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(54) Cardboard box, with a removable part having a mirrored surface
Kartonschachtel mit entfernbarem Teil mit einer Spiegelfläche
Boîte en carton dotée d’une partie amovible comprenant une surface dotée d’un miroir

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Description

[0001] A box formed from a single piece of punched, crease-lined and knurled cardboard sheet, intended to contain plasters or pharmaceutical or cosmetic products or the like applicable to a user’s face. The box has a portion bounded by a knurling which can be broken to allow extraction and removal of a portion having a mirror surface on at least a part thereof to enable the user to clearly view that facial portion on which the plaster or the pharmaceutical or cosmetic product is to be applied.

[0002] WO 00/20289 and EP 1493676 A describe boxes made from a single cardboard sheet and in which one of the main box panels is faced by and adjacent to a supplementary panel (to form a pair of parallel adjacent panels) which is spaced from said main panel with which it defines a pocket to house a leaflet illustrating the product contained in the box: in the box described in EP 1493676 A, the more outer of the two adjacent panels presents a breakable part enabling it to be raised to expose the other adjacent panel or an illustrative leaflet resting on it.

[0003] FR-A-2823719 describes a box according to the preamble of claim 1 containing cosmetic products housed between a lower wall 22 and an intermediate wall 3 of the box, these two walls being parallel. The box also comprises an upper wall 4 acting as a box lid and rotatable about a folding line 42 on the cardboard sheet with which the box is made: when the box is in its closed position this upper wall (or lid) 4 is superposed and rests on the intermediate wall 3 from which the upper wall is raised by rotation about said folding line 42 joining the upper wall to the remaining portion of the box.

[0004] In the intermediate wall 3 a breakable knurling 32 is provided in the form of a closed ring which defines a removable central portion 30, the surface 300 (facing the product 10 contained in the box) of which is a mirror. As clearly and repeatedly stated in said French patent (for example the last three lines of page 4) a glue layer 40 must be provided between the lid 4 and the removable portion 30 of the box to firmly join the portion 30 to the lid, such that when the lid is opened the glue 40 drags the portion 30 to hence break the knurling 32. In this manner the portion 30 (having the mirrored surface 300) remains securely fixed to the box lid 4.

[0005] The box described in FR-A-2823719 has the serious drawback that (when the box has been opened to enable the contained product to be used), the cardboard portion 30 with its mirrored surface 300 remains fixed (glued), see also paragraph b of claim 1) on the lid 4, so that the person wishing to view any facial region for applying the product 10 has to move the edge of the open box towards or against the face, making it difficult or even impossible to view that facial region through the mirrored surface 300.

[0006] Again, as the intermediate wall portion 30 can be detached (by breaking the knurling 32) from the intermediate wall 3 only by the pulling action exerted on it by the lid 4 (which is of flexible cardboard), it is very probable that this lid becomes and remains deformed during box opening, which could then not be perfectly closed, with the risk that part of the product 10 emerges, as the lid 4 is unable to be returned to its closed position in which it adheres to the adjacent surface of the intermediate wall 3.

[0007] The main object of the present invention is to provide a box according to claim 1, in which the pair of panels which is positioned upwards in the box has a portion removable and extractable from the box, this panel portion having a surface which is mirrored finished to enable the box user to clearly view that facial part on which the product contained in the box is to be applied.

[0008] Another object is to provide a box of simple and economical production and use.

[0009] These and other objects are attained by a box having the structure and characteristics specified in claim 1 of the present description.

[0010] Preferably the box has the characteristics indicated in the ensuing claims from 2 to 4.

[0011] A preferred but non-limiting embodiment of the box is represented in the accompanying drawings, in which:

Figure 1 is a plan view of a piece of punched, crease-lined and knurled cardboard sheet seen from that side which is to remain in the box interior; Figures from 2 to 4 show the cardboard piece of Figure 1 in its various successive folding steps to form the box; Figure 5 is a perspective view of the finished and closed box; Figures 6 and 7 show the box with its outer upper panel open and, respectively, with a portion of that panel below the outer panel shown raised upwards after partial breakage of the knurling which separates it from the panel in which that portion is provided; Figure 8 is a perspective view showing the completely open box, in the step following that of Figure 7, in which the said panel portion has been removed; Figure 9 shows the box of Figure 8, but with its outer upper panel lowered onto the box, which is hence closed after its prior use; and Figures from 10 to 13 show, in different stages of use, a structural variant of the removable panel portion underlying the box outer panel.

[0012] With specific reference to Figure 1, this shows in extended plan view a piece of punched, crease-lined cardboard, seen from that side which is to face the interior of the box to be formed from this cardboard piece.

[0013] The cardboard piece comprises seven consecutive cardboard portions separated from one another by transverse folding lines, all indicated by the number 8, and defining in order a first flap 5, a first, a second and respectively a fourth main panel (1, 2, 3 and 4 respectively), a supplementary panel 6 and a second flap
7. To form the box, these cardboard portions are folded about the respective folding lines 8. Firstly, the panel 1 (and with it the first flap 5) is rotated through 180° about that folding line 8 which separates it from the panel 2, hence superposing the panel 1 and the flap 5 on the panels 2 and 3, as shown in Figure 2: in this position a glue layer (represented by dots) is applied to the surface of the flap 5, as shown in Figure 2. At this point the end of a finger can be inserted into the hole 21 and the adjacent end of the panel portion 1 A be gripped with two fingers to be hence raised upwards (in the direction indicated by the two arrows C), to break the knurling 20 (Figure 7) and hence cause complete detachment of the panel portion 1 A, which can be extracted from the box (Figure 8).

[0014] The cardboard is then rotated about that folding line 8 which separates the panels 2 and 3, to superpose the panel 1 on the panel 6 and the first flap 5 on the panel 4, on which this flap 5 is fixed by the glue previously applied to it (Figure 3).

[0015] A glue layer (represented by dots in Figure 3) is then applied to the two ends 7A of the second flap 7, which are divided from the remaining portion of said second flap by breakable knurled lines 9 which separate them from the central portion 10 of said flap 7: the portion 10 is joined to the remaining part of the cardboard along the folding line 8 which separates it from the panel 6, and about which the flap 7 is finally rotated to superpose it and glue it onto the panel 2, as shown in Figure 4.

[0016] At this point the box formation by the cardboard box production firm is complete and the box can be made to assume its desired attitude ready for use, by simply exerting pressure (in the direction of the two arrows indicated by the letter A in Figure 4).

[0017] From the already described figures it can be noted that tabs (for simplicity not numbered) project from the opposing ends of the panels 2 and 4, and that from the opposing ends of the panels 1 and 3 there project lateral panels 11, 12 which are separated from the main panels (as are the aforesaid tabs) by longitudinal folding lines 13 (perpendicular to the transverse folding lines 8) about which these lateral panels (and the tabs) can be folded to close the box ends in known manner, as visible and deducible from Figures 5 to 9.

[0018] Reference will now be again made to the accompanying drawings to understand the essential inventive characteristics of the present invention. A breakable knurling 20 is provided in the first main panel 1 and bounds a panel portion 1 A which is separated from the panel 2 by an elongated hole 21. The panel portion 1 A can be gripped by two fingers (one finger can be inserted below this panel portion after passing the finger through the hole 21) for its separation from the box by breaking the knurling 20. A mirrored surface 22 (consisting for example of a thin reflecting 100 micron sheet of polyester fixed to the panel portion 1 A, or mirror silvering formed in known manner on the smooth outer surface of the said panel portion). It will now be assumed that the box has been formed and closed as shown in Figure 5; in this condition the supplementary panel 6 rests on the main panel 1 and on the panel portion 1 A, while the flap 7 is superposed on the panel 2, on which it is fixed by its two ends 7A glued onto the panel 2.

[0019] To open the box, the free end of the central portion 10 of the flap 7 is gripped and raised (in the direction indicated by the arrow B in Figure 5) to break the knurling 9 and hence enable the supplementary panel 6 to be raised away from the underlying main panel 1 and from the panel portion 1 A (Figure 6).

[0020] At this point the end of a finger can be inserted into the hole 21 and the adjacent end of the panel portion 1 A be gripped with two fingers to be hence raised upwards (in the direction indicated by the two arrows C), to break the knurling 20 (Figure 7) and hence cause complete detachment of the panel portion 1 A, which can be extracted from the box (Figure 8).

[0021] The panel portion 1 A with its mirrored surface 22 can thus be easily used by the box user to clearly view that facial portion on which the product contained in the box, for example a small plaster or a cosmetic or pharmaceutical cream or the like, is to be applied.

[0022] The box can then be again closed by folding the supplementary panel 6 onto the main panel 1 and inserting (as shown in Figure 9) a flexible appendix 30 (provided in the flap 7 by a profiled cut 31) into a window 32 provided in the panel 2. The box is hence reclosed: this system for reclosing the box outer panel after its opening is known per se and is represented in patent applications EP1493676A, EP1538090A and EP1783056A.

[0023] In Figures from 1 to 4 and from 6 to 8 the removable portion 1 A with the mirrored surface 22 consists of a flat uniform portion of the main panel 1.

[0024] Figures from 10 to 13 show a structural variant of said flat portion, this structural variant being shown by the reference numeral 1 B for clarity.

[0025] The panel portion 1 B is shown in plan in Figure 10: a folding line 40 is provided thereon which divides it into two substantially equal parts on which a mirrored surface 22A is provided. The mirrored surface 22A can be a single surface (in which case the folding line 40 extends through it) or can consist of two mutually adjacent separate mirrored portions: in all cases a folding line 40 is provided in the panel portion 1 B to define two separate panel portions (both identified in the drawings by the number 1 B) which are foldable or rotatable about this folding line 40 (Figures from 11 to 13) to enable them to be superposed one on the other (Figure 13).

[0026] As can be seen from all the Figures from 10 to 13, in each of the two separate panel portions 1 B, in a position spaced from the folding line 40, a cut is provided defining a projecting appendix 41 which is flexible and is engagable with its corresponding adjacent appendix 41 when the two panel portions 1 B are folded such that one is superposed on the other (Figure 13).

[0027] Between the two panel portions 1 B, a few small plasters 50 can be inserted (Figures 11-13) after withdrawing them from the box of which the panel portion 1 B formed part. In this manner the two panel portions 1 B when in their folded and closed position (Figure 13) can be placed in and kept in a handbag or a coat pocket, to be easily used when required.
1. A box formed from a single cardboard piece, having a removable portion (1 A) with a mirrored surface (22), and comprising seven consecutive cardboard portions (1-7) separated one from another by transverse parallel folding lines (8), and defining in order a first flap (5), a first, a second, a third and respectively a fourth main panel (1-4), a supplementary panel (6) and a second flap (7), these cardboard portions (1-7) being folded about the respective transverse folding lines (8), the first flap (5) being folded about that folding line (8) which separates it from the first main panel (1) and glued to the inner surface of the fourth main panel (4), said box supplementary panel (6) being folded about that folding line (8) which separates it from the fourth main panel (4) and said second flap (7) being superposed and glued on the outer surface of said second main panel (2), there also being provide lateral panels (11, 12) which project laterally from at least one end of at least one of said main panels (1-4) from which these lateral panels (11, 12) are separated by longitudinal folding lines (13) perpendicular to said transverse folding lines (8), the lateral panels (11, 12) being foldable to close the ends of said box, in said first main panel (1) a knurling (20) being provided opposing therein a panel portion (1A) which comprise a mirrored surface (22), characterised in that said panel portion (1A) can be removed from the first panel (1) and extracted from the box by breaking said knurling (20) when the box is open with its supplementary panel (6) raised away from the first main panel (1).

2. A box as claimed in claim 1, characterised in that said portion (1A) removable from the first main panel (1) is separated from the adjacent second main panel (2) by an elongated hole (21) which interrupts said knurling (20) and defines an aperture (21) for the insertion of a finger of one hand below said panel portion (1A), which can hence be gripped with two fingers to be removed from the box, after tearing said knurling (20).

3. A box as claimed in claims 1 and 2, characterised in that said elongated hole (21) extends both along the first main panel (1) and along the second main panel (2) of the box.

4. A box as claimed in claim 1, characterised in that in the removable panel portion (1 B) a folding line (40) is provided which divides this portion into two parts foldable one onto the other about said folding line, the free edge of each of said two panel portion parts (1 B) being provided with elements (41) which can be mutually engaged to retain the two parts (1 B) mutually superposed.

1. Kasten, welcher aus einem einzigen Pappenstück ausgebildet ist, welcher einen entfernmbaren Abschnitt (1 A) mit einer verspiegelten Oberfläche (22) aufweist und sieben aufeinanderfolgende Pappenschnitte (1-7) umfasst, welche voneinander durch quer verlaufende parallele Faltlinien (8) getrennt sind und in einer Reihenfolge eine erste Lasche (5), eine erste, eine zweite, eine dritte bzw. eine vierte Hauptplatte (1-4), eine Hilfsplatte (6) und eine zweite Lasche (7) definieren, wobei diese Pappenschnitte (1-7) um die entsprechenden quer verlaufenden Faltlinien (8) gefaltet sind, wobei die erste Lasche (5) um diejenige Faltlinie (8) gefaltet ist, welche sie von der ersten Hauptplatte (1) trennt, und an die innere Oberfläche der vierten Hauptplatte (4) geklebt ist, wobei die Hilfsplatte (6) des Kastens um diejenige Faltlinie (8) gefaltet ist, welche sie von der vierten Hauptplatte (4) trennt, und wobei die zweite Lasche (7) über der äußeren Oberfläche der zweiten Hauptplatte (2) angeordnet und auf diese aufgeklebt ist, wobei seitliche Platten (11, 12) vorhanden sind, welche seitlich von zumindest einem Ende von zumindest einer der Hauptplatten (1-4) hervorragen, von welchen diese seitlichen Platten (11, 12) durch längs verlaufende Faltlinien (13) senkrecht zu den quer verlaufenden Faltlinien (8) getrennt sind, wobei die seitlichen Platten (11, 12) faltbar sind, um die Enden des Kastens zu verschießen, wobei bei der ersten Hauptplatte (1) eine Rändelung (20) vorhanden ist, welche darin einen Plattenabschnitt (1 A) verbindet, welcher eine verspiegelte Oberfläche (22) umfasst, dadurch gekennzeichnet, dass der Plattenabschnitt (1 A) von der ersten Platte (1) entfernt und von dem Kasten entnommen werden kann, indem die Rändelung (20) gebrochen wird, wenn der Kasten offen ist, wobei seine Hilfsplatte (6) gegenüber der ersten Hauptplatte (1) angehoben ist.

2. Kasten nach Anspruch 1, dadurch gekennzeichnet, dass der Abschnitt (1 A), welcher von der ersten Hauptplatte (1) entfernt ist, von der benachbarten zweiten Hauptplatte (2) durch ein längliches Loch (21) getrennt ist, welches die Rändelung (20) unterbucht und eine Öffnung (21) für die Einführung eines Fingers einer Hand unter den Plattenabschnitt (1 A) definiert, welcher daher mit zwei Fingern gefällt werden kann, um von dem Kasten entfernt zu werden, nachdem die Rändelung (20) zerrissen worden ist.

3. Kasten nach Ansprüchen 1 und 2, dadurch gekennzeichnet, dass sich das längliche Loch (21) sowohl entlang der ersten Hauptplatte (1) als auch entlang der zweiten Hauptplatte (2) des Kastens erstreckt.

4. Kasten nach Anspruch 1, dadurch gekennzeichnet, -
net, dass bei dem entfernbaren Plattenabschnitt (1B) eine Faltlinie (40) vorhanden ist, welche diesen Abschnitt in zwei Teile teilt, wobei eines um die Faltlinie auf das andere falbar ist, wobei die freie Kante von jedem der zwei Plattenabschnittsteile (1B) mit Elementen (41) versehen ist, welche wechselseitig in Eingriff gebracht werden können, um die zwei Teile (1B) wechselseitig übereinander anzuordnen.

Revendications

1. Boîte formée à partir d’une pièce de carton unique, ayant une partie amovible (1A) avec une surface dotée d’un miroir (22), et comprenant sept parties consécutives en carton (1 à 7) séparées les unes des autres par des lignes de pliage transversales parallèles (8), et définissant dans l’ordre un premier rabat (5), un premier, un deuxième, un troisième et respectivement un quatrième panneau principal (1 à 4), un panneau supplémentaire (6) et un second rabat (7), ces parties en carton (1 à 7) étant pliées au niveau des lignes de pliage transversales respectives (8), le premier rabat (5) étant plié le long de la ligne de pliage (8) qui le sépare du premier panneau principal (1) et collé à la surface intérieure du quatrième panneau principal (4), ledit panneau supplémentaire de boîte (6) étant plié le long de la ligne de pliage (8) qui la sépare du quatrième panneau principal (4) et ledit second rabat (7) étant superposé et collé sur la surface extérieure dudit deuxième panneau principal (2), des panneaux latéraux (11, 12) étant également prévus qui font saillie latéralement à partir d’au moins une extrémité d’au moins un desdits panneaux principaux (1 à 4) desquels ces panneaux latéraux (11, 12) sont séparés par des lignes de pliage longitudinales (13) perpendiculaires auxdites lignes de pliage transversales (8), les panneaux latéraux (11, 12) étant pliables pour fermer les extrémités de ladite boîte, un moletage (20) étant prévu dans ledit premier panneau principal (1) pour y relier une partie de panneau (1A) dotée d’un miroir (22), caractérisée en ce que ladite partie (1A) est séparée du deuxième panneau adjacent (2) par un trou oblong (21) qui interrompt ledit moletage (20) et définit une ouverture (21) pour l’insertion d’un doigt d’une main en dessous de ladite partie de panneau (1A), qui peut ainsi être saisie avec deux doigts pour être détachée de la boîte, après avoir déchiré ledit moletage (20).

2. Boîte selon les revendications 1 et 2, caractérisée en ce que ledit trou oblong (21) s’étend à la fois le long du premier panneau principal (1) et le long du deuxième panneau principal (2) de la boîte.

3. Boîte selon la revendication 1, caractérisée en ce que, dans la partie de panneau amovible (1B), il est prévu une ligne de pliage (40) qui divise cette partie en deux parties pliables l’une sur l’autre le long de ladite ligne de pliage, le bord libre de chacune de ces deux parties de panneau (1B) étant pourvu d’éléments (41) qui peuvent être mutuellement engagés pour maintenir les deux parties (1B) mutuellement superposées.
Fig. 3

Fig. 4
REFERENCES CITED IN THE DESCRIPTION

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