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(54) **Container base, in particular for cosmetic products, with interchangeable cups**

Boden für Behälter, insbesondere von kosmetischen Produkten, mit austauschbaren Näpfchen

Fond pour boîtier, en particulier pour produits cosmétiques, avec godets interchangeables

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Description

[0001] This invention relates to a unit comprising a container base intended to contain particularly but not exclusively cosmetics products, which are compacted into one or more interchangeable cups.

[0002] Said interchangeable cups - generally known as pans in this sector - contain cosmetics products such as eye shadow, blusher, lip gloss, rouge powder, face powder, make-up base, etc.

[0003] Said containers could however also be used for containing products of different type, such as pharmaceuticals or others.

[0004] As is well known to the expert of the art the construction of containers in general and/or of cases for containing cosmetics products such as the aforesaid requires the solution of various technical problems.

[0005] One of these is the possibility of reutilizing the container once its contained product has been used up, by merely replacing the empty pans, which are available commercially in the form of specific refills for that container.

[0006] In this respect, to assure the consumer that the product contained in the refill is original, it is desirable for the pans and the possible insert incorporated into the container base to comprise precise corresponding locators so that components of different origin cannot be fitted in.

[0007] Another technical problem relates to the facility for replacing the pans contained in the container with other pans containing a different cosmetics product or with a different number of modular pans, with ease and without soiling the fingers.

[0008] It is also desirable to provide a container with an interior in which the assembled pans form a pattern of pleasing appearance and which can be varied.

[0009] The aforesaid problems have been solved for example by the containers described and illustrated in EP-A-587252, EP-A-634117 and EP-A-635224.

[0010] In EP-A-587252 and EP-A-634117 the pan is engaged with the container base by snap-retention means, whereas in EP-A-635224 the pan is retained in position by an insert slidable between two positions, namely a position in which the pan is fixed and a position in which it can be removed.

[0011] In particular, EP-A-0 587 252 discloses a container base 10 for receiving interchangeable pans 14 having retention means comprising elastically yieldable vertical section 22 extending from the base, snap-retention means 21, 23 acting between said section 22 and a first side of pan 14 and engagement means 20, 23 provided on the base and on a second side of the pan. No counteracting means are provided on the base and snap-retention means 21 are located at the upper end of the vertical section 22.

[0012] FR-A-2 691 339 discloses a container base for modular trays or "godet" which are retained inside their seats by means of a suitable cup; said cup can be

opened by means of a button which is separated from the base of the container and which can be also used to in order to open the whole container. It discloses also the presence of counteracting means between the base of the container and the bottom of the "godet". Also DE-A-18 12 915 discloses a container base 1 for receiving interchangeable pans 3 having retention means comprising elastically yieldable vertical section 5 extending from the base, snap-retention means acting between said section 5 and a first side of pan 3 and engagement means provided on the base and on a second side of the pan. No counteracting means are provided on the base.

[0013] None of these documents discloses a unit allowing to automatically and easily remove and replace the pan.

[0014] The object of the present invention is to provide a container base in which the pans can be removed even more easily without soiling the fingers.

[0015] Said object is achieved by a unit having the characteristics defined in the accompanying claims.

[0016] The structural and functional characteristics of the invention and its advantages compared with the known art will be more apparent from the following description, given with reference to the accompanying drawings which show one embodiment of a container base for interchangeable pans formed in accordance with the innovative principles of the invention. In the drawings:

Figures 1 to 5 are longitudinal sections showing stages in the removal of a pan from a container base formed in accordance with the invention;

Figure 6 is an enlarged section taken on the plane VI-VI of Figure 5;

Figures 7 to 9 are sections showing the insertion of a pan into the container base of Figures 1 to 5; and Figures 10 and 11 show a modification of the same inventive concept.

[0017] With reference to the drawings, the reference numeral 10 indicates a container base formed in accordance with the invention and 11 indicates a pan removably inserted into said base 10.

[0018] A closure lid (not shown) is intended to be hinged to said base 10 at 12.

[0019] According to the invention, the interchangeable pan 11 is retained in position within the base 10 by retention means formed by the combination of:

- an elastically yieldable vertical section 13 extending from said base 10;
- a tooth 14 extending from a first side of the pan 11 and snap-engaging into an undercut 15 in said section 13;
- a tooth 16 extending from a second side of the pan 11, opposite the first, and engaging in a corresponding seat 17 in the base 10; and

- projections 18 on the base 10 which cooperate with the underlying surface 19 of the pan 11.

[0020] With the container base of the invention, to remove the pan it is sufficient merely to press against the elastically yieldable section (wall) 13 in the direction of the arrow 22 (substantially in a direction perpendicular to the base 10) for the section 13 to move into the positions shown in Figures 2 and 3, so that the pan 11 (because of the force applied to it in the direction of the arrows 23 of Figures 1 and 2 by virtue of the presence of the projections 18, which thrust against the surface 19) rises automatically into the position shown in Figure 5, in which it can be easily gripped and extracted from the base 10.

[0021] A new pan can be easily inserted as shown in Figures 7 to 9, by inserting the pan into the seat provided in the base 10 such that the tooth 16 engages in the seat 17 (Figure 7), and then pressing on the pan 11 in the direction of the arrow 24 of Figure 8, so causing the flexible section 13 to move with resultant snap-engagement of the tooth 14 in the undercut 15, this placing the pan 11 under slight tension because of the action of the projections 18 against its underlying surface 19.

[0022] Figures 10 and 11 show a modification of the inventive concept illustrated by way of non-limiting example in Figures 1 to 9, in which the pair of projections 18 provided at the corners of the base 10 are replaced by a single central projection 25 which, cooperating with the underlying surface of the pan 11, performs the same aforescribed function of automatically extracting the pan from its seat.

[0023] Additionally, in the embodiment of Figures 10 and 11, the wall 26 of the base 10 at the hinge 12 can be at least partly yieldable, to facilitate insertion of the pan 11 into its seat by pressing in the direction of the arrow 27 on the opposite side to that shown in Figures 7 to 9.

[0024] It should be noted that the particular configuration and arrangement of the flexible section 13 enables the user to easily operate it by pressing in a vertical direction perpendicular to the base 10 instead of by a more uncomfortable horizontal action, as is the case in container bases of known type, which do not use the combination of a presser element 13 and counteracting means 18, 19.

[0025] This results in more comfortable use of the container, enabling the pan to be extracted automatically without changing the grip on the container if held in the hand, and also allowing it to be easily used when resting on a horizontal surface.

[0026] The flexibility of the section 13 and of the wall 26 can be achieved in various ways, for example by making cuts of lesser resistance or by thinning down the thickness of the material.

[0027] The object stated in the introduction to the description, of providing a container, particularly but not exclusively for cosmetics, in which pan replacement is

greatly facilitated, is hence attained.

Claims

1. A unit comprising a container base (10) for receiving interchangeable cups or pans (11), particularly but not exclusively for cosmetics products, and at least a pan (11), in which the pan (11) is retained in place by freely releasable retention means comprising an elastically yieldable vertical section (13) extending from the base (10), snap-retention means acting between said section (13) and a first side of said pan (11) and engagement means (16,17) provided on the base and on a second side of the pan, said unit being **characterised in that** said retention means consist of the combination of: said at least one elastically yieldable vertical section (13), said snap-retention means (14,15), said engagement means (16, 17) provided on a second side of the pan (11) opposite the first and acting between the base (10) and the pan (11), and counteracting means acting between the base (10) and the pan (11); said snap-retention means (14,15) consisting of a tooth (14) extending from a first side of the pan (11) and snap-engaging in an undercut (15) located at the base of the vertical section (13) and said counteracting means consisting of at least one projection (25) provided on the base (10) in correspondence with said second side of the pan (11) or centrally, and co-operating with the underlying surface (19) of the pan (11).
2. A unit as claimed in claim 1, **characterised in that** said engagement means (16, 17) consist of a tooth (16) extending from said second side of the pan (11) opposite the first and engaging in a corresponding seat (17) in the base (10).
3. A unit as claimed in claim 1, **characterised in that** said counteracting means (18, 25) consist of a pair of projections (18) on the base (10), provided at those corners of the base (10) opposite the side comprising the section (13).
4. A unit as claimed in claim 1, **characterised in that** said base (10) comprises a second elastically yieldable vertical section or wall (26) in a position opposite said first vertical section or wall (13).

Patentansprüche

1. Eine Einheit, die einen Behälterboden (10) zum Aufnehmen von austauschbaren Näpfchen oder Tiegeln (11), insbesondere, aber nicht ausschließlich, für Kosmetikprodukte, und mindestens einen Tiegel (11) umfaßt, wobei der Tiegel

(11) durch frei freigebbare Rückhaltemittel an seinem Platz gehalten wird, welche einen elastisch nachgebenden vertikalen Abschnitt (13), der sich von dem Boden (10) erstreckt, zwischen dem Abschnitt (13) und einer ersten Seite des Tiegels (11) wirkende Schnapp-Rückhaltemittel und Eingriffsmittel (16, 17), die an dem Boden und an einer zweiten Seite des Tiegels vorgesehen sind, umfassen, wobei die Einheit **dadurch gekennzeichnet ist, daß** die Rückhaltemittel aus der Kombination der folgenden Elemente bestehen: der mindestens eine elastisch nachgebende vertikale Abschnitt (13), die Schnapp-Rückhaltemittel (14, 15), die Eingriffsmittel (16, 17), die auf einer der ersten Seite gegenüberliegenden zweiten Seite des Tiegels (11) vorgesehen sind und zwischen dem Boden (10) und dem Tiegel (11) wirken, und Gegenwirkungsmittel, die zwischen dem Boden (10) und dem Tiegel (11) wirken; wobei die Schnapp-Rückhaltemittel (14, 15) aus einem Zahn (14) bestehen, der sich von einer ersten Seite des Tiegels (11) erstreckt und durch Einschnappen in eine an der Basis des vertikalen Abschnitts (13) angeordnete Hinterschneidung (15) eingreift, und wobei die Gegenwirkungsmittel aus mindestens einem Vorsprung (25) bestehen, der an dem Boden (10) korrespondierend mit der zweiten Seite des Tiegels (11) oder mittig vorgesehen ist und mit der unten liegenden Oberfläche (19) des Tiegels (11) zusammenwirkt.

2. Eine Einheit nach Anspruch 1, **dadurch gekennzeichnet, daß** die Eingriffsmittel (16, 17) aus einem Zahn (16) bestehen, der sich von der ersten Seite gegenüberliegenden zweiten Seite des Tiegels (11) erstreckt und in einen korrespondierenden Sitz (17) in dem Boden (10) eingreift.
3. Eine Einheit nach Anspruch 1, **dadurch gekennzeichnet, daß** die Gegenwirkungsmittel (18, 25) aus einem Paar von Vorsprüngen (18) an dem Boden (10) bestehen, die an denjenigen Ecken des Bodens (10) vorgesehen sind, welche der den Abschnitt (13) umfassenden Seite gegenüberliegen.
4. Eine Einheit nach Anspruch 1, **dadurch gekennzeichnet, daß** der Boden (10) einen zweiten elastisch nachgebenden vertikalen Abschnitt oder eine zweite elastisch nachgebende vertikale Wand (26) in einer dem ersten vertikalen Abschnitt oder der ersten vertikalen Wand (13) gegenüberliegenden Stellung umfaßt.

Revendications

1. Ensemble comprenant un support à conteneur (10) pour recevoir des tasses ou des plateaux interchangeables (11), particulièrement mais pas exclusive-

ment pour les produits cosmétiques, et au moins un plateau (11), dans lequel le plateau (11) est retenu en place par des moyens de fixation à déclenchement libre comprenant une section verticale déformable de façon élastique (13) s'étendant depuis le support (10), des moyens de fixation immédiate agissant entre ladite section (13) et un premier côté dudit plateau (11) et des moyens d'engagement (16, 17) prévus sur le support et sur un second côté du plateau ;

ledit ensemble étant **caractérisé en ce que** lesdits moyens de fixation consistent en la combinaison de : ladite au moins une section verticale déformable de façon élastique (13), lesdits moyens de fixation immédiate (14, 15), lesdits moyens d'engagement (16, 17) prévus sur un second côté du plateau (11) opposé au premier et agissant entre le support (10) et le plateau (11), et les moyens de réaction agissant entre le support (10) et le plateau (11) ; lesdits moyens de fixation immédiate (14, 15) constitués d'une dent (14) s'étendant depuis un premier côté du plateau (11) et s'engageant de façon immédiate dans une rainure (15) située au niveau du support de la section verticale (13) et lesdits moyens de réaction constitués d'au moins une saillie (25) prévue sur le support (10) en correspondance avec ledit second côté du plateau (11) ou au centre, et co-opérant avec la surface sous-jacente (19) du plateau (11).

2. Ensemble selon la revendication 1, **caractérisé en ce que** lesdits moyens d'engagement (16, 17) sont constitués d'une dent (16) s'étendant depuis ledit second côté du plateau (11) opposé au premier et s'engageant dans une assise correspondante (17) dans le support (10).
3. Ensemble selon la revendication 1, **caractérisé en ce que** lesdits moyens de réaction (18, 25) sont constitués d'une paire de saillies (18) sur le support (10), prévues aux angles du support (10) opposés au côté comprenant la section (13).
4. Ensemble selon la revendication 1, **caractérisé en ce que** ledit support (10) comprend une seconde section verticale déformable de façon élastique ou cloison (26) dans une position opposée à ladite première section verticale ou cloison (13).

Fig.1

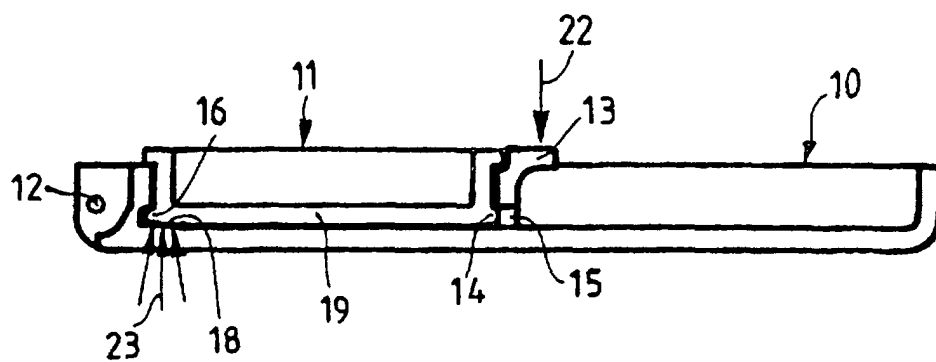


Fig.2

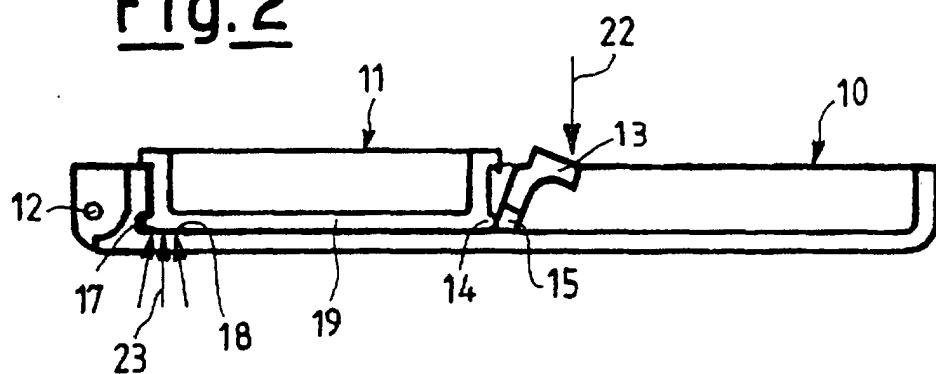


Fig.3

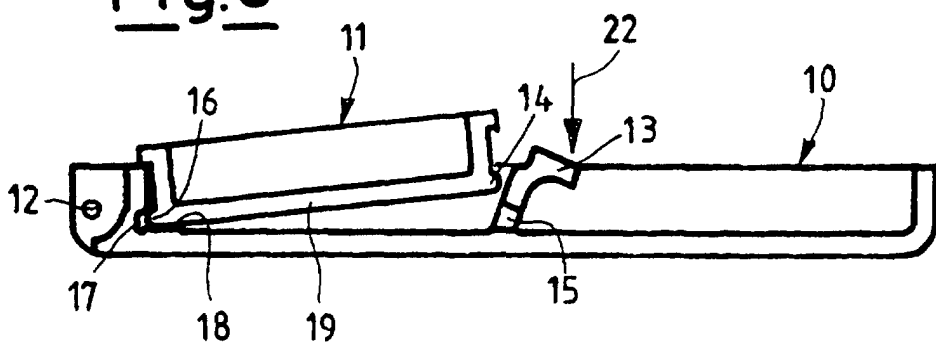


Fig.4

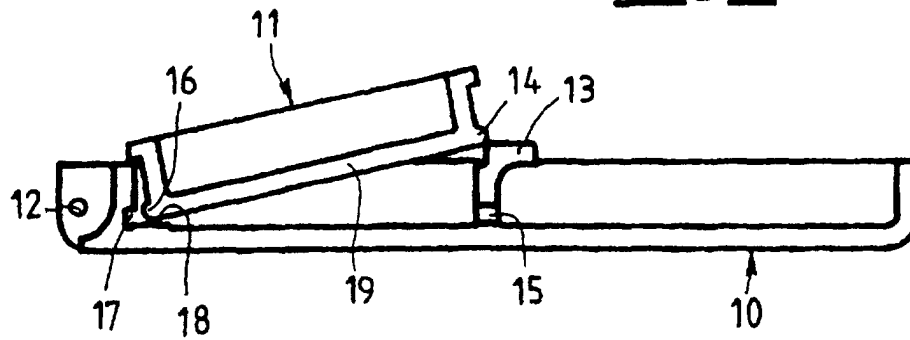


Fig.5

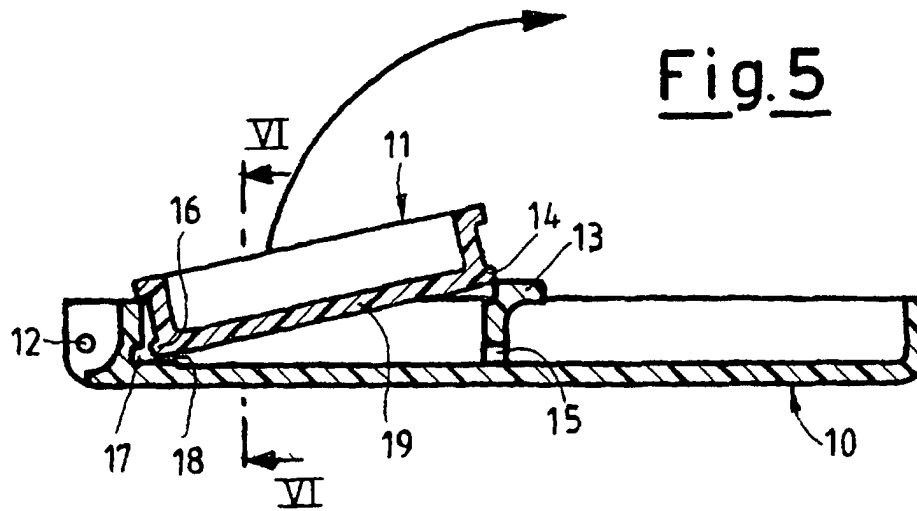


Fig.6

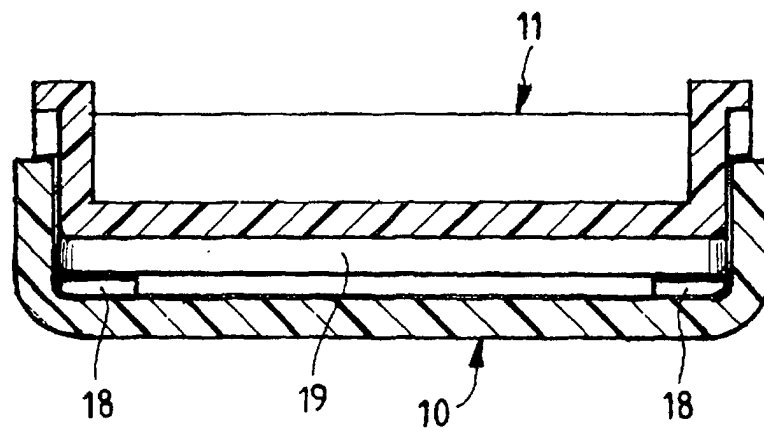


Fig.7

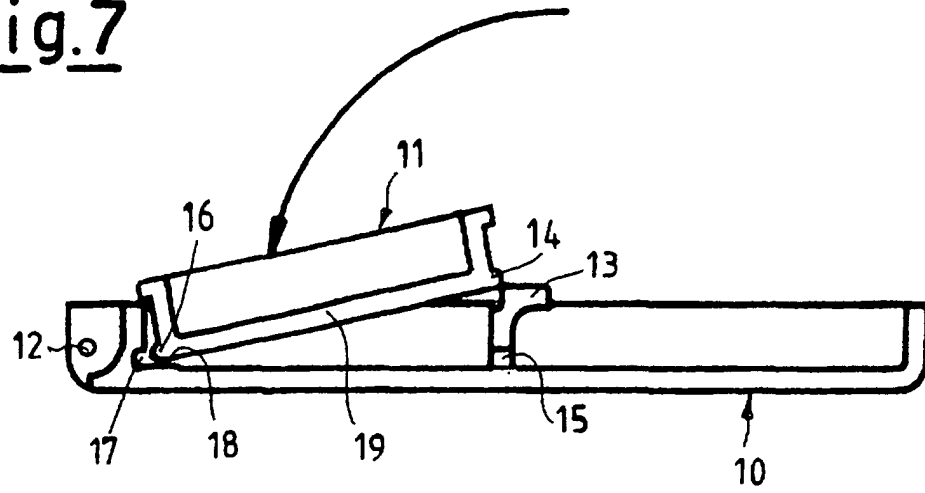


Fig.8

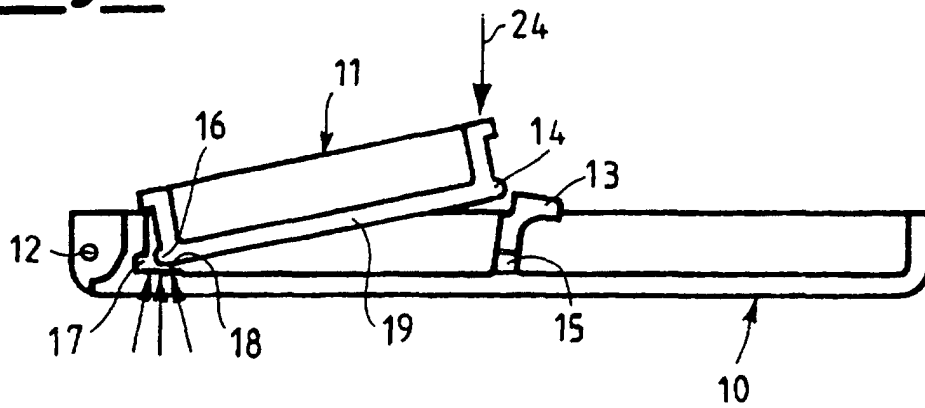


Fig.9

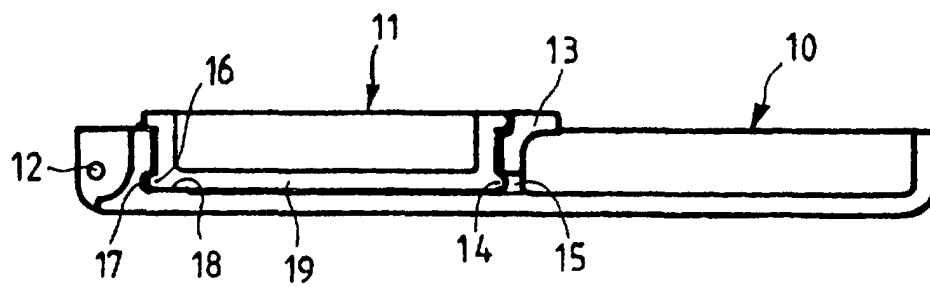


Fig.10

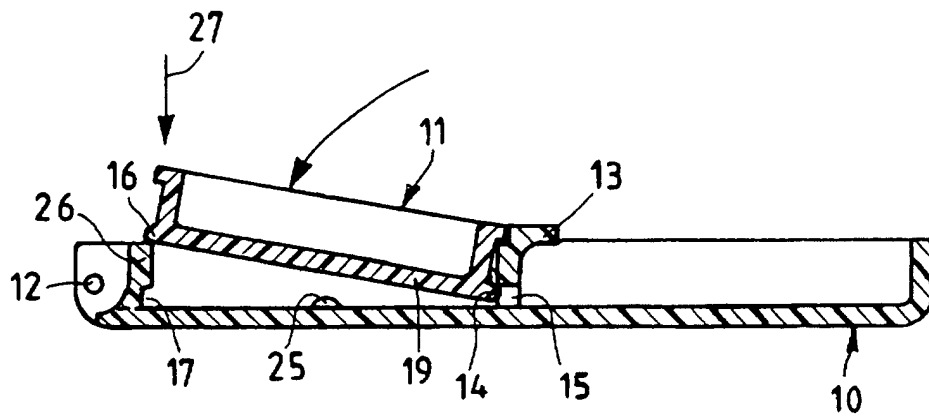


Fig.11

