CONTAINER OR PACKAGE FOR COMPACT DISCS, VIDEO CASSETTES, TOOLS OR THE LIKE

In a one-piece integrally formed, transparent container for records, compact discs, video cassettes, tools or the like, the different parts of the container being hinged together for instance by film hinges, a one-piece booklet or folder inserted in the container lid (1) and having an enlarged back sheet is secured in the container between the upwards facing plane surface of the bottom of a base cover part (2) and the downwards facing plane surface of a disc or tool retention part (3) when the latter in a closing position has been pivoted around a hinge (7) into the base part (2), allowing the booklet to be used with the container lid (1) in an open position without removing the booklet from the container. The lid (1) may further have a locking plate (6) for securing the booklet in the lid when pivoting the latter for the closing operation.
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Container or package for compact discs, video cassettes, tools or the like.

The invention relates to a one-piece integrally formed transparent container or package for records, compact discs, video cassettes, tools or the like and in which container also is inserted a one-piece booklet or folder with mention of and/or user instructions for the contents stored in the container.

Standard containers or packages of this type are generally known for instance as compact disc covers of plastic materials. Each such cover is normally made up of at least three major plastic components: The lid part, the basic cover part and the disc retention part which are manufactured individually and hence assembled together. Normally the lid part and the base cover part are hinged together through a moulded hinge mechanism formed at one side of each part, respectively, and allowing the two parts mutually to move freely between a fully closed and a fully open position of the cover and in the fully closed position being locked together by closure pins or the like, which may be formed in the same moulding process as the cover component in question. The disc retention part may be secured in the base cover part through press fit.

The inner surface of the transparent lid as well as the inner surfaces of the transparent bottom and its also transparent sides may have moulded fixing lugs or the like for the insertion of a separate booklet or folder in the lid and a separate sheet in the base part, the separate sheet being creased in the inner form of the base part. Such fixing lugs are, however, notoriously prone to easy breakage. The outwards turning pages or surfaces of the booklet and the separate sheet in the base cover may have texts and/or symbols for identification of the object stored in the cover in the closed position of the latter. Any user of a compact disc stored in a cover as mentioned above will realize the practical problems in removing a booklet for further reading from the inner surface of the cover lid and the reinsertion of the booklet after use including the risk that a booklet is not reinserted in the cover at all and hence a missing information about the object stored in same.
The major drawbacks of the hitherto generally used compact disc covers are thus that the cover itself comprises at least three separate parts (or five separate parts in case of a double cover) which each require separate manufacturing steps and which are both costly and time-consuming, and that the inserted, loose text items comprise at least two separate parts, the main part of which has to be removed from the cover for proper use.

Some of the above problems are suggested solved as described in WO 88/06559 according to which a compact disc cover is made as a one-piece body manufactured in a single process and comprising a base cover with a hinged lid and integrally formed retention means formed within the base cover. This type of cover implies the use of a loose booklet or folder to be inserted and removed in the usual way into or from the cover lid and excludes an inserted loose identification sheet in the base cover, the integrally formed retention means in the latter preventing such an insertion. Moreover this type of cover is for obvious reasons unsuitable for use as a double cover containing two discs.

Another type of a compact disc cover is known from EP-A-0086484 according to which the cover may also be a one-piece body comprising a base cover part with a hinged lid and with integrally formed retention means both in the lid and in the base part. These retention means prevents, however, any insertion of a booklet or a folder or corresponding text items within the cover.

It is therefore the object of the present invention to provide a one-piece, integrally formed, transparent container or package for records, compact discs, video cassettes, tools or the like and which remedies the drawbacks of the hitherto used containers or covers for such goods and which especially secures a reliable fixation of text items, such as booklets or folders about the stored goods, in the container or package.

It is also the object of the invention to provide a container or package of the above mentioned art and which is easily manufactured in a double type version, i.e. a container for storing two records, discs, video cassettes etc.
The object is obtained by means of a container or package as described in the introduction of the attached claim 1 and characterized by the features in the characterizing clause of this claim.

The object is further obtained by embodiments of the container or package according to claims 2 to 8, the embodiment according to claim 7 being especially suited for storing video cassettes.

The invention will be described in more detail below with reference to the also attached drawings which without being limiting show examples of the invention according to the application and in which

Figure 1 is a perspective view partly in section of a one-piece container for storing a single compact disc,

Figure 2 is a perspective view partly in section of a one-piece container for storing two compact discs,

Figures 3(a) and (b) are cross-sectional views along the lines IIIa-IIIa and IIIb-IIIb, respectively, of Figure 1,

Figures 4(a) and (b) are cross-sectional views along the lines IVa-IVa and IVb-IVb, respectively, of Figure 2,

Figure 5 is a perspective view of a one-piece text booklet with an enlarged back sheet for placing in a container according to the invention and

Figure 6 in a cross-sectional view illustrates the placing of the booklet shown in Figure 5 in a double container according to the invention.

In Figures 1 and 3 a one-piece integrally formed container or package of a transparent plastic material, such as propylene, and shown in an open position, comprises a box-like base cover part 2 with upright sides 16', 16", 17' and 17", an equally box-like disc or tool retention part 3 integrally hinged through a film hinge 7 to the upright side 16' of the base part 2, a container lid part 1
integ rall y hinged through a film hinge 7 to the upright side 17' of the base part 2 and a transparent locking plate 6 hinged through a film hinge 7 to the outwards facing open edge of the lid 1.

The base part 2 and the disc retention part 3 are in their respective opposite upright sides 16', 16", 18' and 18 provided with cutouts 13 and 12, respectively, to facilitate the placing of goods in the container and their removal from same, cf. below. In the shown open position of the container the plane bottom of the disc retention part 3 is facing upwards while the opening of this part with the disc retention means 22 is facing downwards. When preparing the container for storing a compact disc, a booklet or folder 4 (see Figure 5) with a front sheet 4' and an enlarged back sheet 5 with enlargements 5' and 5" is placed on the upwards facing surface of the lid 1 with the front sheet against the inner lid surface while the back sheet 5 is placed in the base part 2 with the enlargements 5' and 5" resting against the upright sides 17' and 17", respectively, and the sheet proper 5 resting against the upwards facing surface of the bottom of the part 2.

The locking plate 6 is then pivoted around its hinge 7 to secure the booklet 4 against the inner lid surface, the locking plate 6 being fastened in this position by moulded locking tabs 11 in the upright sides 10 of the lid 1 and being provided with cutouts 9 allowing the plate to pass locking pins 8 also in the upright sides 10 of the lid.

The disc or tool retention part 3 is pivoted around its hinge 7 into the base cover part 2 so that in closed position the disc or tool retention means are facing upwards. The height of upright sides 18', 18" and 19 of the disc retention part 3 corresponding approximately to the inner height of the upright sides 16', 16", 17' and 17" of the base part 2 the plane bottom of the retention part 3 will in the closed position secure the back sheet 5 and its enlargements 5' and 5" of the booklet 4 between the respective surfaces of the bottoms of the two parts 2 and 3 and between their respective upright sides.

In its closed position the disc retention part 3 is secured in the base cover part 2 by locking pins 23 in the upright side 18" of the
retention part 3, which pins fit into slits 15 in the corresponding upright side 16" of the base part 2.

In this position a disc or tool (not shown) may be placed in the now upwards facing cavity of the retention part 3, the cutouts 12 and 13 facilitating the insertion (and a later removal) of stored goods in the retention part. Thereupon the lid 1 with the locking plate 6 in locked position is pivoted around its hinge 7 connecting it with the base cover part 2 to close the upwards facing cavity of the disc retention part 3. The closed position of the lid 1 is secured against the base part 2 through locking pins 8 in the upright sides 10 of the lid 1 which pins fit into slits 21 in the corresponding upright sides 16' and 16" of the base part 2. The upright sides 16' and 16" of the base part 2 may further have cutouts 14 for the locking tabs 11 in the upright sides 10 of the lid 1. The base part 2 may have moulded, outwards facing stop bars or shoulders 20 at its bottom against which shoulders the now downwards facing edges of the upright sides 10 of the lid 1 abut. It will be seen that the upright sides 10 of the lid 1 in the closed position cover the cutouts 13 in the upright sides 16' and 16" of the base part 2 and the adjacent cutouts 12 in the retention part 3 thereby establishing together with the lid surface a complete closing of the container or package.

The outwards facing pages of the sheets 4', 5, 5' and 5" in the closed position of the container may have texts and/or symbols for identification of the stored goods as known from the hitherto general use of similar containers or covers.

Referring to Figure 5 the enlargement of the back sheet of the one-piece booklet is only showed in the "longitudinal" direction of the booklet. An alternative or an addition hereto is a not shown crosswise enlargement of the back sheet with creased parts of the latter to cover the inner surfaces 16' and 16" of the upright sides of base part 2.

In Figures 2 and 4 is showed an embodiment of the invention in the form of a double compact disc container. The shown reference numerals for the container lid part 1, the base cover part 2 and the disc retention part 3 are identical to those shown in Figures 1 and 3.
and as used in the above. The embodiment shown in Figures 2 and 4 differs from the one shown in Figures 1 and 3 in that the double container comprises yet a disc or tool retention part 24 hinged through a film hinge 7 to the upright side 17" of the base part 2. To allow the successive pivoting of retention part 3 followed by retention part 24 into the base part 2, the upright sides 16' and 16" of the latter represents only half the height of the two other upright sides 17' and 17". When closing the container after the insertion of the booklet 4, 5 the retention part 3 with the retention means 22 is pivoted into the base part 2 for securing the booklet and for allowing the placing of a disc 27 in the now upwards facing cavity of the retention part 3. The retention part 24 has in the shown embodiment the cavity with the retention means 25 facing upwards in the open position of the container. After placing a disc 26 in the cavity and securing it by the retention means 25 the retention part 24 is pivoted into the base part 2 resting in the closed position with its cavity facing downwards against retention part 3 (see Figure 6) and with the plane surface of retention part 24 facing upwards whereafter the lid part 1 is pivoted into closing position. Due to the fact that in the shown embodiment the two retention parts 3 and 24 are facing against each other and that the upper surface of retention part 24 is consequently a plane surface no locking plate 6 (Figure 1) is necessary in that the part 4-4' of the booklet when closing the lid 6 is brought to rest between said plane upper surface and the inner surface of the lid 1. To secure the booklet in the lid 1 during its pivoting the inner lid surface may have separate booklet securing means 28 (Figure 2). Preferably the cutouts 30 in retention part 24 may be provided with protrusions 29 along their lowermost edge in the open position of the container for facilitating the operation of the retention part.

In case, however, that it is appropriate that also the cavity of the retention part 24 is facing upwards in the closing position of the container, the double type container should likewise comprise a locking plate.
In a further embodiment of the container, whether it is a single or double type one, the upright side 17' of the base cover part 2 and to the upper edge of which is hinged the lid 1, to also facilitate
the handling of goods stored in the container, may be pivotally hinged to the bottom plate proper of the base part 2. With the upright side 17' double hinged in this way the side will open separately in connection with the opening operation of the lid 1.

When storing goods having various forms of convex surfaces in the container any bottom/top or side surface of the retention parts, the lid and/or the locking plate facing such goods in closed position of the container may preferably present complementary forms of the goods to secure the latter in fixed positions.

Although it could be considered advantageous to any user of a container or package and of goods stored in same that the booklet or folder does not have to be removed from the container for closer study when taking the goods out of the container, see Figure 6 illustrating leafing through of a one-piece booklet 4,5 with a container in open position, it will be understood that the invention is especially advantageous for instance to broadcasting and television stations, discotheques and the like where a great number of records, compact discs or video cassettes are to be dealt with and commented during a limited time and in a limited space and where a quick and safe use and a quick and safe storing of the contents of the containers is important.
Claims

1. A one-piece integrally formed, transparent container or package for records, compact discs, video cassettes, tools or the like and in which container or package is inserted a one-piece text booklet or folder having at least a front sheet (4') and a back sheet (5) the size of the front sheet corresponding to the inner circumference of the lid of the container, and the size of the back sheet of the booklet being larger than that of the front sheet, characterized in that the one-piece body comprises at least three parts mutually connected two and two through integral hinges such as film hinges (7): A boxlike base cover part (2) to one upright side (16') of which is hinged a disc or tool retention part (3) and to another upright side (17') of which is hinged a container lid part (1), an equally box-like disc or tool retention part (3) designed to fit into the base part (2) the open side of the retention part having disc or tool retention means (22) which in an open position of the container are facing downwards while the plane, closing bottom of the retention part (3) in same position is facing upwards, and a partly box-like lid part (1) so designed that in a closed position of the container the lid (1) covers upwards and sidewards facing open parts of the base cover part (2) and the retention part (3), that the inner surface of the lid (1) forms the basis for inserting the front sheet (4') and any following sheets except the larger back sheet (5) of the text booklet into the container, that the base cover part (2) forms the basis for inserting the larger back sheet (5, 5', 5") of the booklet into the container, and that the disc or tool retention part (3) is so designed that when pivoted around its hinge (7) into the base cover part (2) the plane, now downwards facing surface of the retention part (3) is brought to rest against the inner plane upwards facing surface of the base cover part (2) thereby securing the back sheet (5) of the booklet between the two surfaces and with the disc or tool retention means (3) hereafter in an upwards facing position for receiving an object to be stored in the container before pivoting the lid (1) around its hinge (7) to close the container or package.

2. Container or package according to claim 1, characterized in that at least one upright side (18") of the disc or tool
retention part (3) and the corresponding upright side (16") of the base cover part (2) has a cutout (12, 13) for facilitating the placing of an object in the container and for its removal from same.

3. Container or package according to claim 1, characterized in that the lid part (1) is provided with a transparent locking plate (6) connected to the lid through an integral hinge (7) and forming a fourth integral part of the one-piece body.

4. Container or package according to claims 1-3, characterized in that the one-piece body comprises two disc or tool retention parts (3, 24) each connected to the base cover part (2) through integral hinges (7) at two opposite or at two adjacent upright sides having mutually different heights (16', 17") of the base cover part (2) the lowermost retention part (3) having its opening, in which disc or tool retention means (22) are mounted, facing downwards and the uppermost retention part (24) having its opening with corresponding retention means facing upwards when the container is in an open position, and the lowermost retention part (3) being designed for the securing of the back sheet (5) of the text booklet or folder (4) when the retention part (3) is in a closed position in the container.

5. Container or package according to any of the foregoing claims, characterized in that the upright side (17') of the base cover part (2) to the upper edge of which the lid part (1) is hinged, is pivotally connected along its lower edge through an integral hinge to the cover plate proper of the base part (2).

6. Container or package according to claims 1 and 4, characterized in that any inner surface of the lid part (1), the locking plate (6) and/or the retention part/parts (3, 24) facing the goods stored in the container in its closed position presents a complementary form to the adjacent parts of an object placed in the container.

7. Container or package according to any of the foregoing claims characterized in that the retention part (3, 24) is an open frame without any covering plate or surface the frame having
supports for storing a video cassette.

8. Container or package according to claims 4-7 characterized in that the retention part (24) is provided with protrusions (29) along the lower edges of cutouts (30) in its upright sides.
INTERNATIONAL SEARCH REPORT

International Application No. PCT/DK 91/00070

I. CLASSIFICATION OF SUBJECT MATTER
   According to International Patent Classification (IPC) or to both National Classification and IPC

   IPC5: B 65 D 85/57, 25/10, G 11 B 23/03, 33/04

II. FIELDS SEARCHED

   Classification System   Classification Symbols

   IPC5                  G 11 B; B 65 D

   Documentation Searched other than Minimum Documentation to the extent that such Documents are Included in Fields Searched

   SE, DK, FI, NO classes as above

III. DOCUMENTS CONSIDERED TO BE RELEVANT

   Category | Citation of Document with indication, where appropriate, of the relevant passages | Relevant to Claim No.
   -------- | -------------------------------------------------------- | ------------------
   A        | GB, A, 2132588 (AJEC MARKETING LIMITED) 11 July 1984, see the whole document | 1
   A        | EP, A2, 0370690 (LAM, PHILIP YUNG TAK) 30 May 1990, see column 4, line 4 - column 5, line 26; figures 2,11 | 1
   A        | EP, A1, 0086484 (POLYGRAM GMBH) 24 August 1983, see the whole document, cited in the application | 1
   A        | GB, A, 2154550 (MARDON ILLINGWORTH LIMITED) 11 September 1985, see the whole document | 1

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- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- "Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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IV. CERTIFICATION

Date of the Actual Completion of the International Search: 10th September 1991

Date of Mailing of this International Search Report: 1991-10-14

International Searching Authority: SWEDISH PATENT OFFICE

Signature of Authorized Officer: BO GUSTAVSSON

Form PCT/ISA/210 (second sheet) (January 1985)
ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO. PCT/DK 91/00070

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