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(54) **A CONTAINER FOR DISPENSING PILLS, TABLETS AND CAPSULES**

TABLETTENPACKUNG

RESERVOIR DE DISTRIBUTION DE PILULES, DE COMPRIMES ET DE CAPSULES

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(56) References cited:
DE-B- 1 909 932 **SE-B- 350 742**
US-A- 4 165 709

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Description

THIS INVENTION concerns a container in accordance with the preamble of claim 1 for dispensing pills, tablets and capsules.

It is known to provide such a device as described in German patent specification DE-B-1909932 which device includes a fixed apertured tray with a closable lid, the device being adapted to receive beneath the lid a pre-packed card having individual compartments each for containing a single pill and faced with a sheet of foil, the compartments being located above individual circular holes in the tray such that by depressing a selected compartment the pill contained therein is pushed outwardly through the ruptured foil and through the associated aperture in the tray to emerge beneath the tray. When the device is used as intended, the lid must be opened before a pill can be dispensed, since the top of the tray is covered by a lid without apertures.

Containers for dispensing pills tablets and capsules, in accordance with the present invention are intended for use by individual patients within the community but more usually in hospitals and other establishments where the dosage of medicines for patients may be made up, say, once a week from a central dispensary.

According to the present invention as characterised in claim 1 there is provided an alternative to the container known from the prior art cited above.

Preferred embodiments of the invention are defined in the dependent claims.

An embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:-

Fig. 1 is a plan view of a container made in accordance with the invention;

Fig. 2 is an underneath view;

Fig. 3 is a view of one end;

Fig. 4 is a vertical cross-section taken along line IV-IV of Fig. 1;

Fig. 5 is a cross-sectional view similar to Fig. 4 but incorporating a modified internal configuration.

A container for dispensing pills, tablets or capsules, made in accordance with the invention comprises a box 10 having a base, side and front walls 12 and 13 respectively, and a rear wall 14.

Hingedly attached at 15 to the rear of side walls 12 is a lid 16 which when closed covers the interior of the box. The lid 16 includes rows of windows 17 through which the interior of the box is visible, and in the example shown there are 7 rows representing the days of the week and each containing 6 separate windows representing 6 periods of each day.

Slidably located beneath the windows of each of the 7 rows is a transparent sliding shutter 18 supported beneath the underside of the lid 16 by shelf supports 19 (see Figs. 4 and 5) formed integrally with the lid. Click stops 20 or similar catch devices are provided such that the shutters 18 may be slid open incrementally to expose one or more of the six windows in each daily row and to prevent the shutters from being easily removed entirely from the lid.

As may be seen from the cutaway illustration in Fig 1, the box 10 contains a removable tray 21 which is formed to provide a plurality of compartments 22 each beneath one of the windows 17 in the lid when closed. Two edge regions of the tray 21 include ledges 23 and 24 to which may be adhered printed strips of paper on which the days of the week and either a series of numbers or times of the day, respectively are visible. For this purpose, slots 25 and 26 respectively are provided in the lid 16 so that when it is closed the printed material is visible through the slots.

Referring now to Figs. 2 and 3, a card 27 is placed in the bottom of the box 10 beneath the tray 21 and contains printed material which is visible through one or more cut-outs or windows 28 in the bottom of the box. The printed material may provide information, for example, as to the patient's name, his doctor and the medicines, dosages and times appropriate to that patient. The card 27 is loosely located in a recessed portion of the bottom of the box and may be readily replaced by first removing the tray 21, but it is otherwise held captive therein-by the tray. Therefore, by turning the box over the printed material may be easily read.

In one end wall 12 of the box there is provided a further window 29 and a slot 30 (see Fig. 4) to contain a further label on which the patient's details may be printed and perhaps containing a photograph of the patient as illustrated at 31 so that basic information concerning the patient may be viewed from the side of the container when a number of such containers are stacked together.

Slots 25 and 26 may be closed by replaceable plugs 32 (see Fig. 3) so that the information otherwise visible beneath the slots may be interchangeable. In this way, alternative information may be provided without changing the information printed on the sides of the tray 21. For example, information in different languages or in braille may be provided on the device for specialised use.

A catch 33 is provided at the front of the box whereby the lid may be normally retained in the closed position but it will be seen that when the lid is opened, the tray 21 may be filled without the tray being removed from the box containing the patient's details. This avoids the likelihood of incorrect medicines being dispensed to patients.

As will be seen from Figs. 1 and 4, a thin acetate sheet or film 35 is placed in sealed contact with the upper edges of the tray 21. The sheet 35 may be sealed only around the outer peripheral edges of the tray or

alternatively also around the top edges of each compartment, by the application of an adhesive as indicated by dotted lines 36 applied either to the top of the tray or to the sheet, or both, before the sheet is applied. The sheet is applied after the tray is filled.

The sheet 35 may be translucent or transparent and may be of such material as to be capable of being punctured selectively to permit the contents of one or more compartments to be discharged through the windows 17. Zone perforation 37 of the sheet 35 along one or more edges of the compartments 22 is preferable to assist opening in this way. The perforation 37 may alternatively be over the central regions of the compartments.

In some cases, the need for the sliding shutters 18 will be avoided by the use of such a sheet or film. In practice, the sheet or film 35 may be applied with the tray 21 in situ or before insertion into the box.

Again, in some cases the sheet or film 35 may be reusable indefinitely or until the adhesive strips 36 become ineffective. In this case, dispensing of the contents would be not by puncturing but by peeling back the sheet 35, perhaps at the start of a week in which case the shutters 18 would be required to occlude the compartments 22 until the contents of each compartment are required.

When required, with the lid hinged open, the entire tray 21 may be withdrawn from the box for cleansing or replacement, and so the card 27 may be replaced or updated after removal of the tray.

The other card may be removed from slot 29 in the side wall 12 of the box once the lid is hinged open.

The box and lid are preferably made from a rigid plastics material and the shutters 18 from a transparent plastics material, whilst the tray 21 is preferably vacuum formed from a semi-rigid lightweight plastics so as to be inexpensively replaceable when worn or broken. The cards carrying patient information may be of paper and thus replaceable when amendment is required, or alternatively of a so-called wipe-clean plastics which may be written upon using an indelible pen.

Referring now to Fig. 5, in a modified form, the box may contain two (or more) trays 22 stacked in superimposed relationship, each filled with pills or tablets, and each sealed with a separate sheet or film 35. For this purpose the box may be made deeper, or the trays shallower. With this modification, two or more weeks' supply of medication can be stored in the container, and when each uppermost tray becomes empty it should be placed at the bottom of the stack.

It is not intended to limit the invention to the above example only. For example, shutters 18 may be other than transparent, the numbers and sizes of the windows in the lid and the compartments in the tray may be different from those illustrated and described, and the patient information to be provided on the underside of the container may be written in indelible ink on a panel of wipe-clean material.

The tray 21 may be in the form of compartmental walls formed, perhaps integrally, within the box.

The plugs 32 which are interchangeable to provide different information may be colour-coded for identification.

The lid 16 may be slidable or fully removable with respect to the box to expose the compartments of the tray, provided that the tray need not be removed from that part of the box or lid containing the patient information.

Claims

1. A container for dispensing pills, tablets and capsules, comprising a box (10) with a hinged or removable lid (16), the box defining a plurality of windows (17) through which the contents may be dispensed selectively with the lid closed, a tray (21) removably located in the box (10) beneath the lid (16) and having a plurality of compartments (22) aligned with said windows (17) and a sheet or film (35) capable of selective removal or rupturing to permit dispensing of the contents through the windows without opening the lid, the sheet or film (35) extending across the upper edges of at least some of the compartments (22) in the tray (21) in sealed contact therewith to occlude said compartments, such that by selective rupturing of the sheet or film (35) the contents of individual compartments (22) may be dispensed selectively through the associated aligned windows (17), characterised in that the windows (17) are provided in the lid (16).
2. A container according to Claim 1, characterised in that it includes shutters (18) to occlude the windows, which shutters may be opened selectively to permit access to one or more of said compartments (22) for the discharge of the contents.
3. A container according to Claim 1 or Claim 2, wherein the sheet or film (35) extends across all of the compartments (22) in the tray (21) and is in sealed contact with the upper peripheral edges of the compartments.
4. A container according to any preceding claim, wherein said sheet or film (35) is perforated in zones (37) such as to provide selective access separately to each one of said compartments.
5. A container according to Claim 2, characterised in that each said shutter (18) is disposed slidably with respect to one row of windows (17) in the lid (16) and includes a catch device (20) whereby the shutter may be slid open incrementally to expose one or more of the windows in said row.
6. A container according to Claim 2, characterised in that said shutters (18) are transparent.

7. A container according to any preceding claim, characterised in that said sheet or film (35) is of a thin transparent acetate material such that it may be removably attached to said tray (21) by a previously applied adhesive along the upper compartmental edges (36) and the peripheral edges of the tray. 5
8. A container according to any preceding claim, wherein said tray (21) is formed from a semi-rigid lightweight plastics. 10
9. A container according to any preceding claim, characterised in that it includes at least two removable compartmented trays (21) located in superimposed relationship within the box (12), at least the or each tray (21) beneath the upper one having said sheet or film (35) extending across the compartments. 15

Patentansprüche

1. Behälter zum Abgeben von Pillen, Tabletten und Kapseln, mit einem Kasten (10) mit einem anscharnierten oder entfernbaren Deckel (16), wobei der Kasten mehrere Fenster (17) aufweist, durch die hindurch der Inhalt bei geschlossenem Deckel wahlweise abgegeben werden kann, einer Schale (21), die in dem Kasten (10) unter dem Deckel (16) herausnehmbar angeordnet ist und mehrere Zellen (22) aufweist, welche mit den Fenstern (17) ausgerichtet sind, und einem Blatt oder einer Folie (35), die wahlweise entfernt oder durchbrochen werden kann, um das Abgeben des Inhalts durch die Fenster hindurch zu gestatten, ohne daß der Deckel geöffnet wird, wobei sich das Blatt oder die Folie (35) über die oberen Ränder von wenigstens einigen Zellen (22) in der Schale (21) in dichtem Kontakt mit denselben erstreckt, um die Zellen zu verschließen, so daß durch wahlweises Durchbrechen des Blattes oder der Folie (35) der Inhalt der einzelnen Zellen (22) durch die zugeordneten ausgerichteten Fenster (17) hindurch wahlweise abgegeben werden kann, dadurch gekennzeichnet, daß die Fenster (17) in dem Deckel (16) vorgesehen sind. 20 25 30 35 40
2. Behälter nach Anspruch 1, dadurch gekennzeichnet, daß er Verschlussschieber (18) zum Verschließen der Fenster aufweist, wobei die Verschlussschieber wahlweise geöffnet werden können, um Zugang zu einer oder mehreren Zellen (22) für die Abgabe des Inhalt zu schaffen. 50
3. Behälter nach Anspruch 1 oder Anspruch 2, wobei sich das Blatt oder die Folie (35) über sämtliche Zellen (22) in der Schale (21) erstreckt und mit den oberen Umfangsrändern der Zellen in dichtem Kontakt ist. 55

4. Behälter nach irgendeinem vorhergehenden Anspruch, wobei das Blatt oder die Folie (35) in Zonen (37) perforiert ist, so daß wahlweise Zugang separat zu jeder einzelnen Zelle geschaffen werden kann.
5. Behälter nach Anspruch 2, dadurch gekennzeichnet, daß jeder Verschlussschieber (18) in bezug auf eine Reihe von Fenstern (17) in dem Deckel (16) verschiebbar angeordnet ist und eine Arretiervorrichtung (20) aufweist, wodurch der Verschlussschieber schrittweise aufgeschoben werden kann, um ein oder mehrere Fenster in der Reihe freizulegen.
6. Behälter nach Anspruch 2, dadurch gekennzeichnet, daß die Verschlussschieber (18) transparent sind.
7. Behälter nach irgendeinem vorhergehenden Anspruch, dadurch gekennzeichnet, daß das Blatt oder die Folie (35) aus einem dünnen, transparenten Acetatmaterial besteht, so daß es an der Schale (21) durch einen zuvor aufgetragenen Klebstoff längs der oberen Zellenränder (36) und der Umfangsränder der Schale lösbar befestigt werden kann. 20 25
8. Behälter nach irgendeinem vorhergehenden Anspruch, wobei die Schale (21) aus einem halbstarren, leichten Kunststoff besteht. 30
9. Behälter nach irgendeinem vorhergehenden Anspruch, dadurch gekennzeichnet, daß er wenigstens zwei entnehmbare, in Zellen unterteilte Schalen (21) aufweist, die in dem Kasten (12) übereinander angeordnet sind, wobei wenigstens diejenige oder jede Schale (21), die sich unter der oberen befindet, mit dem Blatt oder der Folie (35), das bzw. die sich über die Zellen erstreckt, versehen ist. 35 40

Revendications

1. Récipient pour distribuer des pilules, des comprimés et des capsules, comprenant une boîte (10) munie d'un couvercle (16) articulé à charnière ou amovible, la boîte définissant une pluralité de fenêtres (17) à travers lesquelles les contenus peuvent être distribués sélectivement en laissant le couvercle fermé, un plateau (21) disposé de façon amovible dans la boîte (10) sous le couvercle (16) et ayant une pluralité de compartiments (22) alignés avec lesdites fenêtres (17) et une feuille ou un film (35) pouvant être sélectivement enlevé ou brisé pour permettre de distribuer les contenus à travers les fenêtres sans ouvrir le couvercle, la feuille ou le film (35) s'étendant en travers des bords supérieurs d'au moins certains des compartiments (22) du pla- 45

teau (21) en contact étanche avec ces bords pour obturer lesdits compartiments de telle manière que, par rupture sélective de la feuille ou du film (35), les contenus des compartiments individuels (22) puissent être distribués sélectivement à travers les 5
fenêtres alignées correspondantes (17), caractérisé en ce que les fenêtres (17) sont prévues dans le couvercle (16).

feuille ou ledit film (35) qui s'étend en travers des compartiments.

2. Récipient selon la revendication 1, caractérisé en ce qu'il comprend des volets (18) pour obturer les 10
fenêtres, lesquels volets peuvent être ouverts sélectivement pour permettre d'accéder à un ou plusieurs desdits compartiments (22) pour la distribution des contenus. 15
3. Récipient selon la revendication 1 ou la revendication 2, dans lequel la feuille ou le film (35) s'étend en travers de tous les compartiments (22) du plateau (21) et est en contact étanche avec les bords 20
périphériques supérieurs des compartiments.
4. Récipient selon une quelconque des revendications précédentes, dans lequel ladite feuille ou ledit film (35) est perforé par zones (37) de manière à per- 25
mettre d'accéder sélectivement et séparément à chacun desdits compartiments.
5. Récipient selon la revendication 2, caractérisé en ce que chacun desdits volets (18) est disposé de 30
façon coulissante par rapport à une rangée de fenêtres (17) du couvercle (16) et comprend un dispositif d'arrêt (20) grâce auquel on peut ouvrir le volet incrémentalement par coulissement pour découvrir une ou plusieurs des fenêtres de ladite 35
rangée.
6. Récipient selon la revendication 2, caractérisé en ce que lesdits volets (18) sont transparents. 40
7. Récipient selon une quelconque des revendications précédentes, caractérisé en ce que ladite feuille ou ledit film (35) est fait d'une matière d'acétate trans- 45
parente mince, de sorte qu'il peut être attaché de façon amovible audit plateau (21) par un adhésif appliqué préalablement le long des bords supérieurs (36) des compartiments et des bords péri-
phériques du plateau.
8. Récipient selon une quelconque des revendications précédentes, dans lequel ledit plateau (21) est 50
formé d'une matière plastique légère semi-rigide.
9. Récipient selon une quelconque des revendications précédentes, caractérisé en ce qu'il comprend au 55
moins deux plateaux compartimentés amovibles (21) placés de façon superposée à l'intérieur de la boîte (12), au moins le ou chaque plateau (21) situé au-dessous du plateau supérieur possédant ladite



