing 24a for the metal element or magnet 24 could be differently positioned and/or shaped, according to specific application requirements.

[0125] Therefore, from the operating point of view, during loading of the paper products P, the pusher member 11 is moved until it reaches the rear end 8a of the drawer 5, so as to achieve maximum capacity of the compartment 7.

[0126] In this position, the third member 23 is magnetically attracted by (or magnetically attracts) the second member 15, until it adheres to the latter: the action of the elastic members 11d is thus momentarily prevented.

[0127] After having introduced the desired quantity of paper products P in the compartment 7, the operator pulls the pusher member 11 in the direction of the front wall 6, until the third member 23 is separated from the second member 15: in this condition, the elastic member 11d are free again to push the pusher member 11 towards the front wall 6, so as to keep the paper products P constantly in contact with the latter in an orderly manner.

[0128] According to another aspect of the invention, the outer shaping of the container 2 allows several identical or similar dispensers 1 to be stacked/matched/associated. In this way, maximum use of the available space can be made to dispense/deliver the products P.

[0129] More in detail, several identical or similar dispensers 1 can be easily stacked, as shown in Figure 7, and in this case, they are used with horizontal positioning, resting on their respective first side walls 2a.

[0130] Or - as shown in Figure 8 - the same identical or similar dispensers can be arranged vertically, resting on the respective bottom walls 2e; this solution allows space use to be optimised in case of a limited support surface.

[0131] According to yet another aspect of the invention, the container 2 of the dispenser comprises at least one housing 19a, 19b, 19c for introducing at least one respective sheet, containing, for example, information and/or advertising messages.

[0132] The aforesaid housing 19a, 19b, 19c is provided along the inner surfaces 2b, 2c, 2d of the container 2.

[0133] The container 2 can therefore be made of transparent (or semi-transparent) material, in at least some of its areas, to allow reading of said messages.

[0134] More in particular - and as shown schematically in Figures 3 to 4 - the container 2 comprises a plurality of housings 19a, 19b, 19c distributed along the inner surfaces thereof (e.g. three housings 19a, 19b, 19c, provided on the inner face of the second, third, fourth side walls 2b, 2c, 2d - respectively).

[0135] In the example shown in the figures, there is a central housing 19a provided in the second side wall 2b of the container 2, and two side housings 19b, 19c provided instead in the second side wall 2c and in the third side wall 2d of the same container 2 - respectively.

[0136] Each of the housings 19a, 19b, 19c is defined by two respective mirrored raised elements 20,21; each of them has a cross-section shaped in such a way as to delimit a sort of pocket wherein a paper or cardboard sheet or the like can be introduced. One or more of the housings 19a, 19b, 19c may also comprise a respective shaped support panel 22a, 22b, 22c, inserted between the raised elements 20,21, which prevents particularly large, or low thickness, sheets from bending, becoming unreadable.

[0137] In particular, a central shaped panel 22a is provided, and two side shaped panels 22b, 22c, which can be inserted in the central housing 19a and in the side housings 19b, 19c - respectively.

[0138] Each one of the shaped panels 22a, 22b, 22c, observed in plan view (Figures 14,15), has convergent side edges 22d, to make it easier to insert them into their respective housings 19a, 19b, 19c.

[0139] As can be seen, instead, in Figure 13, also the housings 19a, 19b, 19c have correspondingly respective raised elements 20,21 arranged in a convergent manner, so as to constitute a guide for the insertion of the respective shaped panels 22a, 22b, 22c.

[0140] When viewed from the rear side, with reference to the inserting direction in the respective housings 19a, 19b, 19c (Figures 14A, 15A), the shaped panels 22a, 22b, 22c have a substantially trapezoidal cross section, so that the respective inclined side edges 22d run alongside the raised elements 20,21, which are complementarily shaped (see, for example, Figure 4).

[0141] In use, therefore, when the operator has to pull out the drawer 5 to introduce new paper products P inside the compartment 7, he applies a simple manual pull on it, for example by inserting fingers inside the window 6a.

[0142] When the traction exerted by the operator exceeds the mutual magnetic attraction force existing between the members 14,15, the latter separate, and there-

fore the drawer 5 disengages from the container 2, so as to be freely pulled out (also completely) from the opening 4.

[0143] Once the paper products P feeding operations have been completed, the operator inserts the drawer 5 again into the opening 4 (possibly by mutually engaging the guides 12a, 12b), pushing it inwards; when the members 14,15 come close to each other, their mutual attraction accompanies and ensures full insertion of the drawer 5 into the container 2.

[0144] It has thus been seen how the invention achieves the intended purposes.

[0145] The magnetic retention means 13 provided in the dispenser 1 according to the invention, configured as described above, constitute an optimal solution to constrain the drawer 5 to the container 2 in a safe and reliable manner.

[0146] At the same time, the container 2 and the drawer 5 can be released in a very easy and quick manner with a simple operator gesture, even using only one hand and applying sufficient traction to separate the two members 14,15.

[0147] This means that the operator in charge of feeding/refilling the products to the dispenser 1, as these are picked up, can work more quickly and comfortably, and this is an important advantage especially if he has to take care of the maintenance of a large number of dispensers 1.

[0148] The shape and the external design of the dispenser 1 are extremely simple and clean, since there are no closing elements, locks, or the like directly visible.

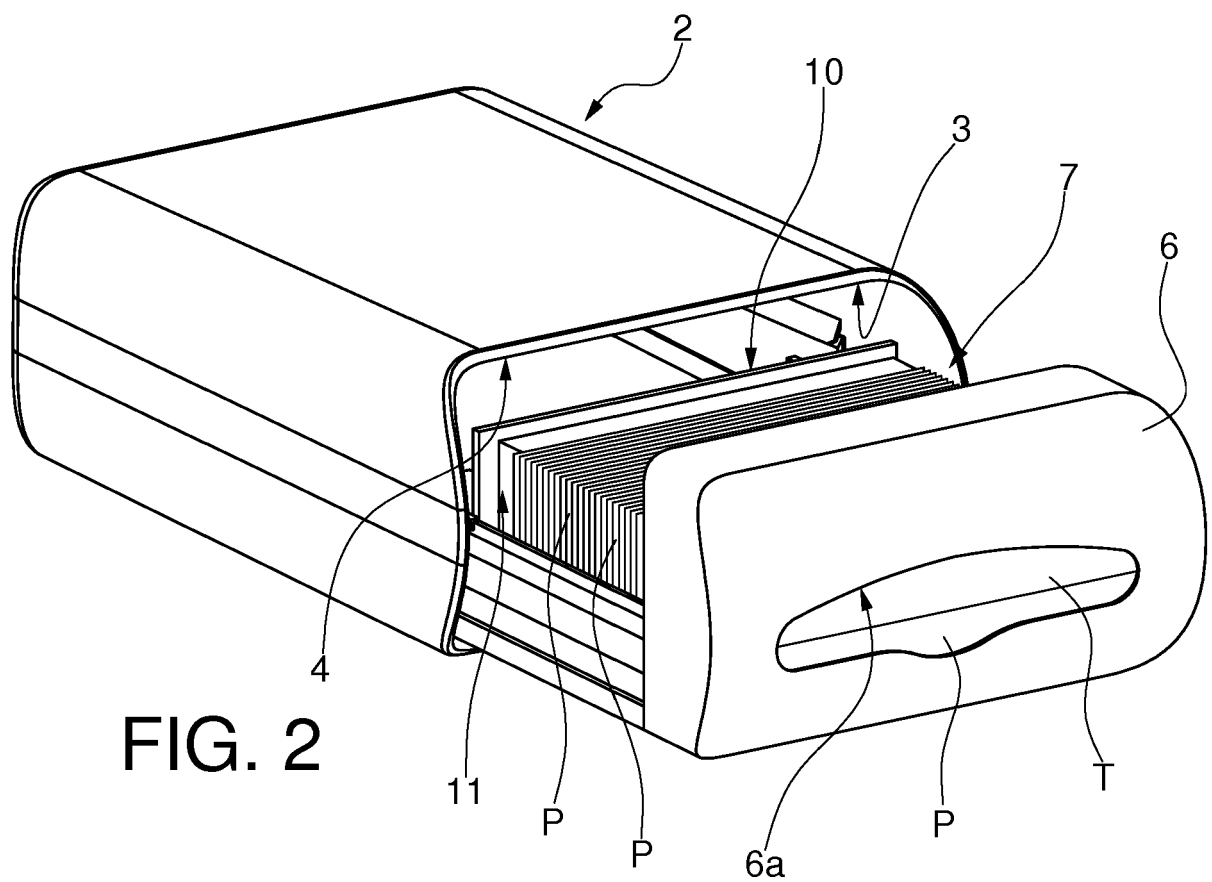
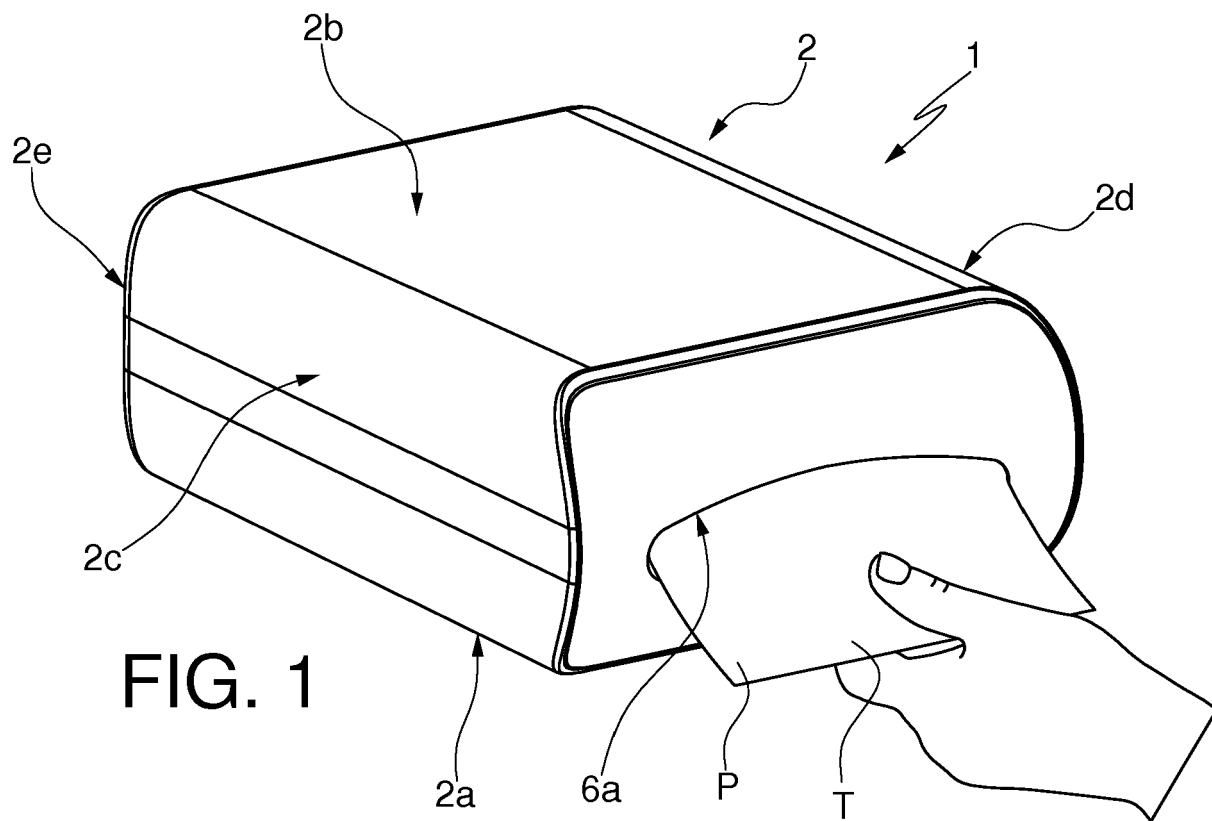
[0149] This also constitutes a deterrent against unauthorised persons opening the drawer 5 of the dispenser 1, as there is no indication or suggestion of how to open it.

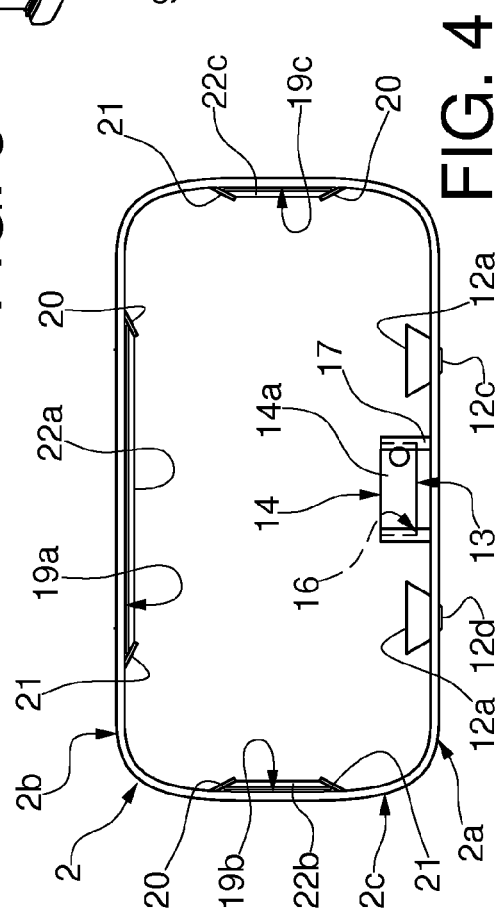
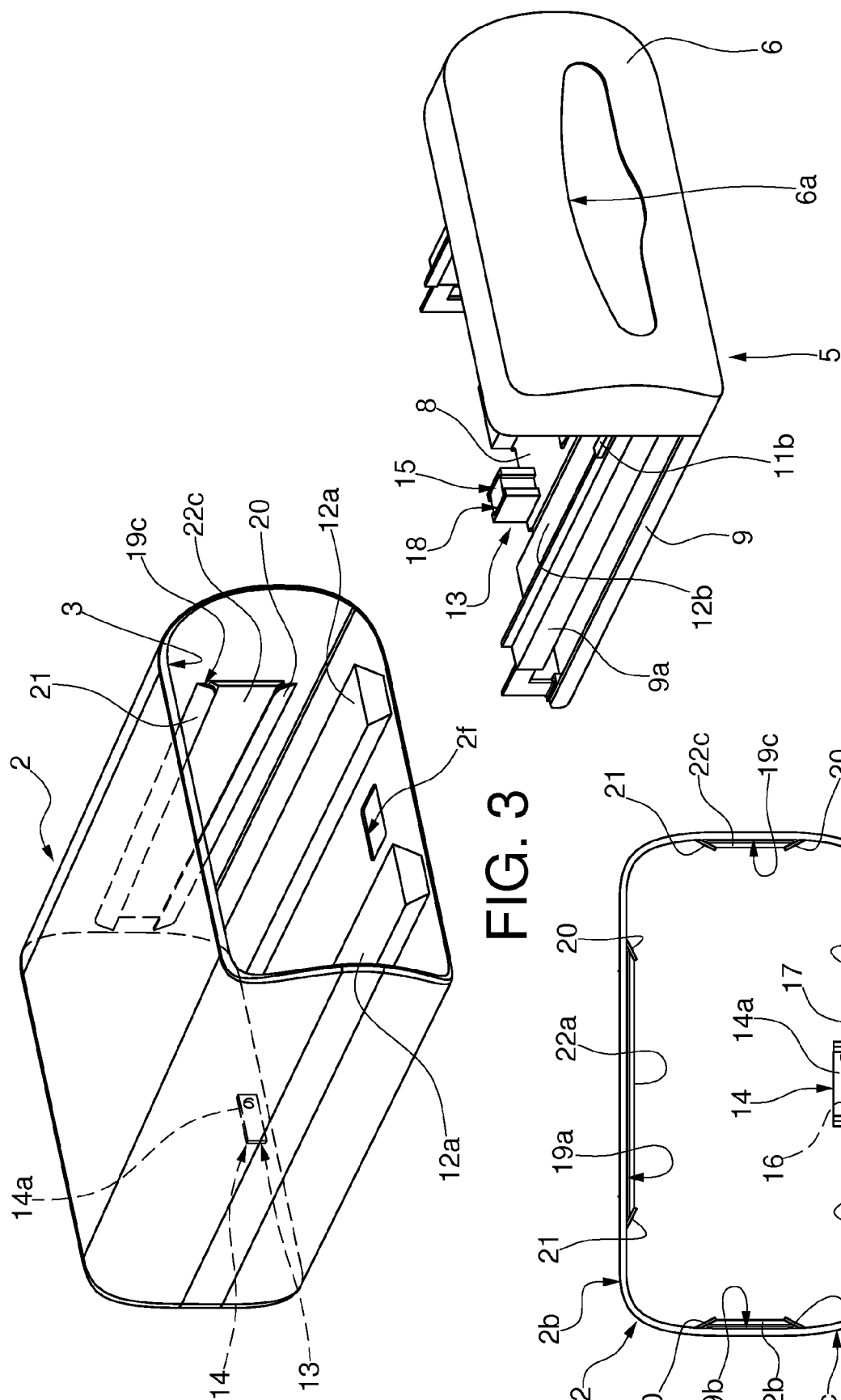
[0150] The present invention has been described according to preferred embodiments, but equivalent variants are still possible without departing from the scope of the appended claims.

Claims

1. A dispenser (1) for paper products comprising at least one container (2), provided with an internal volume (3) and at least one opening (4) which allows access to said internal volume (3), and at least one drawer (5), housed in said internal volume (3), comprising at least one compartment (7) for housing paper products (P), and at least one window (6a) through which the user can manually withdraw paper products (P), said drawer (5) being selectively removable through said opening (4), so as to allow for feeding/refilling paper products (P) as they are withdrawn by users, **characterised in that** it comprises magnetic retention means (13) of said drawer (5) inside said container (2).

2. A dispenser (1) according to claim 1, wherein said magnetic retention means (13) comprise a first member (14) fixed to said container (2), and a second member (15) fixed to said drawer (5), said first member (14) and second member (15) being subjected to a mutual magnetic attraction force when they are close to each other. 5
3. A dispenser (1) according to claim 2, wherein said first member (14) comprises at least one permanent magnet (14a), or at least one metal element. 10
4. A dispenser (1) according to claim 3, wherein said second member (15) comprises at least one metal element (15a), or at least one permanent magnet. 15
5. A dispenser (1) according to any one of claims 2 to 4, wherein said first member (14) is engaged in a respective first seat (16) provided in the bottom wall (2e) of said container (2) opposed to said opening (4), or in one of the side walls (2a, 2b, 2c, 2d) of said container (2) at, or in the immediate vicinity of, said bottom wall (2e). 20
6. A dispenser (1) according to claim 5, wherein said container (2) comprises at least one support (17) defining said first seat (16), wherein said permanent magnet (14a) or said metal element is in turn engaged. 25
7. A dispenser (1) according to any one of claims 2 to 6, wherein said second member (15) is engaged in a respective second seat (18) provided at the rear end (8a) of the lower wall (8) of said drawer (5). 30
8. A dispenser (1) according to claim 7, wherein said second member (15) comprises a metal block in the shape of a cube or parallelepiped engaged in said second seat (18). 35
9. A dispenser (1) according to one of claims 5 to 7, wherein said first seat (16) may be provided at the centre of one of the sides of said bottom wall (2e), or at the centre of one of the sides, opposite to said opening (4) of one of said side walls (2a, 2b, 2c, 2d). 40
10. A dispenser (1) according to one of the preceding claims, wherein the external shape of said container (2) allows several identical or similar dispensers (1) to be stacked/matched/associated in a horizontal or vertical positioning. 45
11. A dispenser (1) according to one of the preceding claims, wherein said container (2) comprises at least one housing (19a, 19b, 19c) for inserting at least one respective sheet containing informative and/or advertising messages, said at least one housing (19a, 19b, 19c) being provided along the inner surfaces of said container (2). 50
12. A dispenser (1) according to claim 11, wherein said container (2) can be made of transparent or semi-transparent material, in at least some of its areas, to allow reading of said messages. 55
13. A dispenser (1) according to one of the preceding claims, wherein said container (2) and said drawer (5) are mutually slidingly coupled by means of guides (12a, 12b) with dovetail cross section.
14. A dispenser (1) according to one of the preceding claims, wherein said drawer (5) comprises compacting means (10) which allow the paper products (P) to be kept constantly in contact with the front wall (6) of said drawer (5), and therefore in a condition such as to be easily withdrawn through said window (6a), whatever the filling level of said compartment (7), said compacting means (10) comprising at least one pusher member (11), said magnetic retention means (13) being suitable for retaining said pusher member (11) at the rear end (8a) of said drawer (5) during the introduction of paper products (P) into said compartment (7).
15. A dispenser (1) according to claim 14, wherein said magnetic retention means (13) comprise a third member (23), fixed to said pusher member (11), suitable for being attracted by said second member (15), or suitable for attracting said second member (15).





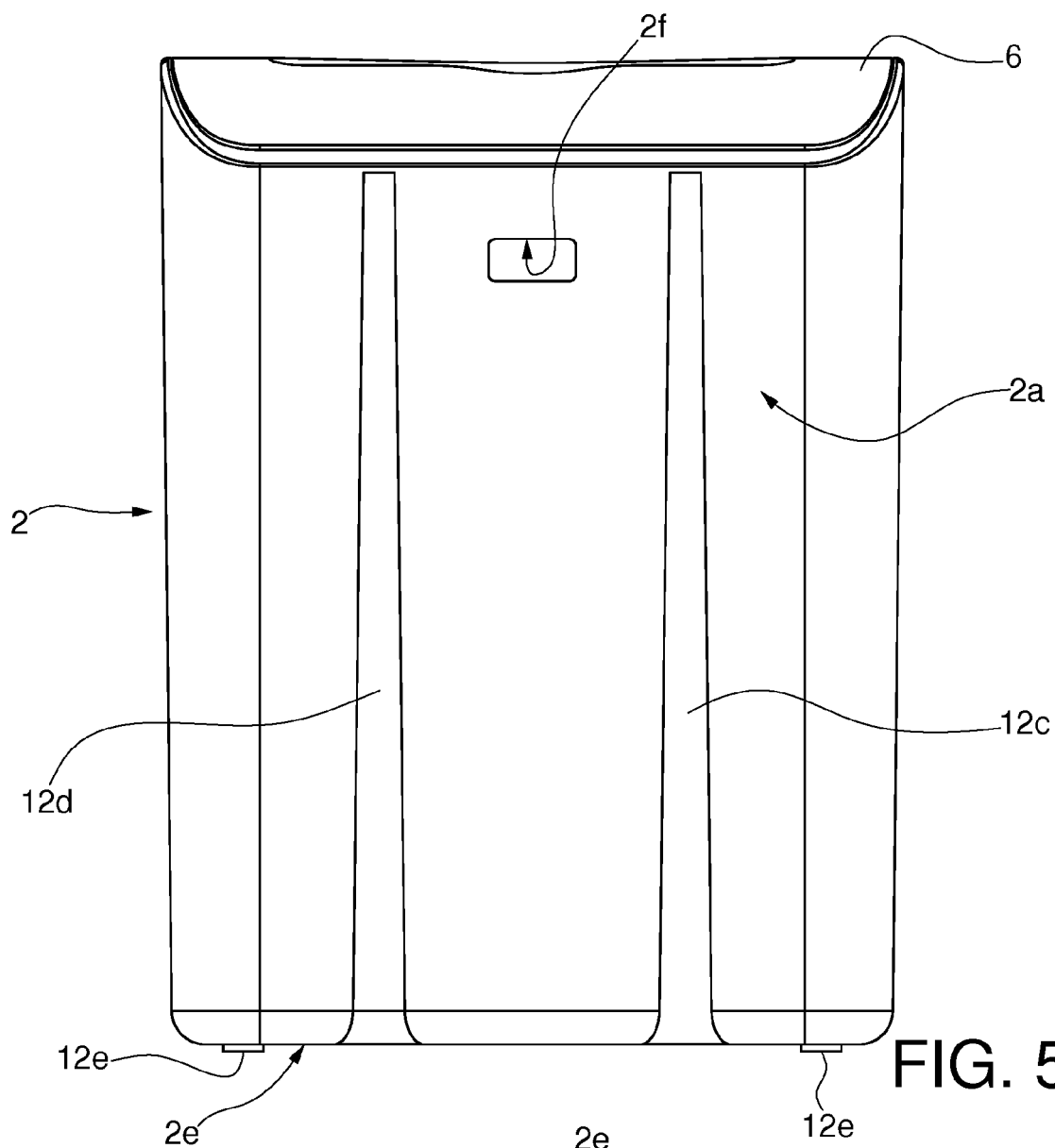


FIG. 5

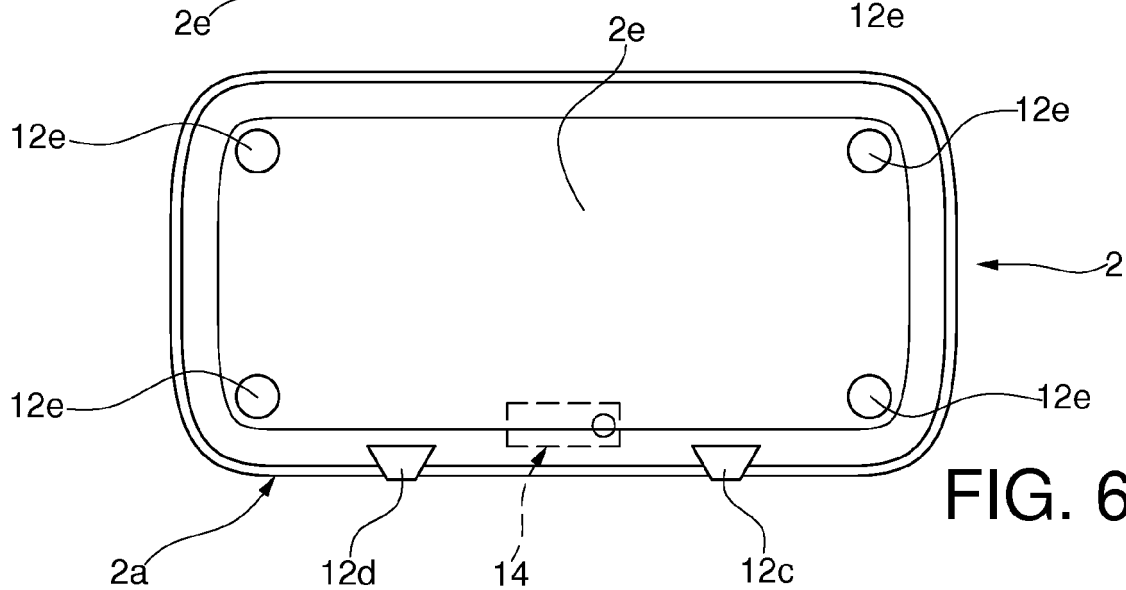
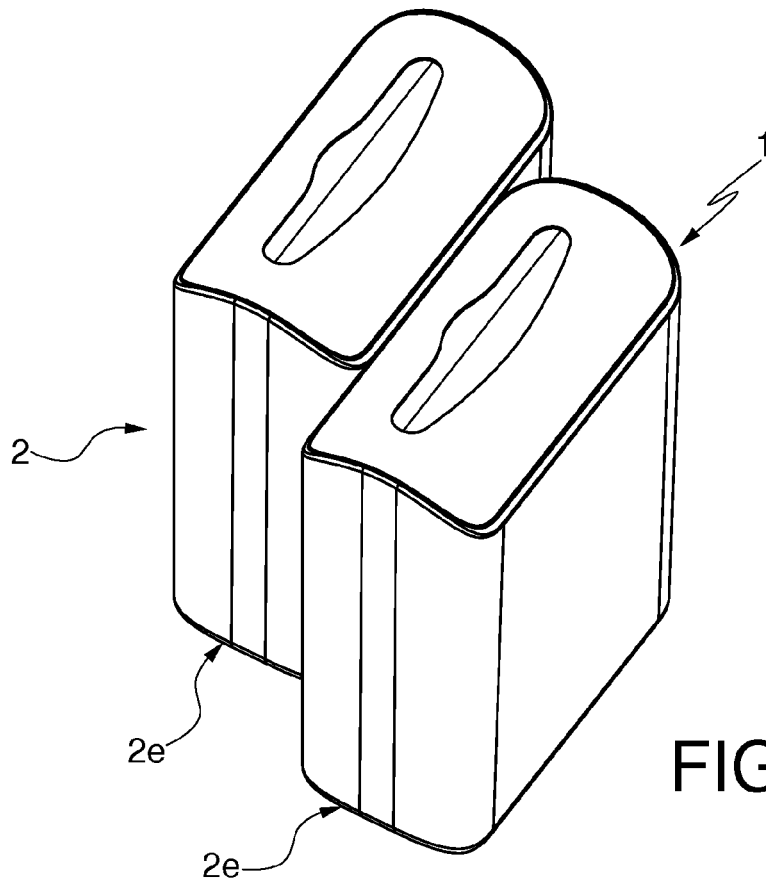
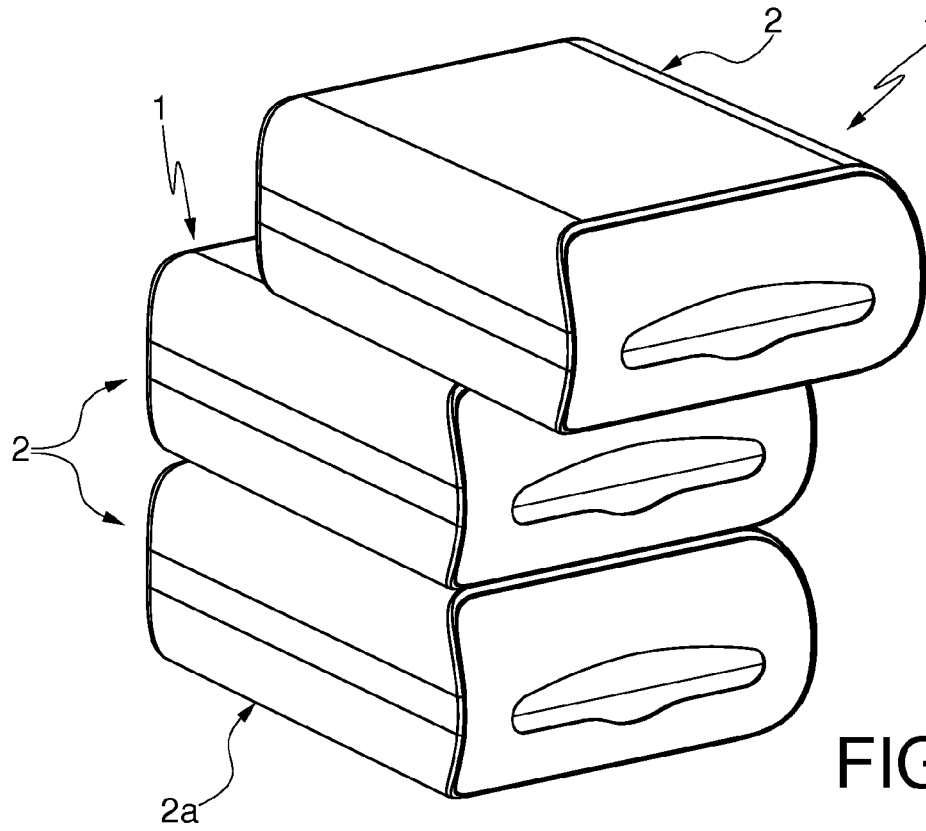


FIG. 6



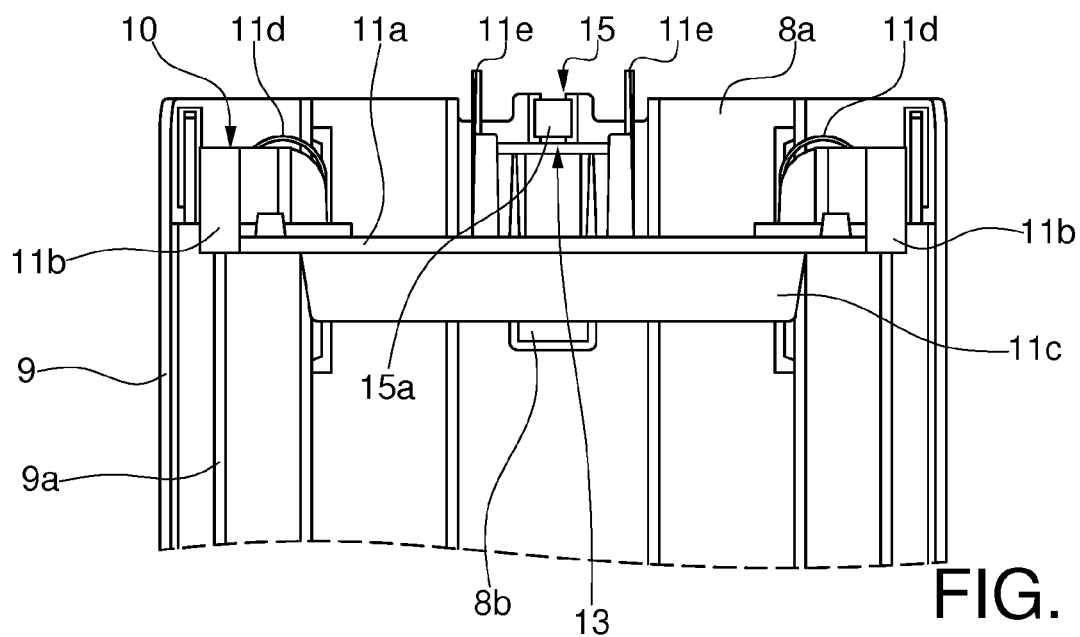


FIG. 9

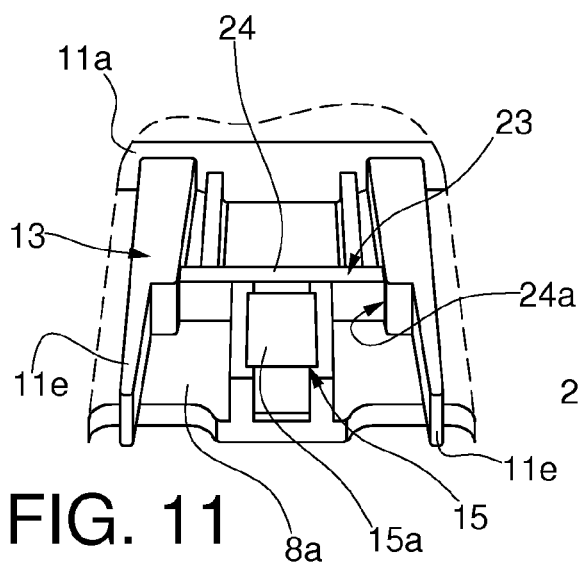


FIG. 11

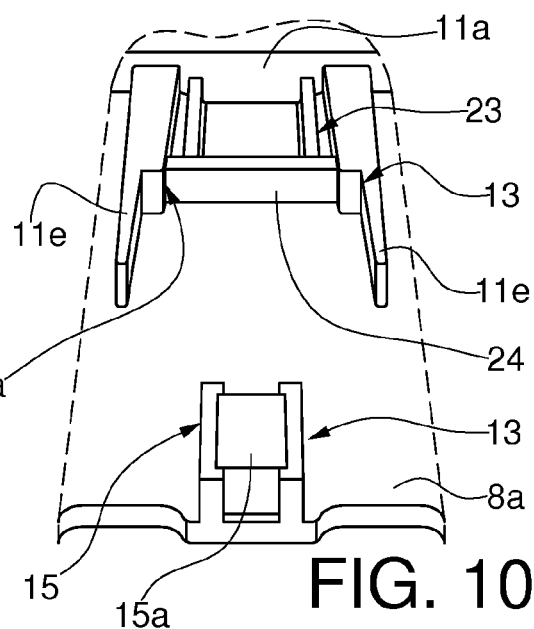


FIG. 10

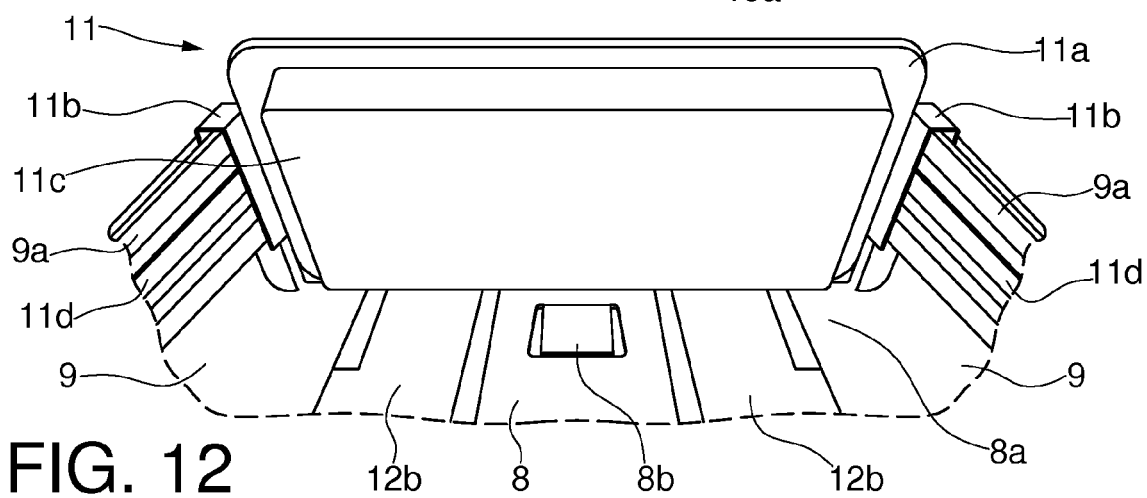


FIG. 12

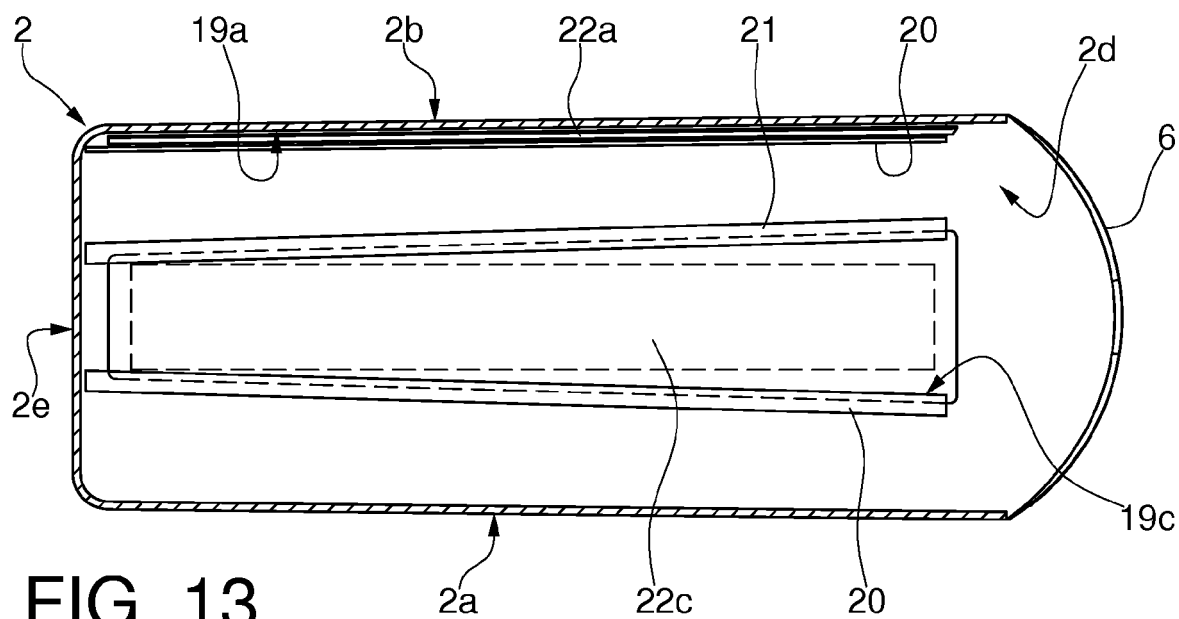


FIG. 13

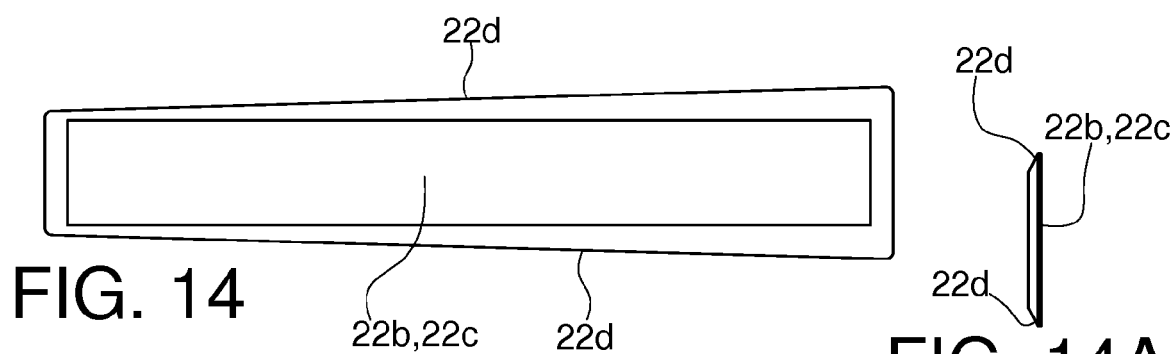


FIG. 14

FIG. 14A

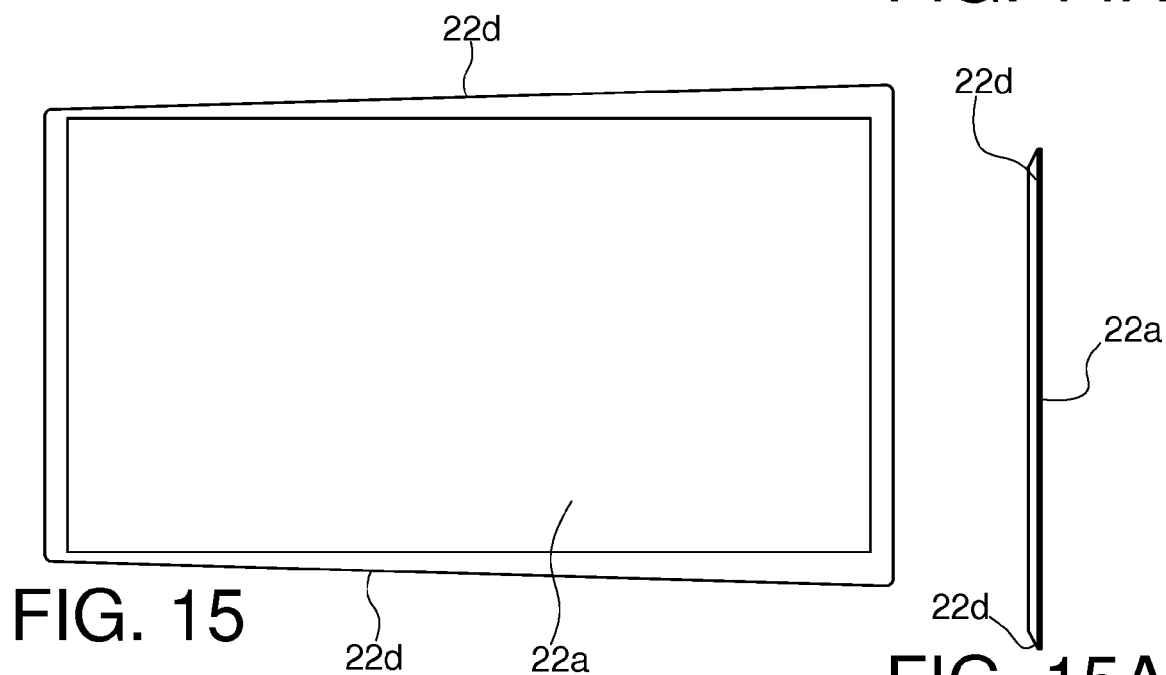


FIG. 15

FIG. 15A



EUROPEAN SEARCH REPORT

Application Number
EP 18 21 1579

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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	US 2 277 815 A (BROEREN FRANK L ET AL) 31 March 1942 (1942-03-31) * page 1, line 7 - line 23 * * page 2, line 61 - page 3, line 36; claims; figures *	1,10,14	INV. A47K10/42
A	US 2015/230673 A1 (GOBLE JESSE M [US]) 20 August 2015 (2015-08-20) * paragraphs [0034], [0052]; claims 1,18; figures *	1	
A	US 5 076 466 A (PETTERSON TOR [US] ET AL) 31 December 1991 (1991-12-31) * the whole document *	1,10,14	
A	US 3 370 748 A (KOERPER ERHARDT C ET AL) 27 February 1968 (1968-02-27) * column 3, line 25 - line 35; claims; figures *	1,14	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47K
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 29 April 2019	Examiner Fordham, Alan
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 18 21 1579

5 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
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29-04-2019

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