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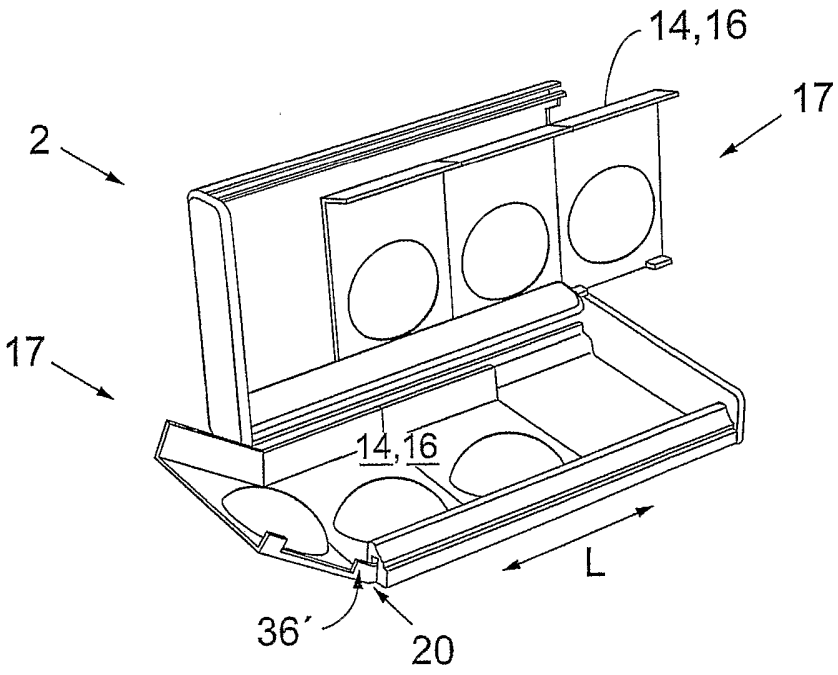
(54) **Title:** CASE FOR PACKAGE OF CONTACT LENSES



(57) **Abstract:** The present invention relates to a case (2) for packages of contact lenses (14, 16) and comprising a first (4) and a second lid (6). The lids are rotatably arranged (R) relative each other by way of a hinge (8) or the similar. At least the first lid (4) comprises a guide rail (10), at an edge part (12) of the first lid (4), and intended to act in realisably engagement with one package of a contact lens (14, 16) for retaining one or more contact lens packages. The guide rail (10) permits that a package of a contact lens (14, 16) is displaceable in the longitudinal direction (L) of the case. A short side (18) of the first lid (4) is formed with an open end part (20). A package of a contact lens (14, 16) in the lid (4) is displaceable out through and removable from the open end part (20).

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CASE FOR PACKAGE OF CONTACT LENSES

TECHNICAL FIELD

The present invention relates to a case for packages of contact lenses.

BACKGROUND

Storage of packages of contact lenses is a common problem. For some time, it has become more and more common with disposable lenses that are used one day and then thrown away. In particular what concerns such disposable lenses, it is a significant problem as far as it concerns the storage of the packages for the contact lenses, delivered in the shape of blister packages, which respective packages contains a contact lens in a sterilized contact lens liquid. The disposable lenses are marketed in cardboard boxes that contains strips with single packages of contact lenses, usually five pieces of contact lens packages on each strip. Merely one month's use of disposable lenses thus implies about 60 pieces of single contact lens packages in total, exclusive an extra number of contact lenses if any contact lens is defect etc. It is obvious that the handling of disposable lenses is a problem, for example during a journey.

Further, the today present cardboard boxes for contact lens packages are unpractical since the cardboard is easily broken, especially if they become damp and wet. The strips with contact lens packages get easily stuck into each other and are therefore difficult to handle during withdrawal and reintroduction in the cardboard boxes, which implies that the contact lens packages become kept all over the place in cupboards, cases, bags and necessaries. In particular during travel it is a risk that the contact lens packages are damaged if they are carelessly carried without a good and protecting packaging. Blister packages are relatively fragile and may be easily perforated by sharp objects whereby the protecting

sterilized contact lens liquid is poured out and the lens becomes useless within short. In addition, one handling problem is that a person has different visual defects on respective eye and with that, it is common that different strength for right and left eye, respectively, of the contact lenses is frequent, and for that reason it is thus important to have a safe control of the different contact lenses. It is also important to be able to keep the different contact lenses apart if several persons in the same housekeeping, or for example persons who are sharing hotel room or luggage, are carrying contact lenses. Containers, cases, boxes and storage covers are previously known for storing of contact lenses, but that there are no known solution that admit a sufficient satisfactory simplicity, organization and handling of the contact lenses. The hitherto known storage boxes are only related to matching spaces for the size of strips of contact lenses. If the storage boxes are opened or if they are opened by themselves, the contact lens packages may fall out. Neither is it they provided for any simple discharge, when a contact lens package shall be removed from such a storage box. A whole strip of contact lens packages has to be taken out from the box, a desired contact lens package is removed from the strip, where after remaining contact lens packages on the strip is again put back into the box.

By GB-A-2341942 it is previously known a casing for storage of contact lenses, that comprises a first container arranged to a second container and a lid arranged between the container parts. In the containers may different objects be stored, such as strips of contact lens packages.

DESCRIPTION OF THE INVENTION

One object with the present invention is to achieve a portable packing for storage and carriage of packages for

contact lenses that at least partly eliminates those drawbacks that are associated with arrangement according to the state of the art. Yet another object is to achieve a casing for packages of contact lenses, in particular intended for disposable packages of one-day-lenses, that facilitates a simple, secure and practical handling and organization of the contact lens packages. Further it is an object to achieve a casing for packages for contact lenses that can be produced to a little cost.

These objects are achieved by a case for packages of contact lenses, intended in particular for disposable packages of contact lenses, according to the present invention as defined in claim 1. The case comprises a first and a second lid, which lids are rotatably arranged in relation to each other by way of a hinge or the similar. At least the first lid comprises a longitudinal guide rail, at an edge part of the first lid, and is arranged along substantially the whole edge part. The guide rail is intended to act in releasably engagement with a package of a contact lens for retaining one or more contact lens packages during position within the lid and which guide rail permits that the package of a contact lens is displaceable in the longitudinal direction of the case. A short side of the first lid is formed with an open end part, whereby a contact lens package that is releasably retained by the guide rail in the lid is displaceable out through and removable from the open end part.

One advantage with this solution according to the present invention is that a secure storage of the contact lens packages in the case is achieved thanks to the arranged guide rail in the lid. Yet another advantage is that the present invention permits a simple handling of contact lenses and eliminates the need to remove whole strips of contact lens packages from the case. By displacing the whole strip with the

contact lens packages retained in the lid, a desired contact lens package can be discharged outside the open end part and be torn off from the strip.

According to the present invention, the guide rail may have a shape that is adapted for engagement with different shapes of contact lens packages, so called blister packages, of contact lenses. The most commonly contact lens packages of today for contact lenses comprises a plane sheet of plastic with a cup-shaped recess in which lens liquid and contact lens is placed. The cup recess is sealed with a foil or the similar, which is tightly arranged on one side of the plastic sheet. The plastic sheet comprises flange sections that originate from the production of the contact lens packages. Thus, the guide rail may use these flange sections in order to retain contact lens packages in the lid owing to that the flange section is inserted in a slot formed by the guide rail.

Additional advantages and features according to embodiments of the invention are evident from the claims and also from the following description of the embodiments.

DESCRIPTION OF THE DRAWINGS

The present invention will now be described more in detail in embodiments, with reference to the attached drawings, without limiting the interpretation of the invention to those, where

Fig. 1A shows in a perspective view from one side a case according to the present invention,

Fig. 1B shows a perspective view from another side of the case in Fig. 1A,

Fig. 1C shows in an enlarged view a cross-section A-A of the case according to Fig. 1A-B in a closed position with contact lenses arranged in the case in a first lid and in a

second lid,

Fig. 1D shows in an enlarged view a cross-section A-A of the case according to Fig. 1A-B in closed position with contact lenses arranged in the case, of another kind than in Fig. 1C, in the first lid and in the second lid, and

Fig. 2 shows schematically the discharge of a contact lens package arranged to a strip with projecting contact lens packages in a case according to the present invention.

DETAILED DESCRIPTION OF EMBODIMENTS

A case 2 for contact lens packages is shown, according to an embodiment of the present invention, in Fig. 1A-D. The case 2 comprises a first lid and a second lid 6, which lids are rotatably R arranged relative to each other by way of a hinge 8 or the like. When the lids 4,6 are arranged closely adjacent to each other, they define a interior delimited delimitation space S for protection and secure storage of contact lens packages. Fig. 1C-D shows a cross-section of the case in closed position, that is with the lids arranged adjacent to each other, with contact lenses arranged in the first lid 4 and in the second lid 6 in the case.

In accordance with the present invention, at least a first lid 4 comprises a longitudinal guide rail 10, at an edge part 12 of the first lid 4, that is arranged along substantially the whole edge part 12. The guide rail 10 is intended to act in relesable engagement with a contact lens package 14,16 (see Fig. 1C-D and 2), for retaining of one or more contact lens packages 14,16 placed inside the lid 4, by means of pressure of the guide rail against a respective contact lens package. Two or more contact lens packages can be arranged to each other in form of a strip 17 (see Fig. 2). As evident from the preferred embodiment of the case 2 shown in Fig. 1A-D, also the other lid 6 may preferably comprise a

longitudinal guide rail 10′ that is arranged along substantially the whole edge part 12′ of the second lid for releasably retaining of one or more contact lens packages 14,16. The guide rail 10,10′ permits that the contact lens package can be displaced in the longitudinal direction L of the case. By means of this configuration that facilitates arrangement of contact lens packages 14,16 in both the first and the second lids 4,6, may contact lens packages for left eye be arranged in one of the lids and for the right eye be arranged in the other lid, whereby a simple handling and a good organization is achieved.

A first short side 18 of the first lid 4 is formed with an open end part 20, whereby a contact lens package 14,16 that is releasably retained of the guide rail 10 in the lid 4 can be discharged and removed through the open end part 20. According to an embodiment shown in Fig. 1A-D, may a second short side 22 of the first lid be formed with a closed end part 24. Furthermore, may also a first short side 25, according to the shown embodiment, of the second lid 6 that is adjacent to the first short side 18 of a first lid 4 be formed with a closed end part 26. In addition, a second short side 28 of the second lid 6 that is adjacent to the second short side 22 of the first lid 4 can be formed with a open end part 30. In that respect may a closed and suitably tight-fitting case in closed position be provided, when the lids are arranged adjoining each other.

The guide rail 10, 10′ may have different shapes. Suitably the guide rail have a J-shaped, or the like, projection 32 that projects from the edge part 12,12′ of a respective lid 4,6, which projection 32 has an outer end 34 that is freely arranged in the lid. In that respect the guide rail forms a slot 35 intended for engagement with a projecting flange section 36,36′ of a contact lens package 14,16 which is

inserted from the short side 18,30 in the respective lid 4,6. As is evident from Fig. 1C-D, the guide rail according to the present invention may be intended for engagement with different kinds of shapes of contact lens packages 14,16 of contact lenses. The guide rail may in that respect be provided with chamferings 37. The case according to present invention is intended for the most common present kinds of contact lens packages for contact lenses as evident in Fig. 2 respectively in 1C-D in cross-section. These contact lens packages comprise a plane sheet 38 of plastic with a cup-formed recess 40 in which lens liquid and contact lens is placed. The cup recess 40 is sealed with a foil or the like that is tightly arranged on one side of the plastic sheet 38. The plastic sheet comprises the above mentioned flange sections 36,36' on one or both sides. According to the present invention, flange sections 36,36' are used on the one side of the contact lens package in order to retain the contact lens packages 14,16 in the lid thanks to that the flange section 36,36' is inserted in the slot 35 that is formed by the guide rail 10,10'.

According to embodiments of the present invention that is evident from Fig. 1A-B, the case may comprise one or more locking devices, a first locking device in the shape of a central snap-lock. This first locking device comprises a clamp part 42 at an edge of one lid 6, which when closing the case 2 engages a matching slot 44 in the second lid 4. The case 2 may comprise second locking device in the shape of a snap lock at the short side/end parts of the case. This second locking device may comprise a male part 46 in the shape of a pin, bump or similar intended for engagement with a correspondingly adapted female part 48 in the shape of a recess, hole or the similar.

In Fig. 2 and 1A-D, respectively, corresponding reference numerals are indicated with the same reference numerals. The

shown case 2 is essentially corresponding with the case 2 shown in Figs. 1A-D, but somewhat more schematically illustrated. Fig. 2 shows discharge of a contact lens package 14,16 arranged to a strip 17 with projected contact lens packages in a case 2 according to the present invention. When a single contact lens package 14,16 is desired, a strip with packages 17 is displaced, or alternatively a single package, in the longitudinal direction L of the case with a slight pressure by a finger. The contact lens package 14,16 is then removed, alternatively it is at least advanced out as far as the perforation, that it is adjacent to the next package 14,16, is substantially in level along with the edge at the open end part 20, whereafter the desired package is torn/broken off from the possibly remaining packages in the case.

The case 2 and included components can be made in plastic, metal, composite material or other material with similar properties. The profiles that form the lids can be extrusion pressed. The end parts and the guide rail can be made of casted plastic. As is evident from the Figs.1-2 the case and the included lids have a comparatively plane, flat shapening that extends substantially in one propagation plane. The case according to the present invention is not limited to a specific size, but can typically be 16 mm high and 63 mm wide, which are adapted dimensions such that the case in both lids may accommodate the most common present contact lens packages on the market. The length may vary depending on how many lens packages that should be accommodated in the case.

CLAIMS

1. Case (2) for packages of contact lenses (14,16) and comprising a first (4) and a second lid (6), which lids are rotatably arranged (R) relative each other by way of a hinge (8) or the similar, **characterized in** that at least the first lid (4) comprises a longitudinal guide rail (10), at an edge part (12) of the first lid (4), that is arranged essentially along the whole edge part (12) and intended to act in releasably engagement with a package of a contact lens (14,16) for retaining one or more contact lens packages (14,16) when positioned within the lid (4) and which guide rail (10) permits that a package of a contact lens (14,16) is displaceable in the longitudinal direction (L) of the case, and also that a short side (18) of the first lid (4) is formed with an open end part (20) whereby a contact lens package (14, 16) that is releaseably retained by the guide rail (10) in the lid (4) is displaceable out through and removable from the open end part (20).

2. Case (2) according to claim 1, **characterized in** that the first short side (18) of the first lid (4) is formed with the open end part (20), and a second short side (22) is formed with a closed end part (24).

3. Case (2) according to claim 1 or 2, **characterized in** that the guide rail (10) has a kind of J-shaped protrusion (32) that is projected from the edge part (8) of the lid (4), which protrusion (32) has an outer end (34) that is freely arranged in the lid and is intended for engagement with a projecting part (36,36') of a contact lens package (14,16) which is inserted from the side in the lid (4).

4. Case (2) according to any of the preceding claims, **characterized in** that also the other lid (6) comprises a longitudinal guide rail (10') which is arranged essentially along the whole end part (12') of the second lid (6) for

releaseably retaining by one or more contact lens packages (14,16).

5. Case (2) according to claim 2 and 4, **characterized in** that a first short side (25) of the second lid (6) that is adjacent to the first short side (18) of the first lid (4) is formed with a closed end part (26) and a second short side (28) of the second lid (6), which is adjacent to the second short side (22) of the first lid (4), is formed with an open end part (30).

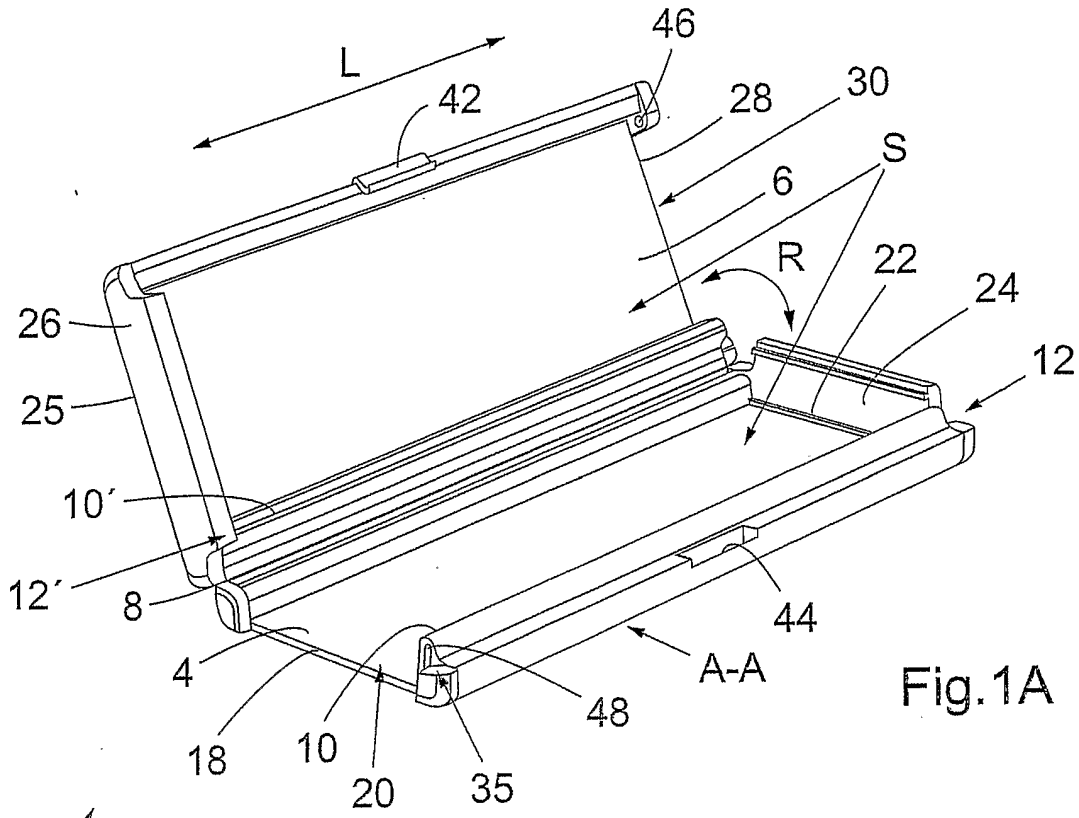
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Fig.1A

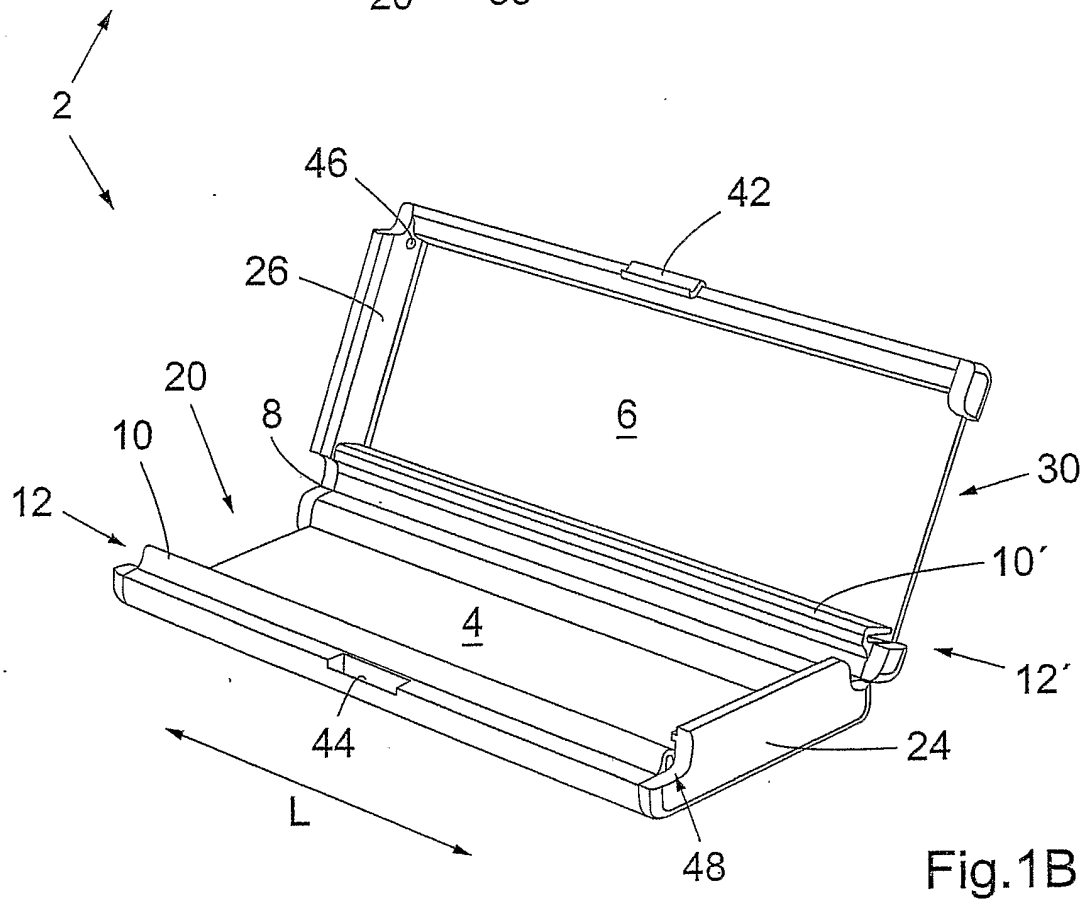
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Fig.1B

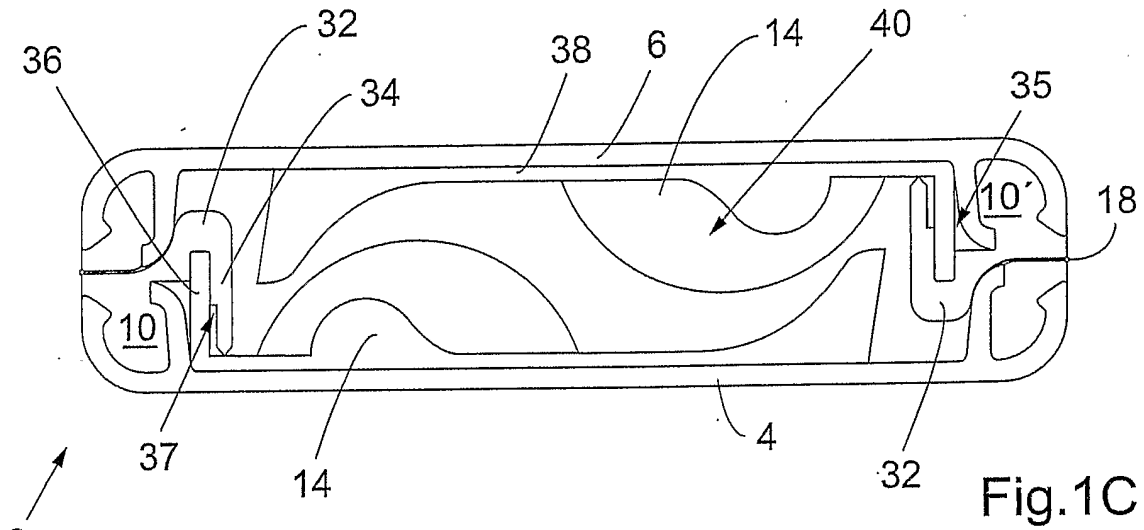

Fig.1C

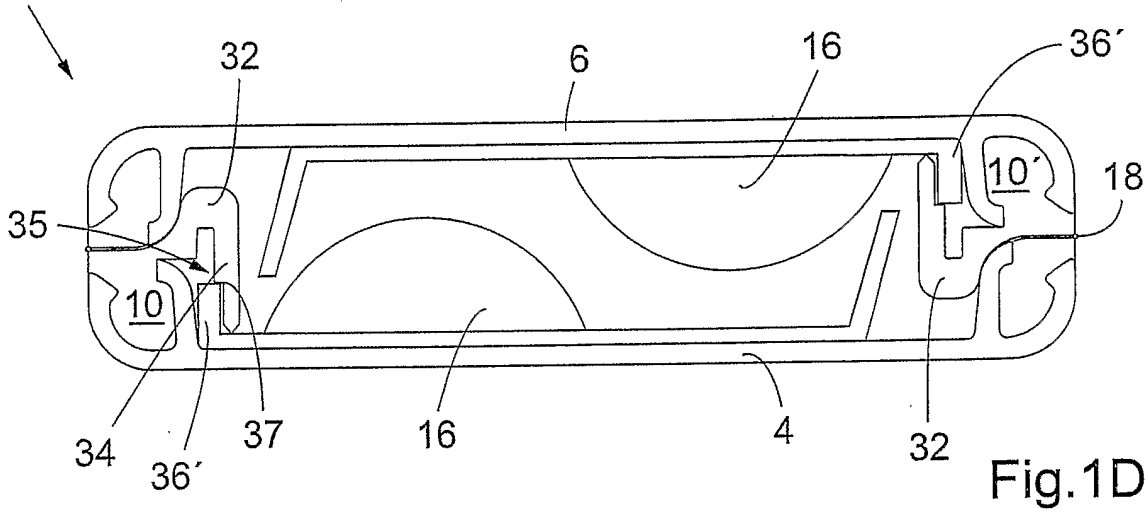

Fig.1D

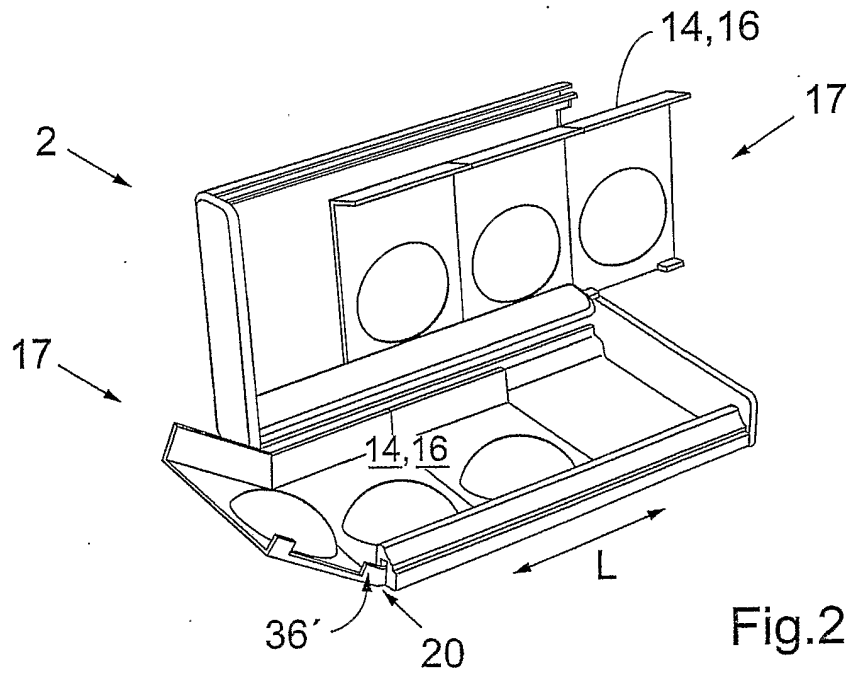

Fig.2

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2005/001903

A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: A45C, B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2341942 A (OPTOPLAST PLC), 29 March 2000 (29.03.2000), figure 2, abstract ---	1-5
A	US 3394717 A (R.G. HOLLINGER), 30 July 1968 (30.07.1968), whole document ---	1-5
A	EP 0650676 A1 (JOHNSON & JOHNSON VISION PRODUCTS, INC.), 3 May 1995 (03.05.1995), figures 1-3, abstract ---	1-5
A	EP 0734957 A1 (JOHNSON & JOHNSON VISION PRODUCTS, INC.), 2 October 1996 (02.10.1996), column 9, line 7 - line 26, figures 1,5,6, abstract ---	1-5

[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
3 March 2006	07 -03- 2006
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86	Authorized officer Björn Lindkvist / MRo Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2005/001903

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 10053798 C1 (ABDELUAHID, M.), 4 April 2002 (04.04.2002), figures 1,2,6, abstract -- --------	1-5

International patent classification (IPC)

A45C 11/00 (2006.01)

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Cited literature, if any, will be enclosed in paper form.

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