

(19)



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(11)

EP 1 630 104 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

01.03.2006 Bulletin 2006/09

(51) Int Cl.:

B65D 43/04 (2006.01)**B65D 21/02** (2006.01)**B65D 47/06** (2006.01)**B44D 3/12** (2006.01)(21) Application number: **04104095.7**(22) Date of filing: **26.08.2004**

(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• **Schouten, Eelco****3402XN Ijsselstein (NL)**(74) Representative: **Voncken, Bartholomeus Maria
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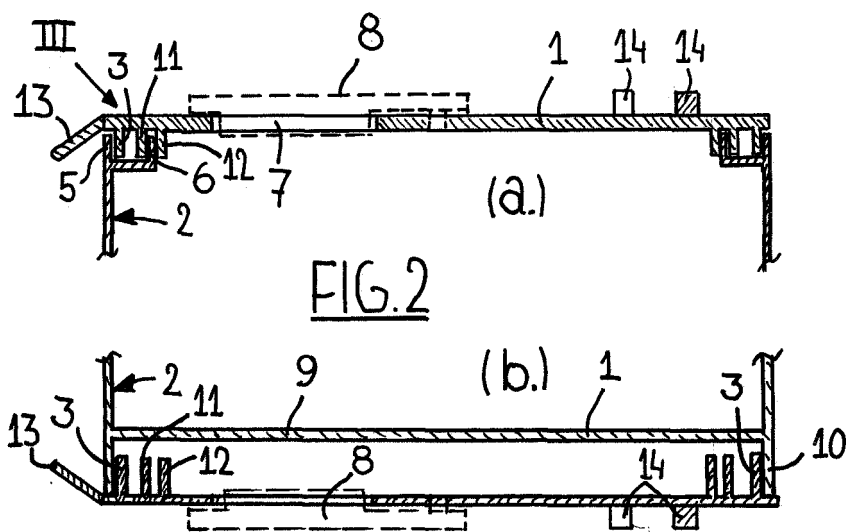
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2271CA Voorburg (NL)(54) **Removable lid**

(57) A removable lid is provided, intended to be used with a container (2) of the paint can type having an upper opening surrounded by an upwardly opening channel (4) delimited by an inner peripheral wall (6) and an outer peripheral wall (5), said lid comprising a substantially flat disc-shaped main body (1) and an annular skirt (3) extending substantially perpendicularly to the disc-shaped body and intended to be housed between the peripheral walls of the channel of the container, wherein the

disc-shaped body further is provided with a pouring opening (7) and a closure cap (8) therefor.

The annular skirt has an outer diameter closely matching the inner diameter of the outer peripheral wall of the channel of the container for a clamping engagement therewith, wherein the shape of the annular skirt further allows it to clampingly engage a downwardly extending ridge (10) surrounding the bottom of the container.



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Description

[0001] The invention relates to a removable lid intended to be used with a container of the paint can type having an upper opening surrounded by an upwardly opening channel delimited by an inner peripheral wall and an outer peripheral wall, said lid comprising a substantially flat disc-shaped main body and an annular skirt extending substantially perpendicularly to the disc-shaped body and intended to be housed between the peripheral walls of the channel of the container, wherein the disc-shaped body further is provided with a pouring opening and a closure cap therefor.

[0002] A removable lid of the above-mentioned type is known from US-A-4.518.094. Herein the peripheral walls of the channel of the container define an upper annular opening with a reduced size in relation to the size of a tubular shaped groove of the channel. Correspondingly, the annular skirt of this known lid comprises an annular projection or thickening for a snapping cooperation with the channel of the container. Thus, this known lid only is adapted to be used in combination with such a specific container.

[0003] It is an object of the present invention to provide an improved removable lid of the type referred to above.

[0004] Thus, in accordance with the present invention the removable lid is characterized in that the annular skirt has an outer diameter closely matching the inner diameter of the outer peripheral wall of the channel of the container for a clamping engagement therewith, and wherein the shape of the annular skirt further allows it to clampingly engage a downwardly extending ridge surrounding the bottom of the container.

[0005] As a result, the removable lid according to the present invention can be attached to the upper side of a standard container of the paint can type after the original lid thereof has been removed. The outwardly directed face of the annular skirt then will engage the inwardly directed face of the outer peripheral wall of the groove, such that the removable lid remains attached thereto by means of friction without the need for additional means.

[0006] Furthermore, because a standard container of the paint can type also is provided with a downwardly extending ridge surrounding the bottom of the container, of which the inner diameter substantially corresponds to the inner diameter of the outer peripheral wall (at the upper side of the container), the removable lid also can be attached to the bottom of the container, be it in an inversed position with the annular skirt extending upwardly and engaging the said ridge with friction. This position of the removable lid can be used to store the removable lid before its use (when the upper side of the container still may be provided with the original lid). In such a storage position the removable lid occupies only a negligible amount of space.

[0007] When the removable lid is attached to the outer peripheral wall of the channel, as stated above, the pouring opening can be used to pour a desired amount of

paint out of the can. The lid then prevents paint from entering the groove and promotes pouring the paint without dripping.

[0008] In a preferred embodiment, inwardly from the annular skirt at least one additional annular skirt is provided for sealingly engaging the inner peripheral wall of the channel of the container.

[0009] Such an additional annular skirt can prevent paint from entering the groove of the container between the disc-shaped body of the lid and the inner peripheral wall of the groove, for example when the container is tilted during pouring.

[0010] In such a case the lid may be optimised further when the disc-shaped body comprises two additional annular skirts for sealingly engaging the opposite faces of the inner peripheral wall of the channel of the container.

[0011] In such an embodiment said two additional annular skirts sealingly enclose the inner peripheral wall, whereas the main annular skirt sealingly and frictionally engages the outer peripheral wall. The additional annular skirts, however, also will contribute to maintaining the removable lid firmly in position on the container.

[0012] In still another embodiment of the lid the disc-shaped body comprises a lip extending radially outward of the pouring opening beyond the outer circumference of the disc-shaped body.

[0013] Such a lip firstly will function as a guide for paint poured out of the pouring opening, thus reducing the risk of paint dripping along the outer wall of the container. Secondly, this lip acts as a member to be gripped manually by a user of the lid for manipulating the lid (e.g. for removing it from the lower side of the container while in the storage position; for removing it from the upper side of the container for discarding, etcetera).

[0014] Preferably, in such a case, the lip extends inclined downwardly. It is noted, that 'downwardly' is regarded in a position in which the removable lid is attached to the upper side of the container and wherein the container is substantially in a non-tilted position.

[0015] It is noted that a lip as mentioned before, if provided, may have such a dimension as not to interfere with adjacent containers when a number of containers is stored in a close relationship.

[0016] Further it is preferred that the diameter of the disc-shaped body at most equals the outer diameter of the container. As a result the disc-shaped body will not significantly add to the outer dimensions of the container, which fact is important when storing and transporting large numbers of such containers.

[0017] Finally, an embodiment of the removable lid according to the invention is mentioned in which the disc-shaped body on its face opposite to the annular skirt is provided with elevations. Such elevations firstly are help-full when containers provided with such a lid are to be stacked one on top of the other (the elevations will prevent the closure cap from negatively interfering with an adjacent container), and secondly enable a stable position of a container on a supporting surface when the lid

is attached to the lower side of the container (storage position, preventing the closure cap from making the position of the can instable).

[0018] Hereinafter the invention will be elucidated while referring to the drawing in which an embodiment of a removable lid according to the invention, in combination with a container, is illustrated.

Fig. 1 shows an embodiment of a removable lid according to the invention in a view from below;

Fig. 2 is a cross-sectional view according to II-II in fig. 1, with (a) the lid attached to the top of a container, and (b) the lid attached to the bottom of a container, and

Fig. 3 is an enlarged view of detail III in fig. 2, however with the lip not being shown.

[0019] Firstly referring to figure 1, a removable lid for a container of the paint can type is illustrated. The lid comprises a substantially flat disc-shaped main body 1 with a diameter which in the illustrated embodiment equals the outer diameter of a container 2 (fig. 2) to which the lid has to be attached. An annular skirt 3 extends substantially perpendicularly downwards from the main body 1 (see also fig. 2 and fig. 3).

[0020] The container 2 for which the lid is intended, comprises an upper opening surrounded by an upwardly opening channel 4 (see fig. 3) delimited by an outer peripheral wall 5 and an inner peripheral wall 6.

[0021] The annular skirt 3 has an outer diameter closely matching the inner diameter of the outer peripheral wall 5, such that a clamping engagement therebetween will occur when the lid is attached to the top of the container 2, as illustrated in fig. 2a.

[0022] The lid further is provided with a pouring opening 7 for pouring out the contents of the container, such as paint. The pouring opening can be closed, or opened, by a closure cap 8 illustrated only schematically in dotted lines.

[0023] As is usual for the illustrated type of container, its bottom 9 is provided with a downwardly extending annular ridge 10 surrounding the bottom. Generally, the inner diameter of the ridge 10 will closely resemble the inner diameter of the outer peripheral wall 5 at the top of the container 2. Thus it is possible to position the lid at the bottom 9 (fig. 2b) in a reversed position (i.e. with the skirt 3 facing upward), wherein the skirt 3 clampingly engages the ridge 10.

[0024] As illustrated, the disc-shaped main body also is provided with two additional skirts 11 and 12 engaging opposite sides of the inner peripheral wall 6 of the channel 4 (when the lid is positioned at the top of the container 2). In the situation according to fig. 2b the additional skirts 11 and 12 do not have a function.

[0025] Finally, the disc-shaped main body is provided with a lip 13 extending radially outward of the pouring opening 7 beyond the outer circumference of the disc-shaped body 1. As seen in fig. 2a this lip 13 also is

inclined downwardly.

[0026] Before its use (when the container still is closed by its original lid, not illustrated) the removable lid is attached to the lower side of the container 2 as illustrated in fig. 2b. Because the diameter of the main body 1 (at most) equals the diameter of the container 2, the lid does not compromise the storage and transport of the container. The cooperation between the skirt 3 and ridge 10 maintains the lid attached to the container.

[0027] After removal of the original lid, the removable lid can be attached to the top of the container 2 as illustrated in fig. 2a and fig. 3. The skirt 3 engages the outer peripheral wall 5, whereas the additional skirts 11 and 12 engage opposite sides of the inner peripheral wall 6. The engagement between the cooperating parts maintains the lid attached to the container 2.

[0028] After opening the pouring opening 7 by removing the closure cap 8 (which, in a manner not shown, may be attached to the main body 1 in a movable or flexible manner) the container may be tilted and the contents of the container (e.g. paint) may be poured out. The paint then flows over the lip 13 without dripping on any part of the container 2, which remains clean. Also, the additional skirts 11 and 12 prevent paint from entering the channel 4 between the inner peripheral wall 6 and the main body 1.

[0029] The main body 1 further is provided with elevations 14 which, in the situation according to fig. 2a, allow containers to be stacked (the closure cap 8 also can be used therefor) and, in the situation according to fig. 2b, allow the container to be supported by a support surface not illustrated without tilting.

[0030] The invention is not limited to the embodiment described before, which may be varied widely within the scope of the invention as defined by the appending claims.

Claims

1. Removable lid intended to be used with a container of the paint can type having an upper opening surrounded by an upwardly opening channel delimited by an inner peripheral wall and an outer peripheral wall, said lid comprising a substantially flat disc-shaped main body and an annular skirt extending substantially perpendicularly to the disc-shaped body and intended to be housed between the peripheral walls of the channel of the container, wherein the disc-shaped body further is provided with a pouring opening and a closure cap therefor, **characterized in that** the annular skirt has an outer diameter closely matching the inner diameter of the outer peripheral wall of the channel of the container for a clamping engagement therewith, and wherein the shape of the annular skirt further allows it to clampingly engage a downwardly extending ridge surrounding the bottom of the container.

2. Removable lid according to claim 1, wherein inwardly from the annular skirt at least one additional annular skirt is provided for sealingly engaging the inner peripheral wall of the channel of the container. 5
3. Removable lid according to claim 2, wherein the disc-shaped body comprises two additional annular skirts for sealingly engaging the opposite faces of the inner peripheral wall of the channel of the container. 10
4. Removable lid according to claim 1, 2 or 3, wherein the disc-shaped body comprises a lip extending radially outward of the pouring opening beyond the outer circumference of the disc-shaped body. 15
5. Removable lid according to claim 3, wherein the the lip extends inclined downwardly.
6. Removable lid according to any of the previous claims, wherein the diameter of the disc-shaped body at most equals the outer diameter of the container. 20
7. Removable lid according to any of the previous claims, wherein the disc-shaped body on its face opposite to the annular skirt is provided with elevations. 25

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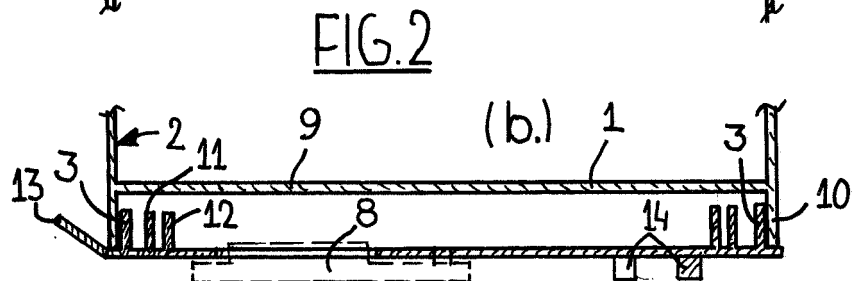
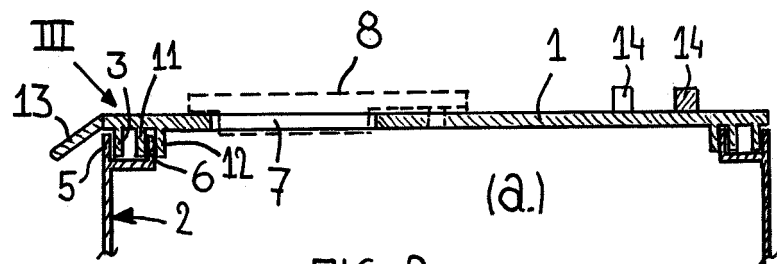
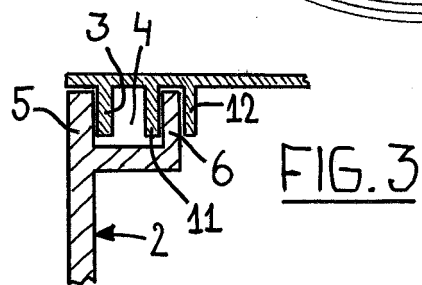
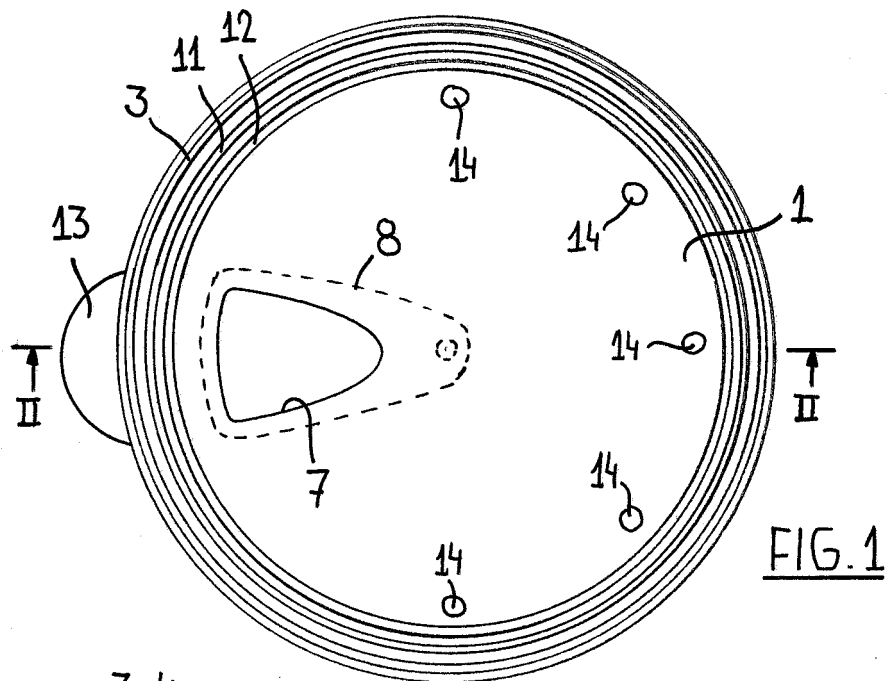
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EUROPEAN SEARCH REPORT

Application Number
EP 04 10 4095

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)
A	CA 2 225 300 A1 (JOHNSON, ROBERT ELLIOTT) 19 June 1999 (1999-06-19) * claims 1,7; figures 2,7e,9 * * page 20, line 24 - page 22, line 3; figure 8 *	1-7	B65D43/04 B65D21/02 B65D47/06 B44D3/12
A	GB 2 199 311 A (* MARDON ILLINGWORTH LIMITED; * LAWSON MARDON) 6 July 1988 (1988-07-06) * figure 1 *	2,3,6	
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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B65D B44D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 26 January 2005	Examiner Bridault, A
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 04 10 4095

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
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