



(11) Publication number : **0 603 978 A1**

(12) **EUROPEAN PATENT APPLICATION**

(21) Application number : **93203634.6**

(51) Int. Cl.⁵ : **B65D 41/18**

(22) Date of filing : **23.12.93**

(30) Priority : **24.12.92 NL 9202261**

(43) Date of publication of application :
29.06.94 Bulletin 94/26

(84) Designated Contracting States :
**AT BE CH DE DK ES FR GB GR IE IT LI LU MC
NL PT SE**

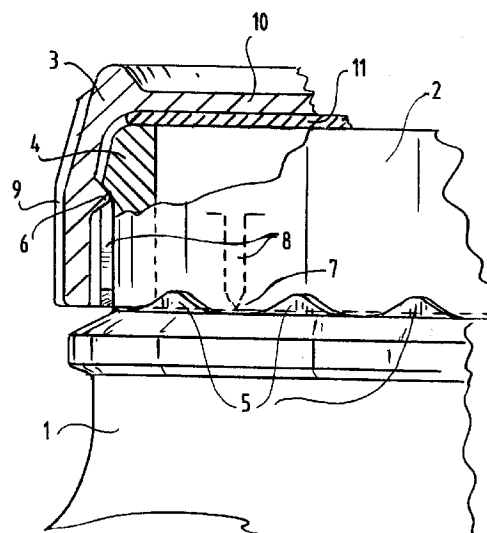
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(54) **Container with a cap.**

(57) The invention relates to a combination of a container (1) with a round mouth (2) and a cap (3) closing off this mouth (2),
which container (1) comprises :
a widening (4) situated on the outside ;
and
a number of rise cams (5) situated on the outside in one plane parallel to the mouth opening ;
which cap (3) comprises :
a widening (6) situated on the inside for snap-in co-action with the widening (4) on the outside of the container (1) ; and
a number of cams (8) present on the inside and situated with their axial bottom zone (7) between the cams (5) on the outside of the container (1) ;
such that the combination can be made by arranging the cap (3) on the container (1) with axial pressure, and that by rotation relative to the container (1) the cap (3) can be removed therefrom.



The invention relates to a combination of a container with a round mouth and a cap closing off this mouth,

which container comprises:

a widening situated on the outside; and

a number of rise cams situated on the outside in one plane parallel to the mouth opening;

which cap comprises:

a widening situated on the inside for snap-in co-action with the widening on the outside of the container; and

a number of cams present on the inside and situated with their axial bottom zone between the cams on the outside of the container;

such that the combination 1, 3 can be made by arranging the cap on the container with axial pressure, and that by rotation relative to the container the cap can be removed therefrom.

The advantage of such a combination is that in order to form the combination after filling of the container in the factory, the cap can be placed on the container by exerting axial pressure. The consumer can open the combination by rotating the cap relative to the container. The combination is in principle reclosable. To this end the consumer can reclose the opened container by exerting an axial pressure between container and cap.

The annexed figure shows the combination of a container 1 with a round mouth 2 and a cap 3 with external ribs 9 closing off this mouth 2.

The container 1 comprises an annular widening 4 situated on the outside and a number of rise cams 5 situated on the outside in one plane parallel to the mouth opening 2.

The cap 3 comprises a widening 6 situated on the inside and co-acting in snap-in manner with the widening 4 on the outside of the container 1, for instance a ring or a number of annularly arranged, inward facing protrusions, in addition to a number of cams 8 present on the inside and situated with their axial bottom zone 7 between the cams 5 on the outside of the container 1.

As shown in the figure, the combination 1, 3 can be made by arranging the cap 3 on container 1 with axial pressure, and the cap 3 can, by rotation relative to container 1, be removed therefrom. The cams 5 have for this purpose the fluent form shown in the figure which over a small range gives an effect as of screw thread. The dimensioning must be such that the bottom zone 7 provides an axial displacement during rotation of cap 3 which is sufficiently large to cause the ring 6 on the inside of cap 3 to pass over the widening 4 on the container mouth 2.

In the forming of the combination it is practically of no importance what the relative angular position is of the cap 3 and the container 1. During the axial pressing each cam 8 will seek a path whereby it eventually occupies a position between the cams 5. It will

be apparent that for this purpose the angular positions of cams 5 and 8 must be mutually corresponding.

In principle the number of cams 8 is not important. This number should however preferably amount to a minimum of three.

An adhesive foil 11 is arranged on the upper wall of container 1 on the inside, thus ensuring a sealing action of the cap on the container 1.

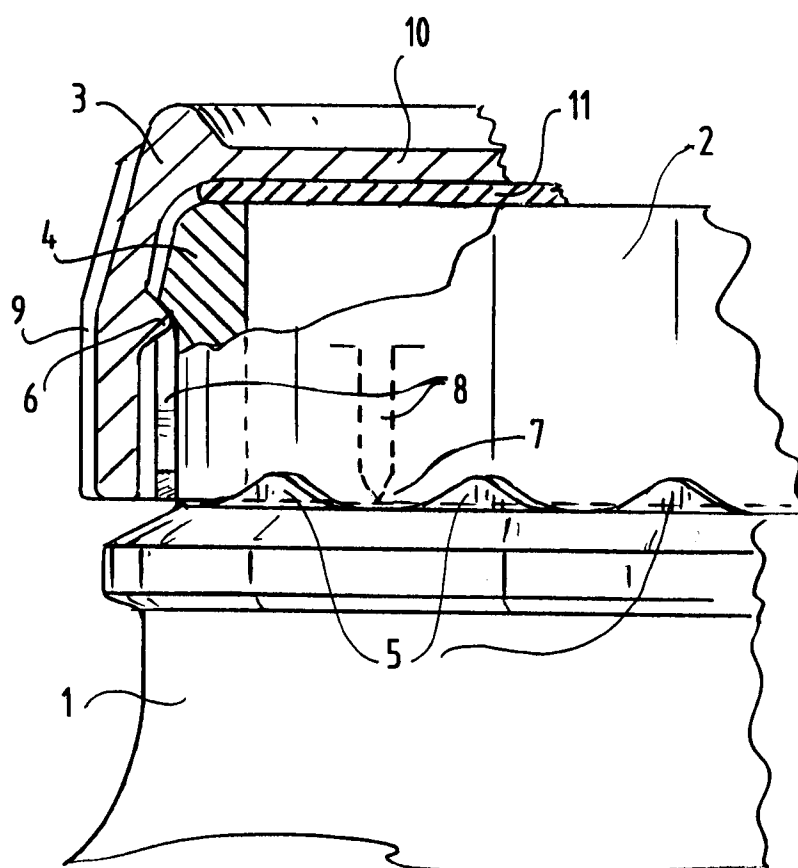
The combination according to the invention has the great advantage of enabling with technically very simple means a considerable rationalization of the closing operation of a container, while the sealing can nevertheless be guaranteed with very simple means. Due to the snap-in co-action with the container, the cap can also have a small mass, whereby it is light and can be manufactured with less material.

The sealing foil 11 adheres to the rim of the container mouth 2. After opening of the container 1 for the first time the foil 11 must first be removed by the user.

The cams 5 can form part of the container 1 or form part of a ring fixed to the container. It will be apparent that during loosening of the cap this ring must be resistant to the therein occurring forces. In particular, the ring with the cams may not move together with the cap during its removal.

Claims

1. Combination of a container (1) with a round mouth (2) and a cap (3) closing off this mouth (2), which container (1) comprises:
 - a widening (4) situated on the outside; and
 - a number of rise cams (5) situated on the outside in one plane parallel to the mouth opening;
 which cap (3) comprises:
 - a widening (6) situated on the inside for snap-in co-action with the widening (4) on the outside of the container (1); and
 - a number of cams (8) present on the inside and situated with their axial bottom zone (7) between the cams (5) on the outside of the container;
 such that the combination (1, 3) can be made by arranging the cap (3) on the container (6) with axial pressure, and that by rotation relative to the container (1) the cap (3) can be removed therefrom.
2. Combination as claimed in claim 1, **characterized in that** the cams present on the container form part of a ring fixed to the container.





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EUROPEAN SEARCH REPORT

Application Number
EP 93 20 3634

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.5)	
X	US-A-3 372 834 (AYOTTE ET AL) * column 4, line 4 - line 47; figures 1-6 *	1	B65D41/18	
Y	---	2		
Y	FR-A-2 669 307 (BORMIOLI METALPLAST) * page 4, line 10 - page 6, line 22; figures 1-4 *	2		
A	---	1		
X	EP-A-0 055 954 (L'OREAL) * page 3, line 30 - page 4, line 11; figure 1 *	1		
X	CH-A-463 985 (L'OREAL) * column 4, line 23 - line 53; figures 1,3 *	1		
X	GB-A-2 041 892 (UNITED GLASS LIMITED) * page 1, line 117 - page 2, line 17; figure *	1		
X	GB-A-1 414 957 (UNILEVER) * page 3, line 3 - line 30; figures 1-5 *	1		B65D
A	US-A-3 910 444 (FOSTER) * column 2, line 23 - line 63; figures 2,5,6 *	1		
A	GB-A-815 352 (GORGET)			
A	FR-A-2 642 729 (LABORATOIRES SUPPO-STERIL)			
A	FR-A-2 206 252 (ASTRA PLASTIQUE)			
A	FR-A-2 241 463 (SOCIETE DES PRODUITS NESTLE)			

The present search report has been drawn up for all claims				
Place of search BERLIN		Date of completion of the search 24 March 1994	Examiner Spettel, J	
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				

EPO FORM 1503 03.92 (P04C01)