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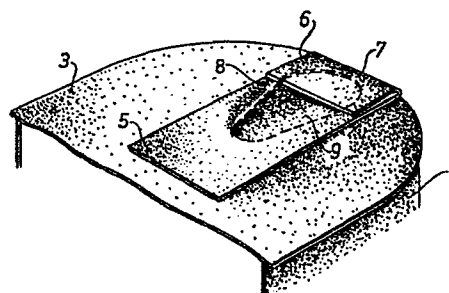
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54 An opening arrangement for packing containers.

57 Opening arrangements for packing containers often consist of a pouring opening formed in the packing container wall which is covered by a tear-off cover strip. To facilitate the removal of the cover strip, the same is placed so that it projects with one end portion outside the edge line of the container wall. However, this also increases the risk of unintentional opening. To reduce this risk the projecting end part (6) of the cover strip (5) may be folded about 180° to lie against the main part of the cover strip, at the same time as the cover strip is provided with one or more moulded portions (9) which make it possible to insert a finger underneath the grip lug (6) and lift the same when the cover strip (5) is to be removed.



AN OPENING ARRANGEMENT FOR PACKING CONTAINERS

The present invention relates to an opening arrangement for packing containers comprising a wall with a pouring opening and
5 a tear-off cover strip applied over the same in a sealing manner.

Packing containers of the non-returnable type are used for the packaging of various contents such as milk, juice and the like. The packing containers are usually manufactured by folding and sealing of laminated material in the form of sheets or a web
10 which comprise at least on the outside a layer of thermoplastic material serving on the one hand as a liquid-tight layer, on the other hand makes possible the sealing together of the packing container. The packing container is usually provided with some form of opening arrangement, e.g. in the form of a cover strip which
15 covers a pre-punched pouring opening in the wall of the packing container and can simply be torn off when the packing container is to be opened and the contents are to be emptied out through the pouring opening.

In packing containers with opening arrangements which comprise
20 a pre-manufactured pouring opening and a cover strip sealing the same, the pouring opening is customarily placed near the edge of one wall of the packing container, in particular a plane top wall. The cover strip is applied over the pouring opening and is sealed to the wall material around the pouring opening so that a com-
25 pletely liquid-tight seal is achieved. In order to facilitate the removal of the cover strip when the packing container is to be opened, it is possible to provide the cover strip with a projecting grip-lug which extends outside the actual edge of the container wall, and in this manner makes it possible simply to grip the strip
30 between thumb and forefinger and pull it off in connection with the opening of the packing container.

The abovementioned type of cover strip has been found to have a disadvantage in that this projecting grip-lug is easily deformable and gets caught on the adjacent packing container during the hand-
35 ling of the packing containers in collective packages of the carrier type. This means among other things an increased risk of leakages.

- 2 -

It is an object of the present invention to provide an opening arrangement for packing containers, this opening arrangement being of the type which comprises a pouring opening and a cover strip sealing the same, but which is not subject to the disadvantages of the opening arrangements described above.

It is a further object of the present invention to provide an opening arrangement of the type described in the introduction in which the grip-lug of the cover strip does not extend outside the contour of the container wall but is nevertheless simple to grip and utilize when the packing container is to be opened.

Finally it is a further object of the present invention to provide a cover strip wherein the risk of unintentional opening is minimized.

These and other objects have been achieved in accordance with the invention in that an opening arrangement for packing containers comprising a wall with a pouring opening and a tear-off cover strip applied over the same in a sealing manner has been given the characteristic that one end of the cover strip is doubled and given the form of a grip-lug, the cover strip having a moulded part which provides a gap between the free end of the grip-lug and the main part of the underlying main part of the cover strip.

Preferred embodiments of the opening arrangement in accordance with the invention have been given moreover the characteristics which are evident from the enclosed subsidiary claims.

Through the design of the opening arrangement in accordance with the invention a readily openable cover strip is provided wherein the risk of unintentional opening has been wholly eliminated whilst material consumption and costs have not been raised by comparison with known cover strips.

A preferred embodiment of the opening arrangement in accordance with the invention will now be described in more detail with special reference to the enclosed schematic drawings which only show the details required for the understanding of the invention.

Fig.1 shows in perspective a packing container with an opening arrangement according to the invention.

Fig.2 shows on a larger scale a part of the top container wall

- 3 -

with an opening arrangement according to fig.1.

The packing container shown in fig.1 is of a known type and is made from two laminated sheets of packing material which on the outside have layers of thermoplastic, that is to say heat-sealable, material. One sheet is bent into U-shape and forms a back wall 1, a bottom wall 2 and a top wall 3 of the packing container. The other sheet too is bent substantially into a U-shape and sealed to the first sheet so that it forms a curved casing wall 4 for the packing container. The two sheets are heat-sealed to one another at their contact surfaces. This known package type is chosen only as an example of a suitable packing container on which the opening arrangement in accordance with the invention can be used, but it is understood that any known or new type of packing container whatever which has a substantially plane container wall can be provided with an opening arrangement in accordance with the invention.

As is also evident from fig.1, the one container wall of the packing container shown, more particularly the top wall 3, is provided with a cover strip 5 which is applied over a non-visible pouring opening in the top wall 3. The cover strip 5, which is shown more clearly in fig.2, has a doubled front end which serves as a grip lug 6. The grip-lug 6 is separated from the main portion of the cover strip sealing the pouring opening by a folding line 7 which extends substantially along the edge line of the container wall 3. The grip lug 6 is folded over about 180° in relation to the main part of the cover strip and situated with its free edge 8 on a level with the underlying pouring opening which is not visible in fig.2 but whose contour is indicated by a moulded, recessed part 9 of the main part of the cover strip, this part having a size and shape which substantially correspond to the underlying pouring opening. The moulded part 9 extends so far down into the pouring opening that it can serve as a reclosing element, since the contact between the edges of the moulded part 9 and the edges of the pouring opening provides a friction grip which retains the cover strip relatively securely over the pouring opening when the cover strip is applied again in its original

position after the opening of the packing container.

Since the free edge 8 of the grip lug 6 is on a level with the underlying pouring opening 9, a gap will be produced between the doubled grip-lug 6 and the main part of the cover strip 5 in spite of the doubling over 180° of the cover strip (the grip lug 6 is shown in fig.2 for the sake of clarity not fully in contact with the main part of the cover strip), which makes it possible to introduce a finger underneath the free edge 8 of the grip lug 6 and lift up the grip lug 6 as a preparation for the tearing off of the main part of the cover strip 5. Through the doubling of the grip lug 6 of the cover strip no part of the cover strip will project outside the edge line of the packing container thus eliminating the risk of unintentional opening. Since the doubled grip lug 6 is folded over about 180° and thus lies flat against the top portion of the packing container, no part of the grip lug will project from the top wall 3 either, which also contributes to the prevention of any unintentional opening. To prevent the grip lug from "raising itself" and projecting from the surface of the top wall 3, it may be suitable in certain cases, e.g. when a material is used for the manufacture of the cover strip 5 which is hard to fold, to seal the grip lug 6 to the cover strip 5. This is accomplished by a detachable seal along the edges of the grip lug 6 and in particular by elongated sealing zones along the longitudinal edges of the cover strip 5 on both sides of the moulded part 9.

As mentioned earlier, the moulded part 9 may be utilized for the reclosing of the packing container by virtue of its friction contact with the edges of the pouring opening. However, it is not always desirable to provide the cover strip 5 with some recessed, moulded part. If this is the case the moulding which is required for facilitating the introduction of a finger underneath the grip lug 6 may be provided in the grip lug itself where a moulded part can be formed in the vicinity of the free edge region (not shown in the figures) of the grip lug 6. This moulded part may be in the form of a semicircular raised part or be constituted of two parallel projecting zones which prevent the centre portion of the

- 5 -

free edge 8 of the grip lug from resting fully against the underlying main part of the cover strip 5 when the grip lug 6 is folded over about 180° . With this design of the cover strip in accordance with the invention it is likewise possible to prevent unintentional unfolding of the grip lug 6 by providing seals of appropriate strength at the free corner or parallel edges of the grip lug.

CLAIMS

1. An opening arrangement for packing containers comprising a wall (3) with a pouring opening and a tear-off cover strip (5)
5 applied over the same in a sealing manner,
c h a r a c t e r i z e d i n t h a t one end of the cover strip (5) is doubled and given the form of a grip-lug (6), the cover strip (5) having a moulded part (9) which provides a gap between the free end of the grip-lug (6) and the underlying main
10 part of the cover strip (5).
2. An opening arrangement in accordance with claim 1,
c h a r a c t e r i z e d i n t h a t the moulded part (9) is situated with a limited region of the main part of the cover strip (5) and has a size and shape which substantially correspond
15 to the underlying pouring opening.
3. An opening arrangement in accordance with one or more of the preceding claims,
c h a r a c t e r i z e d i n t h a t the grip-lug (6) is folded over about 180° in relation to the main part of the cover
20 strip (5) and is situated with its free edge (8) on a level with the underlying pouring opening.
4. An opening arrangement in accordance with claim 2,
c h a r a c t e r i z e d i n t h a t the moulded part (9) of the cover strip (5) extends down into the pouring opening and
25 serves as a reclosing element.
5. An opening arrangement in accordance with claim 1,
c h a r a c t e r i z e d i n t h a t the moulded part is situated in the free edge region of the grip-lug (6).
6. An opening arrangement in accordance with one or more of the
30 preceding claims,
c h a r a c t e r i z e d i n t h a t the doubled grip-lug (6) is detachably joined along its edges to the main part of the underlying cover strip (5).
7. An opening arrangement in accordance with one or more of the
35 preceding claims,
c h a r a c t e r i z e d i n t h a t a folding line (7)

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- 7 -

between the main part of the cover strip (5) and the grip-lug
(6) extends substantially along the edge of the container wall (3).

1/1

