



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 645 517 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
12.04.2006 Bulletin 2006/15

(51) Int Cl.:
B65D 17/50 (2006.01) B65D 77/20 (2006.01)

(21) Application number: **04077796.3**

(22) Date of filing: **11.10.2004**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL HR LT LV MK

• **Savrij Droste, Fred Willem**
7231 DG Warnsveld (NL)

(74) Representative: **'t Jong, Bastiaan Jacob et al**
Arnold & Siedsma
Advocaten en Octrooigemachtigden
Sweelinckplein 1
2517 GK Den Haag (NL)

(71) Applicant: **Impress Group B.V.**
7418 AH Deventer (NL)

(72) Inventors:
• **Jouillat, Jean-François René**
49150 Bauge (FR)

(54) **Reclosable foil lid**

(57) The invention relates to a reclosable foil lid (5,6) for closing the mouth opening of a container, said lid (5,6) comprising:

- a foil sheet (5,6) adapted to the mouth opening of the container; and
- attachment means (7) arranged to the foil sheet (5,6) for reclosable attachment to the edge (4) of the

mouth opening.

The invention furthermore relates to combination (1) of a container and a reclosable foil lid (5,6), wherein the container comprises a bottom, a peripheral wall (2) extending from the bottom, wherein the upper part of the peripheral wall (2) defines a mouth opening and wherein the reclosable foil lid (5,6) is attached to the edge (4) of the mouth opening.

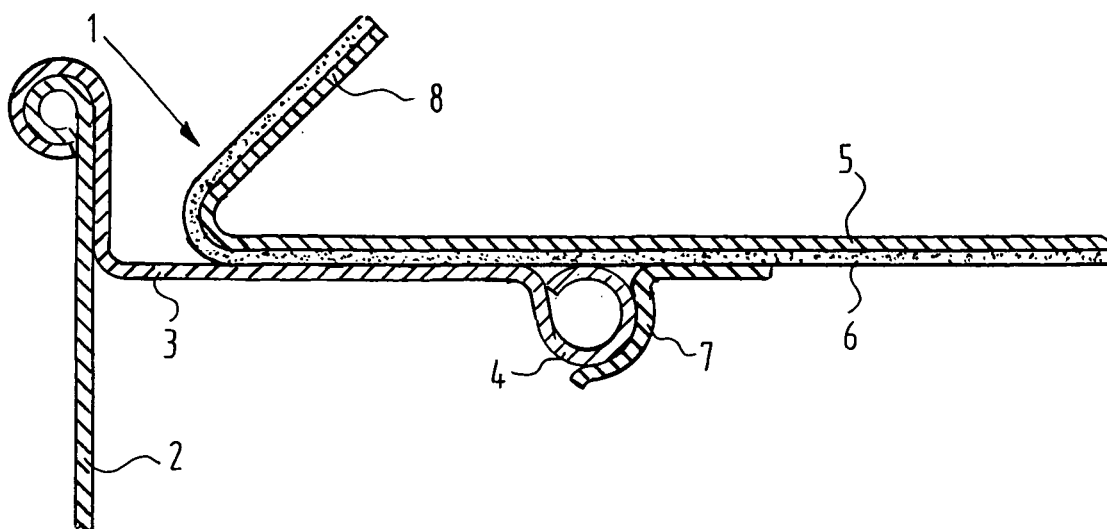


FIG. 1

EP 1 645 517 A1

Description

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

[0002] 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.

[0003] 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.

[0004] The object of this invention is achieved by a 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.

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

[0006] In a preferred embodiment of the reclosable foil lid according to the invention the attachment means comprise a flexible lip extending at least partially along the periphery of the foil sheet. This flexible lip will engage onto the edge of the mouth opening and provides an additional attachment of the foil lid to the mouth opening.

[0007] In another 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. Reclosable foil lid for closing the mouth opening of a container, said 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.

2. Reclosable foil lid according to claim 1, wherein the attachment means comprise a flexible lip extending at least partially along the periphery of the foil sheet.

3. Reclosable foil lid according to claim 2, wherein the flexible lip snappingly coacts with the edge of the mouth opening.

4. Reclosable foil lid according to claim 2 or 3, wherein the flexible lip is of a plastic

5. Reclosable foil lid according to any of the preceding claims, wherein the foil sheet is of a metal, in particular aluminum.

6. Reclosable foil lid according to any of the preceding claims, comprising a tab arranged to the foil sheet.

7. Combination of a container and a reclosable foil lid according to any of the preceding claims, 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.

8. Combination according to claim 7, wherein the upper part of the peripheral wall comprises an inwardly extending ring-shaped edge.

9. Combination according claim 7 or 8, wherein the edge of the mouth opening comprises a peripheral groove in which the attachment means reclosably engage.

10. Combination according to claim 9, wherein the groove is formed by a beaded edge.

11. Combination according to claim 9 or 10, wherein the groove is formed by a bend back portion of the edge of the mouth opening.

12. Combination according to any of the claims 9 - 11, wherein the foil lid is attached to the edge of the mouth opening on either side of the groove.

13. Combination according to any of the claims 7 -12, wherein the foil lid is adhered to the edge of the mouth opening.

14. Combination according to any of the claims 7 - 13, wherein the container is a tin-plate can.

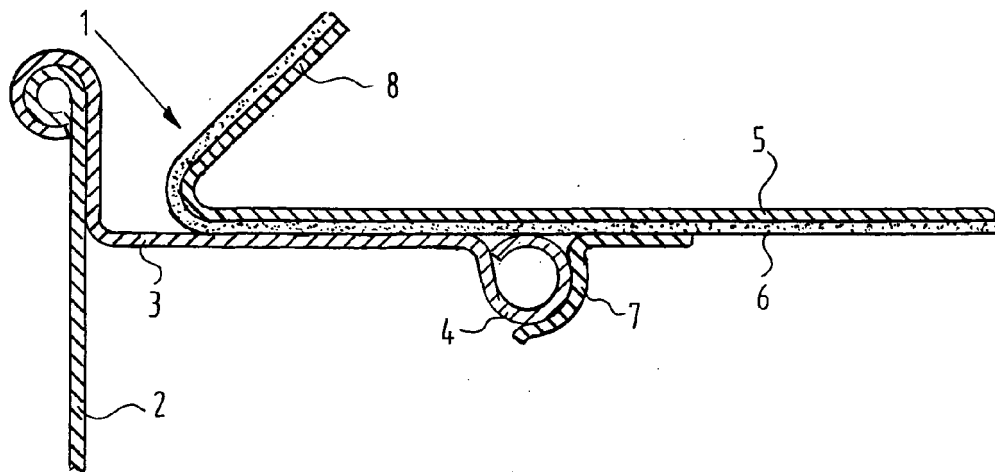


FIG. 1

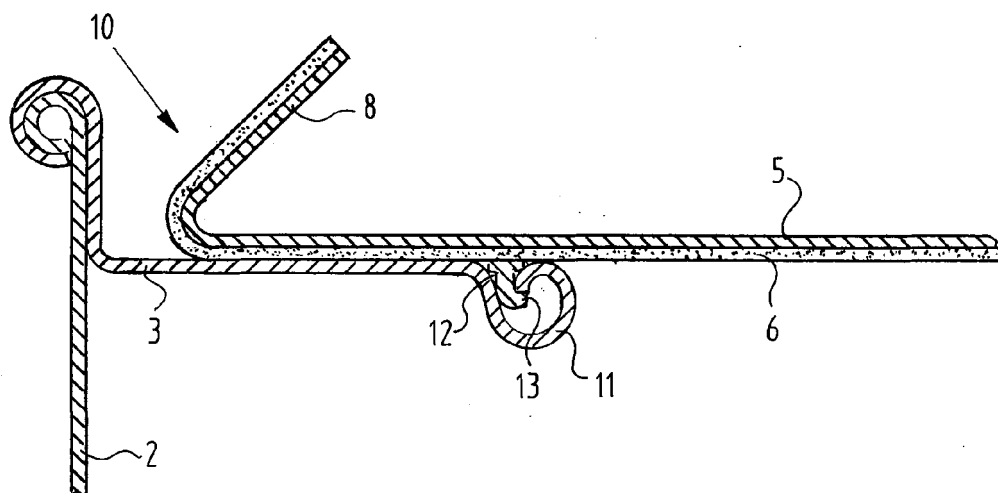


FIG. 2

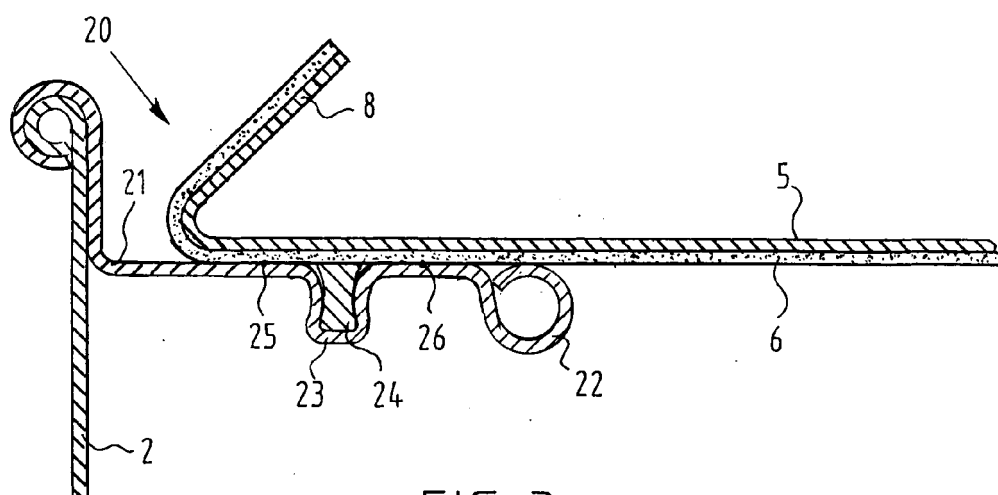


FIG. 3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 07 7796

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X A	US 5 085 348 A (HUERLIMANN ET AL) 4 February 1992 (1992-02-04) * column 3, line 10 - column 4, line 9; figures 1-6 *	1-3,5-8, 13 4,9-12, 14	B65D17/50 B65D77/20
X A	US 3 274 964 A (JR. ELMER W. GRIESE,) 27 September 1966 (1966-09-27) * column 2, line 43 - column 4, line 20; figures 1-7 *	1,2,5,7, 14 3,4,6, 8-13	
X A	EP 1 052 186 A (DI MAURO OFFICINE GRAFICHE S.P.A) 15 November 2000 (2000-11-15) * column 3, paragraph 18 - column 5, paragraph 38; figures 1-4 *	1-4,7,13 5,6, 8-12,14	
X A	US 5 582 317 A (WERMUND ET AL) 10 December 1996 (1996-12-10) * column 3, line 42 - column 6, line 8; figures 1-5 *	1-4,6-8 5,9-14	
A	EP 1 419 972 A (SONOCO DEVELOPMENT, INC) 19 May 2004 (2004-05-19) * column 4, paragraph 11 - column 5, paragraph 15; figures 1-4 *	1-14	TECHNICAL FIELDS SEARCHED (Int.Cl.7) B65D
A	US 5 752 614 A (NELSON ET AL) 19 May 1998 (1998-05-19) * column 3, line 29 - column 5, line 46; figures 1-8 *	1-14	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 14 March 2005	Examiner Lendfers, P
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

2
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 07 7796

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-03-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5085348	A	04-02-1992	AU 3084489 A	21-09-1989
			BR 8901227 A	31-10-1989
			CA 1331365 C	09-08-1994
			DK 121389 A	18-09-1989
			EP 0332885 A1	20-09-1989
			JP 1279071 A	09-11-1989
			KR 9703303 B1	17-03-1997
			MX 171275 B	15-10-1993
			PT 90014 A ,B	10-11-1989
			ZA 8901628 A	29-11-1989
US 3274964	A	27-09-1966	US 3245576 A	12-04-1966
EP 1052186	A	15-11-2000	IT MI990881 A1	26-10-2000
			EP 1052186 A2	15-11-2000
US 5582317	A	10-12-1996	US 5472542 A	05-12-1995
			AU 679291 B2	26-06-1997
			AU 1004895 A	20-07-1995
			CA 2138344 A1	14-07-1995
			EP 0665171 A1	02-08-1995
EP 1419972	A	19-05-2004	US 2004089664 A1	13-05-2004
			BR 0304576 A	31-08-2004
			CA 2435420 A1	12-05-2004
			EP 1419972 A2	19-05-2004
US 5752614	A	19-05-1998	NONE	