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(54) **Reclosable foil lid**

Wiederverschliessbarer Foliendeckel

Couvercle en feuille refermable

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Description

[0001] The invention relates to a reclosable foil lid for closing the mouth opening of a container, the reclosable foil lid comprising:

- a foil sheet adapted to the mouth opening of the container; and
- attachment means arranged to the foil sheet for reclosable attachment to the edge of the mouth opening.

[0002] Such a reclosable foil lid is known from document US-A-5 582 317.

[0003] Foil lids are commonly used for closing containers, which for example contains food stuffs, such as milk powder. The foil lid provides a secure closure of the container and is easily removable from the container. The only problem with foil lids according to the state of the art is that such foil lids cannot be used for reclosing the container. It is common to provide an additional cap, which can be placed over the mouth opening of the container and which is used for reclosing the container after the foil lid has been removed.

[0004] It is an object of the invention to provide a foil lid, which can be used for reclosing a container. This will remove the necessity of an additional cap resulting in a cheaper container.

[0005] These attachment means provide the possibility to reattach the foil sheet onto the container providing a reclosable foil lid.

[0006] The object of this invention is achieved by a reclosable foil lid according to claim 12 wherein the attachment means comprise a flexible lip extending at least partially along the periphery of the foil sheet. This flexible lip is formed in the foil sheet and shaped such that the lip forms a reclosable attachment of the foil lid to the mouth opening.

[0007] In a preferred embodiment of the foil lid according to the invention the flexible lip snappingly coacts with the edge of the mouth opening. This provides for a firm attachment of the foil sheet to the container.

[0008] Preferably, the flexible lip is of a plastic. This provides some stiffness to the flexible lip and ensures that the shape of the lip will stay adapted to the shape of the mouth opening. Generally the foil sheet is of a metal, in particular aluminum. This has the dimension to wrinkle and in combination with a plastic flexible lip, the foil sheet will stay less wrinkled even after a number of reclosing actions.

[0009] The invention further relates to a combination of a container and a reclosable foil lid according to the invention, wherein the container comprises a bottom, a peripheral wall extending from the bottom, wherein the upper part of the peripheral wall defines a mouth opening and wherein the reclosable foil lid is attached to the edge of the mouth opening.

[0010] In a preferred embodiment of the combination

according to the invention a part of the peripheral wall comprises an inwardly extending ring-shaped edge. On to this ring-shaped edge the foil lid can be attached in a common way for example by adhering the foil sheet to the ring.

[0011] In a preferred embodiment of the combination according to the invention the edge of the mouth opening comprises a peripheral groove in which the attachment means reclosably engage. By providing a groove the attachment means, in particular a lip, can snap into the groove and provides a good attachment onto the container. It also will provide a good sealing of the foil lid onto the container, as the attachment means can be pressed into the groove.

[0012] In a further preferred embodiment of the combination according to the invention the groove is formed by a beaded edge. It is common to provide the edge of the mouth opening with a beaded edge. This is to prevent that the sharp edge of the material of the container defines the edge opening. By providing a beaded edge a more rounded edge is provided. Now by suitably arranging the beaded edge, a groove can also be provided into this edge.

[0013] In yet another embodiment of the combination according to the invention the groove is formed by a bend back portion of the edge of the mouth opening.

[0014] In yet another preferred embodiment of the combination according to the invention the foil lid is attached to the edge of the mouth opening on either side of the groove. Specially when such a combination is sterilized the pressures present, when sterilizing such a container will attend to rip a foil lid from the edge of the mouth opening. Now by attaching the foil lid on either side of the groove a sufficient large attachment surface is provided, which can cope with the forces present when sterilizing.

[0015] Preferably the foil lid is adhered to the edge of the mouth opening.

[0016] Although such a combination according to the invention can be made out of any material, it is preferred to manufacture the container out of tin-plate.

[0017] These and other features of the invention will be elucidated in conjunction with the accompanying drawings.

[0018] Figure 1 shows a cross-sectional view of a first embodiment of a combination according to the invention.

[0019] Figure 2 shows a cross-sectional view of a second embodiment of a combination according to the invention.

[0020] Figure 3 shows a cross-sectional view of a third embodiment of a combination according to the invention.

[0021] In figure 1 a cross-sectional view of a combination 1 according to the invention is shown. This combination 1 comprises a container with a peripheral wall 2 and a ring-shaped upper part 3, which is beaded to the peripheral wall 2. The inner edge 4 of the ring-like part 3 is curled, such that no sharp edges define the mouth opening of the container. On top of the ring-like part 3 a

foil lid 5 is arranged, which has on the bottom side a coating 6 for adhering the ring-like part 3. The reclosable foil lid 5 comprises a lip 7, which extends along the periphery of the edge 4 of the mouth opening. The lip 7 partially envelopes this edge 4. Of the lid 5 has been removed from the ring-like part 3 by pulling the tab 8 the foil lid can be reclosed by the flexible lip 7.

[0022] When such a combination 1 is being sterilized, the lip 7 provides some relief for the attachment of the foil lid 5 onto the ring-like part 3. Due to the shape of the lip 7 part of the pressure is transferred to the edge 4 thereby reducing the forces on the attachment zone of the attachment of the foil lid 5 onto the ring-like part 3.

[0023] Figure 2 shows a cross-sectional view of a second embodiment 10 according to the invention. Parts similar to the embodiment 1 according to figure 1 are designated with the same reference signs.

[0024] The combination 10 according to figure 2 has again a ring-like part 3 which is arranged to the peripheral wall 2 of the container. The edge 11 again has a curled edge, but in this embodiment provides a groove 12 in which a lip 13 of the foil lid 5 extends. This lip 13 has a notch, which hooks into the curled edge 11 providing a snapping closure for the foil lid 5.

[0025] Figure 3 shows a third embodiment 20 according to the invention. Again parts similar to the embodiment according to figure 1 are designated with the same reference signs. The container has a peripheral wall 2 onto which a ring-shaped part 21 is arranged. This ring-shaped part 21 has a curled edge 22, which defines the mouth opening. The ring-like part 21 has a bend back portion 23 defining a groove. In this groove a lip 24 extends, which is attached to the foil lid 5. Again this groove and lip 24 provide a reclosable foil lid. The foil lid can be adhered on either side of the groove 23 at the interfaces 25 and 26 between the foil lid 5 and the ring-like portion 21.

Claims

1. Combination of a container and a removable and reclosable foil lid, wherein the container comprises a bottom, a peripheral wall extending from the bottom, wherein the upper part of the peripheral wall defines a mouth opening and wherein the foil lid is attached to the mouth opening and wherein said lid comprises:

- a foil sheet adapted to the mouth opening of the container; and
- attachment means arranged to the foil sheet for reclosable attachment to the edge of the mouth opening, **characterized in that** the attachment means comprise a flexible lip extending at least partially along the periphery of the foil sheet and formed in the foil sheet and shaped such that the lip forms a reclosable attachment

of the foil lid to the mouth opening.

2. Combination according to claim 1, wherein the flexible lip snappingly coacts with the edge of the mouth opening.
3. Combination according claim 1 or 2, wherein the edge of the mouth opening comprises a peripheral groove in which the lip reclosably engages.
4. Combination according to claim 3, wherein the groove is formed by a beaded edge.
5. Combination according to claim 3 or 4, wherein the groove is formed by a bend back portion of the edge of the mouth opening.
6. Combination according to any of the claims 1-5, wherein the foil lid releasably is adhered to the mouth opening.
7. Combination according to any of the claims 3-5, wherein the foil lid is releasably adhered to the mouth opening on either side of the groove.
8. Combination according to any of the claims 1-7, wherein the container is a tin-plate can.
9. Combination according to claim 1-8, wherein the flexible lip is made of a plastic.
10. Combination according to any of the preceding claims, wherein the foil sheet is made of a metal, in particular aluminum.
11. Combination according to any of the preceding claims, comprising a tab arranged to the foil sheet.
12. Reclosable and removable foil lid comprising

- a foil sheet adapted to a mouth opening of a container; and
- attachment means arranged to the foil sheet for reclosable attachment to the edge of the mouth opening, **characterized in that** the attachment means comprise a flexible lip extending at least partially along the periphery of the foil sheet and formed in the foil sheet and shaped such that the lip forms a reclosable attachment of the foil lid to the mouth opening.

Patentansprüche

1. Kombination eines Behälters und eines lösbaren und wiederverschließbaren Foliendeckels, wobei der Behälter aufweist: einen Boden, eine periphere Wand die sich vom Boden aus erstreckt, wobei der

obere Abschnitt der peripheren Wand eine Mundöffnung definiert und wobei der Foliendeckel an der Mundöffnung befestigt ist und wobei der genannte Deckel aufweist:

- ein Folienblatt, angepasst an die Mundöffnung des Behälters, und
 - ein Befestigungsmittel, angeordnet an dem Folienblatt zum wiederverschließbaren Anbringen am Rand der Mundöffnung, **dadurch gekennzeichnet, dass** das Befestigungsmittel aufweist: eine flexible Lippe, die sich mindestens teilweise entlang des Umfangs des Folienblatts erstreckt und in dem Folienblatt ausgebildet ist und derart gestaltet ist, dass die Lippe eine wiederverschließbare Befestigung des Folienblatts an der Mundöffnung formt.
2. Kombination nach Anspruch 1, wobei die flexible Lippe schnappend mit dem Rand der Mundöffnung zusammenwirkt.
 3. Kombination nach Anspruch 1 oder 2, wobei der Rand der Mundöffnung eine periphere Nut aufweist, in der die flexible Lippe wiederverschließbar in Eingriff ist.
 4. Kombination nach Anspruch 3, wobei die Nut mittels eines gesickten Randes ausgebildet ist.
 5. Kombination nach Anspruch 3 oder 4, wobei die Nut mittels eines zurückgebogenen Abschnitts des Rands der Mundöffnung ausgebildet ist.
 6. Kombination nach irgendeinem der Ansprüche 1-5, wobei der Foliendeckel lösbar an die Mundöffnung angehaftet ist.
 7. Kombination nach irgendeinem der Ansprüche 3-5, wobei der Foliendeckel lösbar auf beiden Seiten der Nut an die Mundöffnung angehaftet ist.
 8. Kombination nach irgendeinem der Ansprüche 1-7, wobei der Behälter eine Weißblechdose ist.
 9. Kombination nach Anspruch 1-8, wobei die flexible Lippe aus Kunststoff ist.
 10. Kombination nach irgendeinem der vorherigen Ansprüche, wobei die Folienschicht aus Metall ist, insbesondere Aluminium.
 11. Kombination nach irgendeinem der vorherigen Ansprüche, wobei ein Lappen an dem Folienblatt angebracht ist.
 12. Wiederverschließbarer und lösbarer Foliendeckel aufweisend:

- ein Folienblatt, angepasst an eine Mundöffnung eines Behälters, und
- ein Befestigungsmittel, angeordnet an dem Folienblatt zum wiederverschließbaren Anbringen an dem Rand der Mundöffnung, **dadurch gekennzeichnet, dass** das Befestigungsmittel aufweist: eine flexible Lippe, die sich mindestens teilweise entlang des Umfangs des Folienblatts erstreckt und in dem Folienblatt ausgebildet ist und derart gestaltet ist, dass die Lippe eine wiederverschließbare Befestigung des Folienblatts an der Mundöffnung formt.

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Revendications

1. Association d'un récipient et d'un couvercle sous forme de feuille amovible et refermable, le récipient comprenant un fond, une paroi périphérique s'étendant depuis le fond, la partie supérieure de la paroi périphérique définissant une ouverture de bouche et le couvercle sous forme de feuille étant fixé à l'ouverture de bouche et comprenant :

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- une feuille adaptée à l'ouverture de bouche du récipient ; et
- des moyens de fixation agencés sur la feuille pour la fixation refermable sur le bord de l'ouverture de bouche,

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caractérisée en ce que les moyens de fixation comprennent une lèvre flexible s'étendant au moins partiellement le long de la périphérie de la feuille et réalisée dans la feuille, et formée de telle sorte que la lèvre forme une fixation refermable du couvercle sous forme de feuille sur l'ouverture de bouche.

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2. Association selon la revendication 1, dans laquelle la lèvre flexible agit conjointement par encliquetage avec le bord de l'ouverture de bouche.

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3. Association selon la revendication 1 ou 2, dans laquelle le bord de l'ouverture de bouche comprend une rainure périphérique dans laquelle s'engage la lèvre de manière refermable.

4. Association selon la revendication 3, dans laquelle la rainure est formée par un bord roulé.

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5. Association selon la revendication 3 ou 4, dans laquelle la rainure est formée par une partie arrière courbée du bord de l'ouverture de bouche.

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6. Association selon l'une quelconque des revendications 1 à 5, dans laquelle le couvercle en forme de feuille adhère de manière amovible à l'ouverture de bouche.

7. Association selon l'une quelconque des revendications 3 à 5, dans laquelle le couvercle en forme de feuille adhère de manière amovible à l'ouverture de bouche de chaque côté de la rainure. 5
8. Association selon l'une quelconque des revendications 1 à 7, dans laquelle le récipient est une boîte étamée.
9. Association selon l'une quelconque des revendications 1 à 8, dans laquelle la lèvre flexible est composée de plastique. 10
10. Association selon l'une quelconque des revendications précédentes, dans laquelle la feuille est constituée d'un métal, en particulier d'aluminium. 15
11. Association selon l'une quelconque des revendications précédentes, comprenant une languette agencée sur la feuille. 20
12. Couvercle en forme de feuille refermable et amovible comprenant
- une feuille adaptée à une ouverture de bouche d'un récipient ; et 25
 - des moyens de fixation agencés sur la feuille pour la fixation refermable sur le bord de l'ouverture de bouche, 30
- caractérisé en ce que** les moyens de fixation comprennent une lèvre flexible s'étendant au moins partiellement le long de la périphérie de la feuille et réalisée dans la feuille, et formée de telle sorte que la lèvre forme une fixation refermable du couvercle sous forme de feuille sur l'ouverture de bouche. 35

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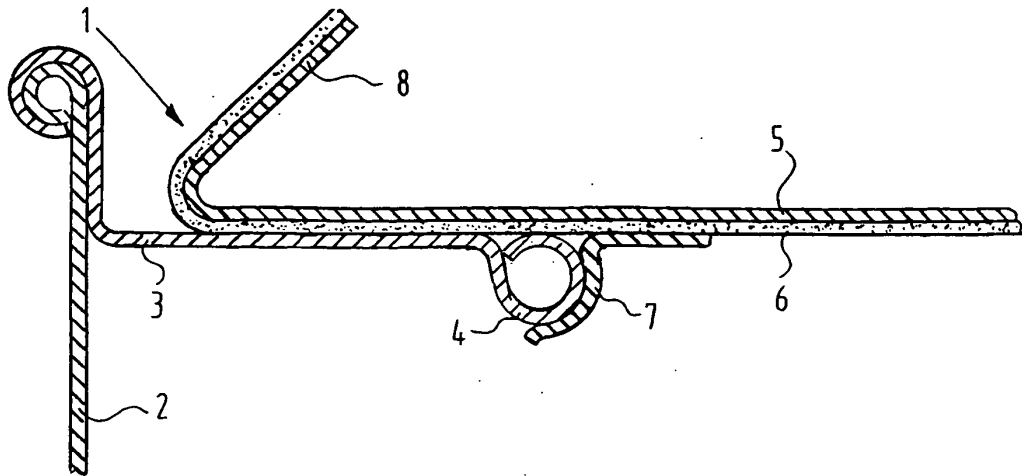


FIG. 1

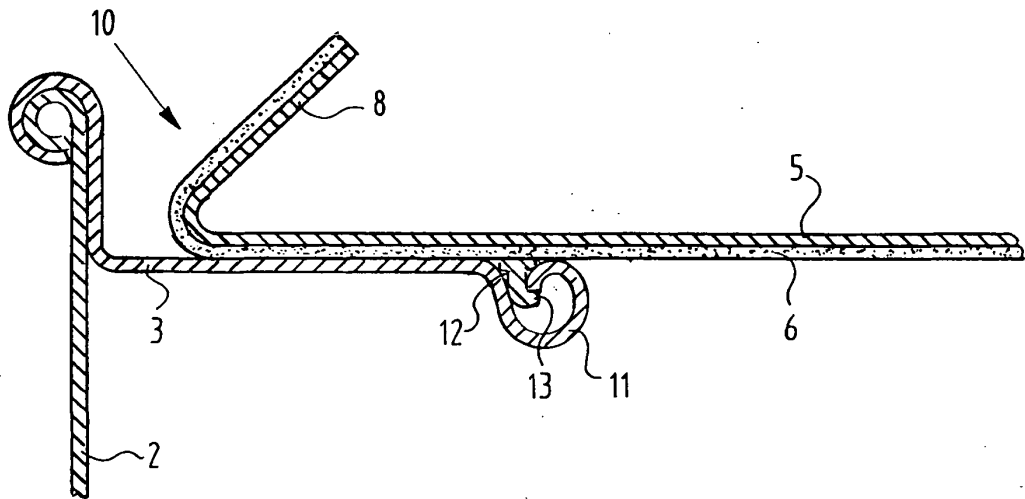


FIG. 2

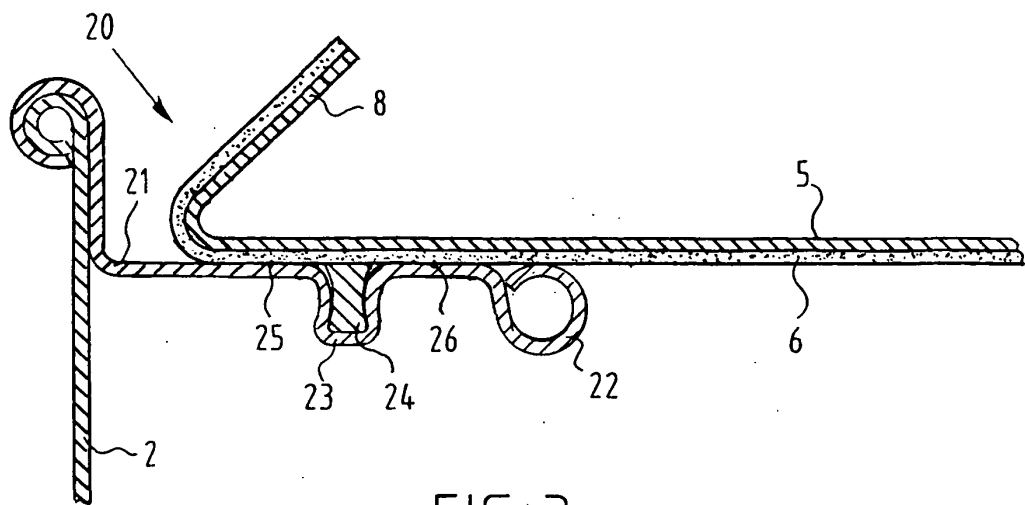


FIG. 3

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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