



(43) International Publication Date
17 April 2014 (17.04.2014)

(51) International Patent Classification:
B65D 43/02 (2006.01)

(21) International Application Number:
PCT/EP2013/071136

(22) International Filing Date:
10 October 2013 (10.10.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
MI2012A001721 12 October 2012 (12.10.2012) IT

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(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,

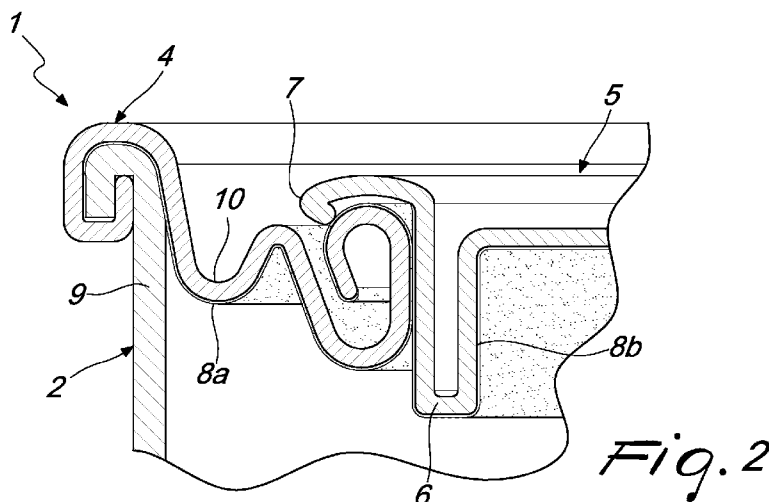
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM,
ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))

(54) Title: CONTAINER, PARTICULARLY SUITABLE FOR CONTAINING WATER-BASED LIQUIDS AND THE LIKE



(57) Abstract: A container (1), particularly suitable for containing water-based liquids and the like, comprising a containment body (2) which has an upper mouth (3) delimited by a metallic ring (4) that is associated with the containment body (2) and can be engaged by pressing with a closure (5). The metallic ring (4) is provided partly by a sealed band (8a) that is plastic-coated at least at the region of the metallic ring (4) that is adapted to face the inside of the containment body (2) to prevent direct contact of the water-based liquid substance contained in the containment body (2) with the metallic ring (4).



CONTAINER, PARTICULARLY SUITABLE FOR CONTAINING WATER-BASED LIQUIDS AND THE LIKE

The present invention relates to a container, particularly suitable for containing water-based liquids and the like.

5 As is known, pots, particularly pots intended to contain paints and the like, are constituted by a main body that is generally cylindrical with a circular base, is made of plastic material and has a metallic ring that delimits the mouth for access to said container.

This metallic ring, which is generally clinched to the internal wall of
10 the body of the container and is made of a ferrous material, is adapted to accommodate a press-on closure so as to form a hermetic seal.

These containers of a known type are not free from drawbacks, which include the fact that since the substances contained therein are water-based, the metallic ring and the closure, if made of ferrous materials, are subject to
15 oxidation, which leads to the forming of rust.

Another drawback of containers of the known type resides in that they normally cannot be stacked one inside the other, since their flat bottom allows mutual sliding, with consequent collapse of the stack of containers.

A further drawback of containers of the known type resides in the fact
20 that the metallic ring generally protrudes inward with respect to the walls of the body of the container, and this characteristic does not allow complete and correct emptying of said container, since a point of accumulation of the contained substance is formed.

The aim of the present invention is to provide a container, particularly
25 suitable for containing water-based liquids and the like, that is not subject to oxidation of its parts, so as to have a longer life than containers of the known type and not to alter the physical-chemical properties of the contained substance.

Within this aim, an object of the present invention is to provide a
30 container that can be stacked easily.

Another object of the present invention is to provide a container, particularly suitable for water-based liquids and the like, that is highly reliable, relatively simple to provide and has competitive costs in comparison to the background art.

5 This aim and these and other objects that will become more apparent hereinafter are achieved by a container, particularly suitable for containing water-based liquids and the like, comprising a containment body which has an upper mouth delimited by a metallic ring that is associated with said containment body and can be engaged by pressing with a closure,
10 characterized in that said metallic ring is provided partly by a sealed band that is plastic-coated at least at the region of said metallic ring that is adapted to face the inside of said containment body to prevent direct contact of the water-based liquid substance contained in said containment body with said metallic ring.

15 Further characteristics and advantages of the invention will become more apparent from the description of a preferred but not exclusive embodiment of a container, particularly suitable for containing water-based liquids and the like, according to the invention, illustrated by way of non-limiting example in the accompanying drawings, wherein:

20 Figure 1 is an exploded perspective view of an embodiment of the container according to the invention;

Figure 2 is an enlarged-scale view, along an axial sectional plane, of a detail of the container according to the invention;

25 Figure 3 is a longitudinal sectional view of two stacked containers according to the invention;

Figure 3a is a longitudinal sectional view of two stacked containers according to a variation of the invention;

Figure 4 is a longitudinal sectional view of the two containers shown in Figure 3 and mutually spaced.

30 With reference to the figures, the container particularly suitable for

containing water-based liquids and the like, generally designated by the reference numeral 1, comprises a containment body 2 made of plastic material, such as for example polypropylene, that has a cylindrical shape with a circular base and is provided with an upper mouth 3 delimited by a
5 metallic ring 4 that is made for example of a ferrous material and is associated with the containment body 2 and can be engaged by pressing with a closure 5.

According to the invention, the metallic ring 4 is provided partly by a sealed band 8a that is plastic-coated at least at the region of the metallic ring
10 4 that is adapted to face the inside of the containment body 2 to prevent direct contact of the water-based liquid substance contained in the containment body 2 with the metallic ring 4.

Advantageously, the closure 5 has a disk-like shape and comprises an inner edge 6 that protrudes in an axial direction, is adapted to be inserted in
15 the upper mouth 3 and is such as to form an outer abutment ring 7.

More precisely, the closure 5 can be also made of a ferrous material. In this case, it is covered by a plastic-coated layer 8b that is formed at least at the region of the closure 5 that is adapted to face the inside of the containment body 2 to prevent direct contact of the water-based liquid
20 substance contained in the containment body 2 with the plug 5.

As regards the metallic ring 4, it is clinched to the upper mouth 3 so as to be flush with the inner wall 9 of the containment body 2 and so as to form a circular groove 10 that is radially internal to the internal wall 9.

Furthermore, at the lower base 11 of the containment body 2 there is a
25 circular rim 12 that protrudes axially from the lower base 11 and is complementary to the circular groove 10 for the stable stacking of two containers 1, as shown in Figures 1 and 2.

Advantageously, the body of the container 1 can taper slightly and in this case, as shown in Figure 3a, the circular edge 12 is an extension of the
30 container body and rests against the circular groove 10 of said underlying

container, when two containers are stacked.

In practice it has been found that the container according to the invention achieves fully the intended aim and objects, since it prevents direct contact between the aqueous substance contained therein and parts thereof that are subject to rusting.

Another advantage of the container according to the invention resides in the fact that it can be stacked easily in a stable manner.

The container, particularly adapted for containing water-based liquids and the like, thus conceived, is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

All the details may furthermore be replaced with other technically equivalent members.

In practice, the materials used, as well as the contingent shapes and dimensions, may be any according to the requirements and the state of the art.

The disclosures in Italian Patent Application No. MI2012A001721 from which this application claims priority are incorporated herein by reference.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

CLAIMS

1. A container (1), particularly suitable for containing water-based liquids and the like, comprising a containment body (2) which has an upper mouth (3) delimited by a metallic ring (4) that is associated with said
5 containment body (2) and can be engaged by pressing with a closure (5), characterized in that said metallic ring (4) is provided partly by a sealed band (8a) that is plastic-coated at least at the region of said metallic ring (4) that is adapted to face the inside of said containment body (2) to prevent direct contact of the water-based liquid substance contained in said
10 containment body (2) with said metallic ring (4).

2. The container (1) according to claim 1, characterized in that said containment body (2) is made of plastic material.

3. The container (1) according to claim 2, characterized in that said metallic ring (4) is clinched to said upper mouth (3) so as to be flush with
15 the internal part (6) of said containment body (2) and so as to form a circular groove (10) that is radially internal to said internal wall (9).

4. The container (1) according to claim 3, characterized in that it comprises, at the lower base (11) of said containment body (2), a circular edge (12) that protrudes axially from said lower base (11) and is
20 complementary to said circular groove (10) for the stable stacking of said container (1) with another underlying container (1).

5. The container (1) according to claim 1, characterized in that said closure (5) is disk-shaped and comprises an internal rim (6) that protrudes in an axial direction and is adapted to be inserted in said upper mouth (3) and
25 such as to form an outer abutment ring (7).

6. The container (1) according to claim 1, characterized in that said closure (5) is made of metal and is coated with a plastic layer (8b) that is formed at least at the region of said closure (5) that is adapted to face the inside of said containment body (2) to prevent direct contact of the water-
30 based liquid substance contained in said containment body (2) with said

closure (5).

7. The container (1) according to claim 4, characterized in that said containment body (2) is conical and said circular edge (12) constitutes an extension of the side wall of said containment body (2).

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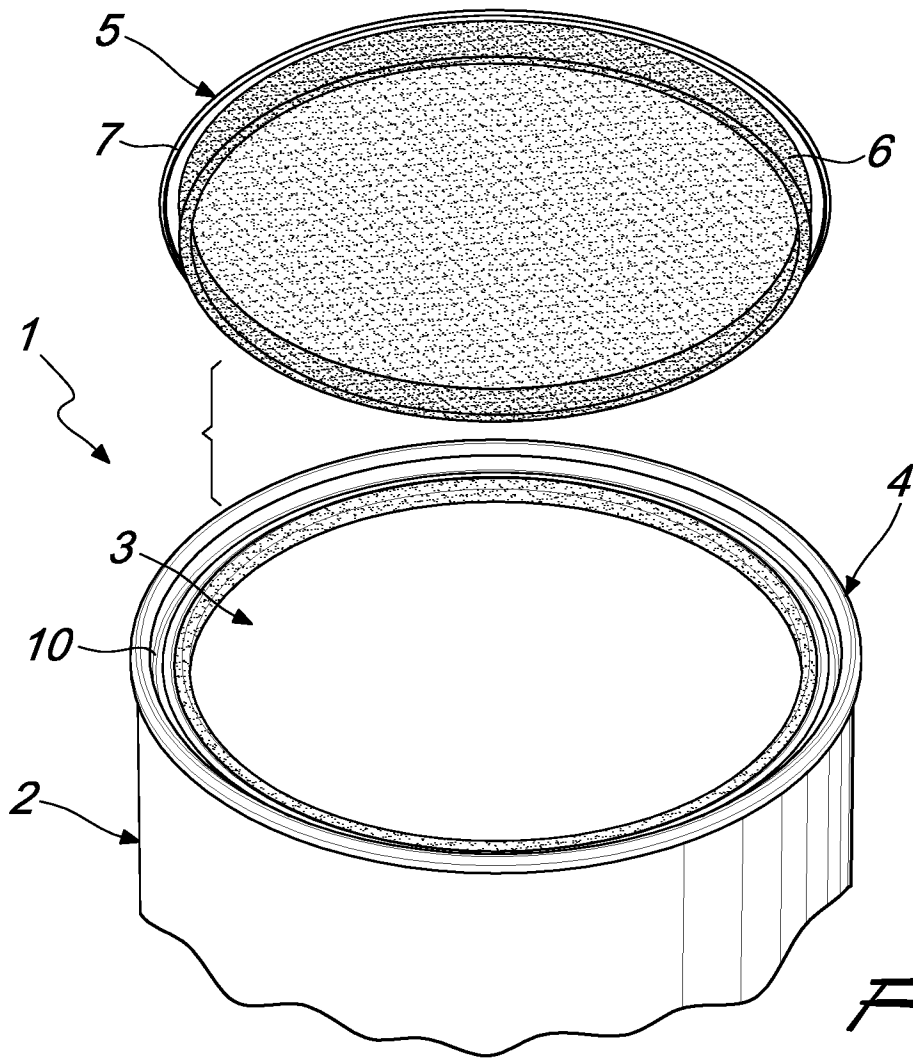


Fig. 1

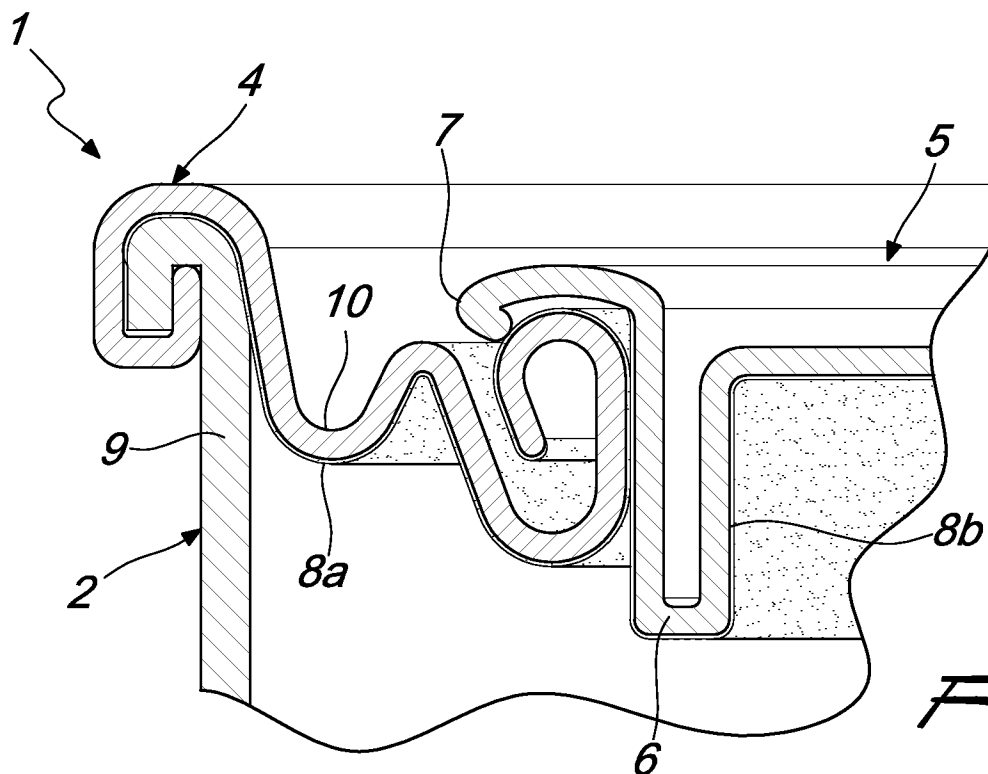
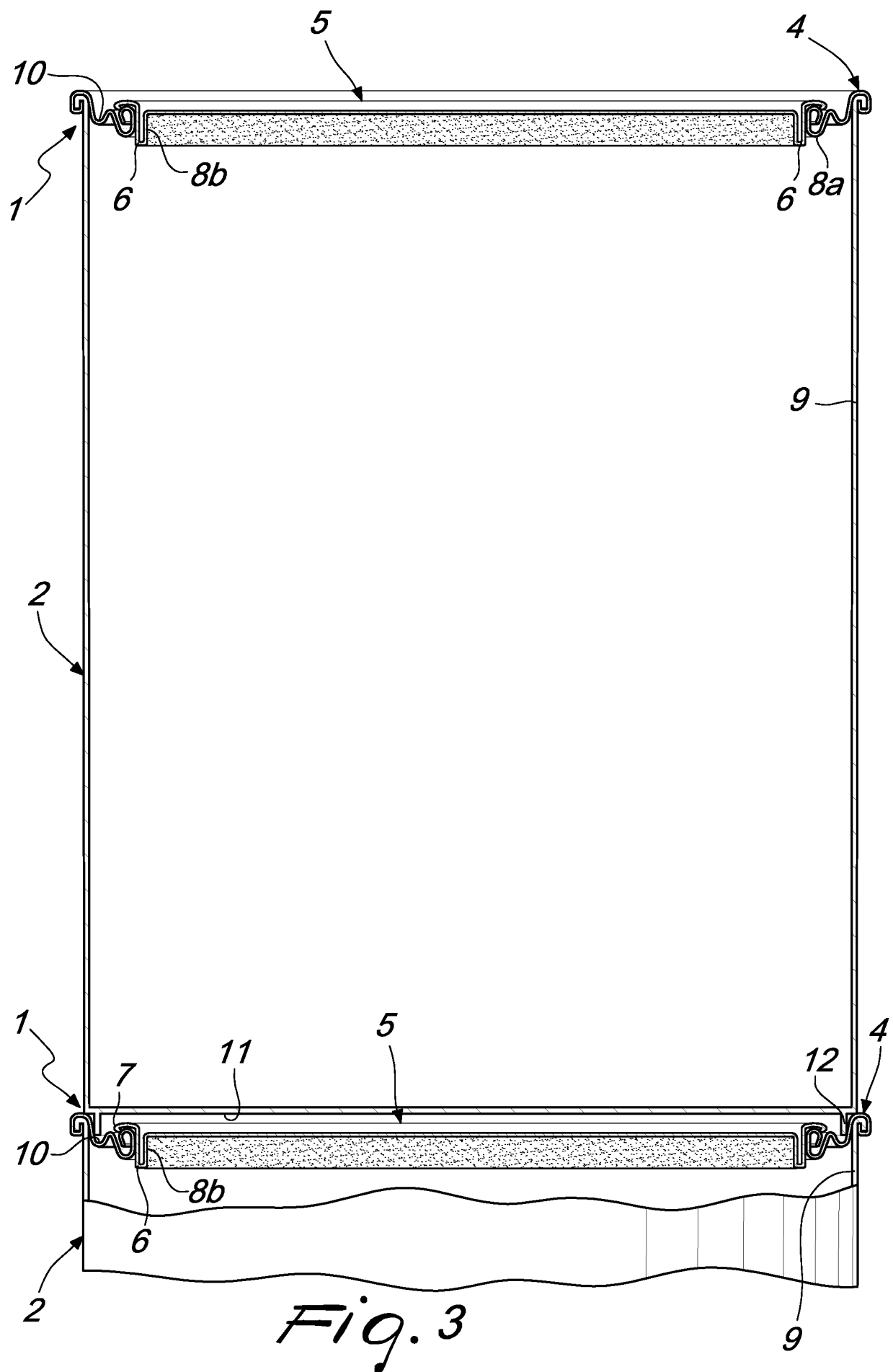
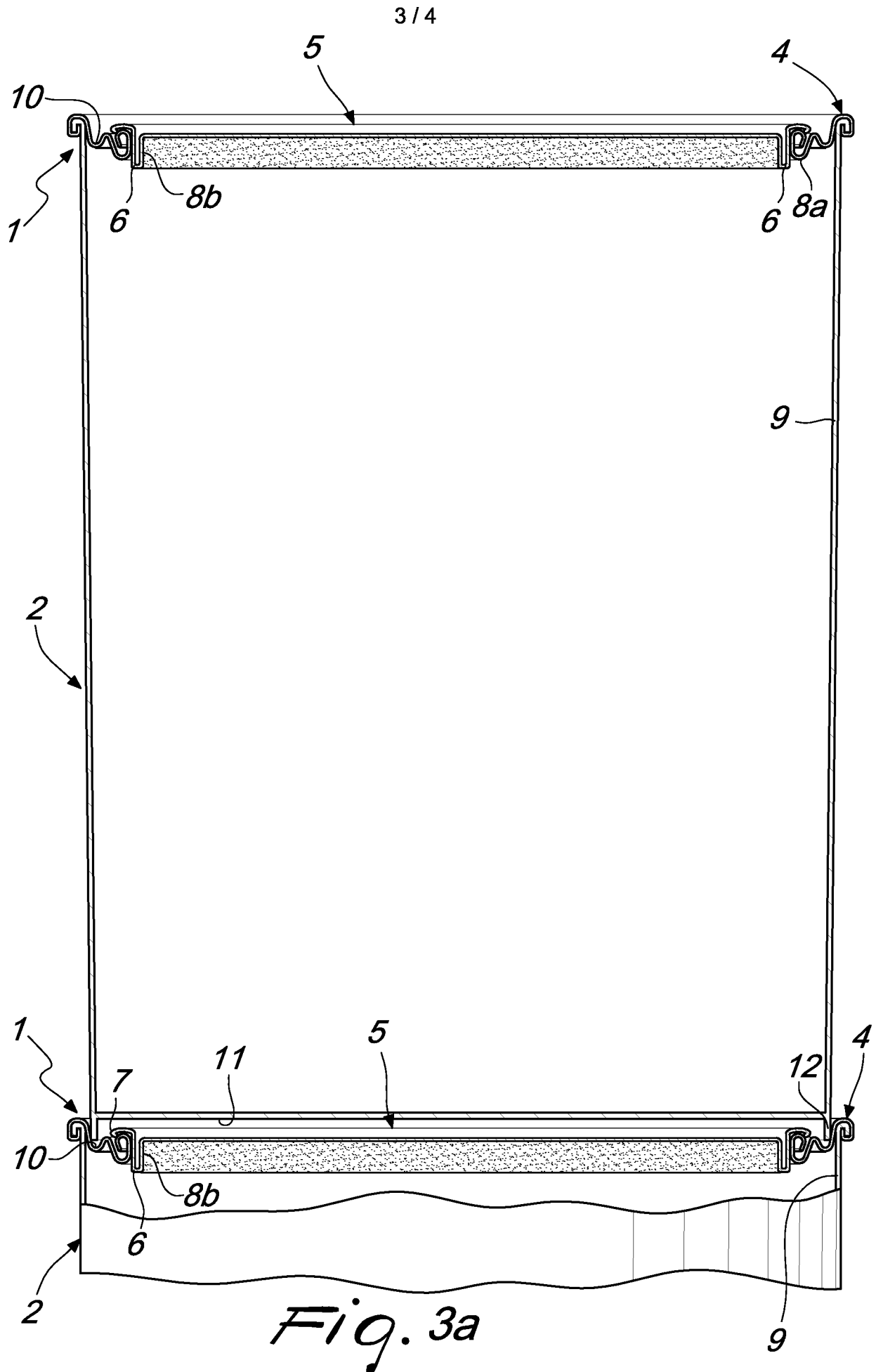
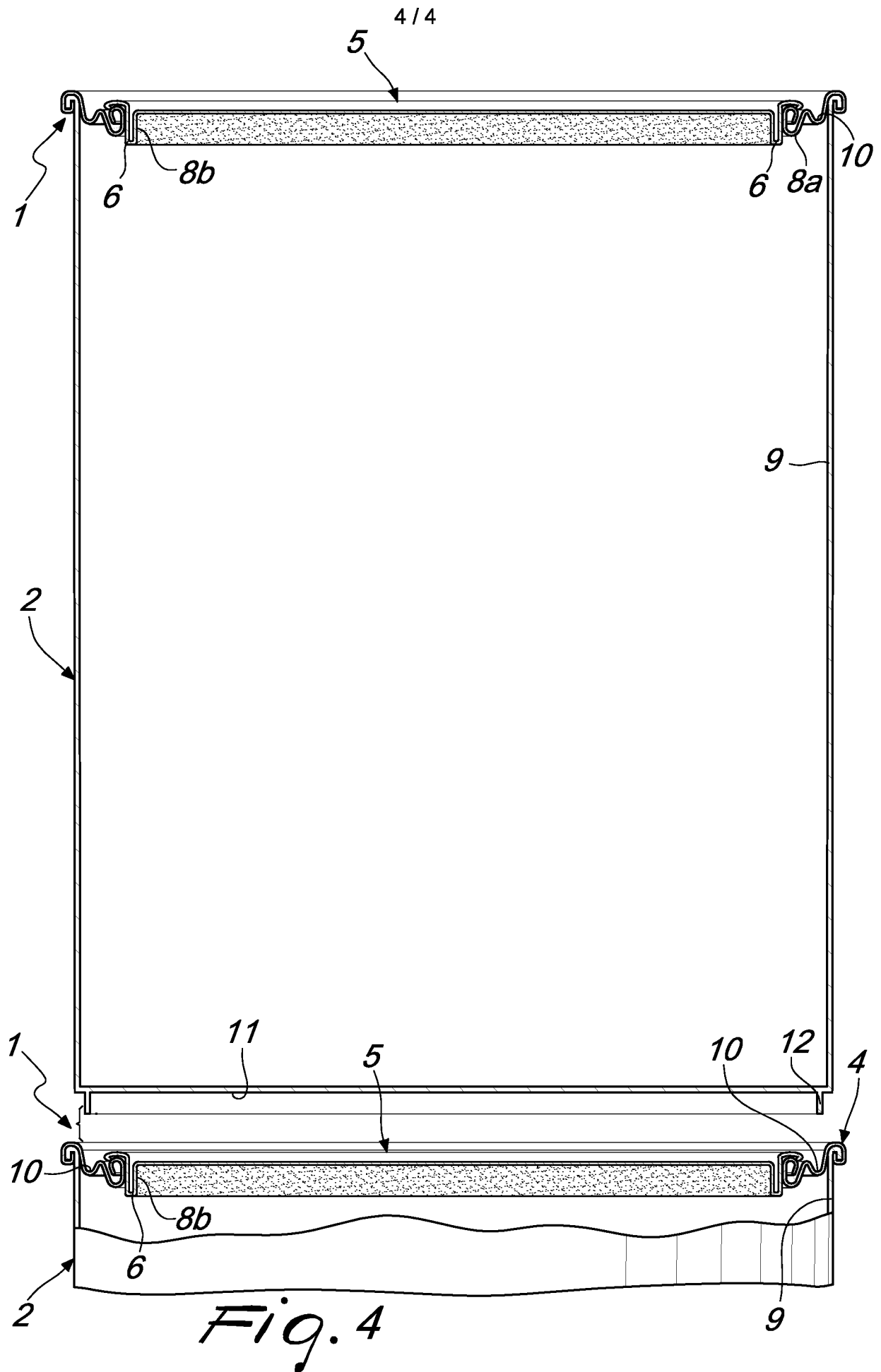


Fig. 2

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2013/071136

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65D43/02
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97/41043 A1 (SCHMALBACH LUBECA [DE]) 6 November 1997 (1997-11-06)	1,5,6
Y	page 4, line 14 - page 5, line 23; figure 1	2
X	----- EP 0 259 292 A1 (KOUPERMAN BIDONS BOITES METALL [BE]) 9 March 1988 (1988-03-09) column 4, line 38 - column 5, line 25; figure 1	1
Y	----- EP 2 236 429 A2 (POLI BOX ITALIANA S R L [IT]) 6 October 2010 (2010-10-06) claim 1	2



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

8 January 2014

Date of mailing of the international search report

26/03/2014

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2013/071136

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1, 2, 5, 6

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1, 2, 5, 6

How to prevent the metal parts of a container from oxidising

2. claims: 3, 4, 7

How to provide a stackable container

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2013/071136

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9741043	A1	06-11-1997	AT 300480 T 15-08-2005
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