

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DOW-38575-A	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCTUS2015/040578	International filing date (<i>day/month/year</i>) 15.07.2015	Priority date (<i>day/month/year</i>) 16.07.2014	
International Patent Classification (IPC) or national classification and IPC INV. B65B43/08			
Applicant Dow Global Technologies LLC			
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. ☒ (<i>sent to the applicant and to the International Bureau</i>) a total of <u>7</u> sheets, as follows: ☒ sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions). ☐ sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4bis, 70.2(e), 70.16 and 91.2). ☐ superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No. I and the Supplemental Box (see Rule 70.16(b)). b. ☐ (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing, in the form of an Annex C/ST.25 text file, as indicated in the Supplemental Box Relating to Sequence Listing (see paragraph 3ter of Annex C of the Administrative Instructions).			
4. This report contains indications relating to the following items: ☒ Box No. I Basis of the report ☐ Box No. II Priority ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability ☐ Box No. IV Lack of unity of invention ☒ Box No. V Reasoned conclusion under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement ☐ Box No. VI Certain documents cited ☐ Box No. VII Certain defects in the international application ☐ Box No. VIII Certain observations on the international application			
Date of submission of the demand 13.04.2016		Date of completion of this report 13.09.2016	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Fax: +49 89 2399 - 4465		Authorized officer Rodriguez Gombau, F Telephone No. +49 89 2399-6046 	

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US2015/040578

Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a) and (b))
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-39 as originally filed

Claims, Numbers

1-23 filed with telefax on 16-08-2016

Drawings, Sheets

1/10-10/10 as originally filed

- ☐ a sequence listing - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rules 70.2(c) and (c-bis)):
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
5. ☐ This report has been established:
- ☐ taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-bis) and 70.2(e)).
 - ☐ without taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91(Rules 66.4bis and 70.2(e)).

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
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6. ☒ With regard to top-up searches (Rules 66.1 *ter* and 70.2(f)):
- ☒ A top-up search was carried out by this Authority on 06.06.2016 (all discovered documents are listed in the Supplemental Box Relating to Top-up Search).
 - ☐ Additional relevant documents have been discovered during the top-up search.
 - ☐ No top-up search was carried out by this Authority because it would serve no useful purpose.
7. ☐ Supplementary international search report(s) from Authority(ies) has/have been received and taken into account in establishing this report (Rule 45bis.8(b) and (c)).

* If item 4 applies, some or all of those sheets may be marked "superseded".

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-19</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	<u>1-19</u>
	No: Claims	
Industrial applicability (IA)	Yes: Claims	<u>1-19</u>
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- 1 Reference is made to the following documents:
 - D1 WO 01/85560 A1 (DANISCO [DK]; SCHULZ WERNER [DK]) 15 November 2001 (2001-11-15)
 - D2 US 3 003 681 A (RENE ORSINI) 10 October 1961 (1961-10-10)
 - D3 EP 0 893 358 A1 (HOSOKAWA YOKO KK [JP]; MITSUBISHI SHOJI PACKAGING KAB [JP]) 27 January 1999 (1999-01-27)
 - D4 DE 39 25 871 A1 (HOECHST AG [DE]) 7 February 1991 (1991-02-07)
 - D5 US 3 112 047 A (WEINREICH CHARLES F ET AL) 26 November 1963 (1963-11-26)
 - D6 GB 1 463 579 A (AMERICAN CAN CO) 2 February 1977 (1977-02-02)
- 2 Document D1 is regarded as being the prior art closest to the subject-matter of claim 1, and discloses [references applying to this document] :

"A flexible container (cf. fig. 1) comprising:

four panels (1,2,3,4), the four panels forming

 - (i) a body portion (cf. portion between lines 13 and 14 in fig. 2);
 - (ii) a neck portion (cf. the zone indicated by "b" in fig. 5), and a flare portion (60) that extends from the neck portion;
 - (iii) a tapered transition portion (cf. in fig. 1 the portion created by the "triangle-like" structures of the top panel 3 due to it's attachment to lateral seals 15 and 16) **between** the body portion and the neck portion;
 - (iv) the neck portion having a reduced width, the flare portion having an expanded end (cf. fig. 5); and

the width of the flare portion gradually increases from the neck portion to the expanded end (cf. fig. 5)."

- 2.1 The subject-matter of claim 1 therefore differs from this known flexible container in that :
- i) the above portions are formed by **four individual panels** of flexible film material **sealed together**.
 - ii) the tapered transition portion **joins** the body portion and the neck portion.

and is therefore new (Article 33(2) PCT).

- 2.2 The problem to be solved by the present invention may be regarded as to provided a flexible container in which an insert can be readily attached to the neck portion and which can be produced with increased efficiency.

- 2.3 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

- i) the skilled man has no reason to create the above mentioned portions with four individual panels. In particular, in the present invention, the neck portion of the present invention is created with four individual panels, while in D1 is created with two panels joined together.
- ii) even if the the skilled person would decide to create the container of D1 with four individual panels, there is no reason to create a tapered portion that joins the body portion and the neck portion.
- iii) although D3 shows a container created with four panels, the skilled person has no incentive to adapt the neck portion of D3 to a neck portion having a reduced width, the flare portion having an expanded end and the width of the flare portion gradually increasing from the neck portion to the expanded end.

- 3 The same reasoning of point 2 applies, mutatis mutandis, to the subject-matter of the corresponding independent claims 10 and 13, which therefore are also considered new and inventive.

- 4 Claims 2-9, 11, 12, 14-19 are dependent on either claim 1, 10 or 13 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

BEFORE THE INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Applicant : Dow Global Technologies LLC
International Application No. : PCT/US2015/040578
International Filing Date : 15 July 2015
Priority Date : 16 July 2014
Title : FLEXIBLE CONTAINER WITH FITMENT AND
PROCESS FOR PRODUCING SAME
Authorized Officer : Rodriguez, Gombau, F
Attorney Docket No. : DOW-38575-A

European Patent Office
D-80298 Munich
Germany

Via Facsimile – 011 49 89 2399 4465

**RESPONSE TO WRITTEN OPINION OF IPER
AND SECOND ARTICLE 34 AMENDMENT**

This Paper is submitted in response to the Written Opinion of the International Preliminary Examining Authority (IPER) mailed on 17 June 2016 having a response deadline of 17 August 2016.

The ISA examined claims 1-4 and 14-19. Claims 5-13 and 20 were not examined due to alleged lack of unity objections.

1. Claims

Claims 1-7, 9-15, 18-19, and 21-23 are pending.

Claims 8, 20, and 16-17 are canceled.

Claims 21-23 are added.

A. A marked-up version of the claims is set forth on pp. 4-6 of this Paper.

B. Replacement Sheets with claims 1-20 (for pp. 40-42 of the application) are at the last three pages of this Paper.

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C. A claim chart, at p. 7 of the Paper, sets forth the differences between the original claims and the claims on the Replacement Sheet.

2. Unity

Claim 20 is canceled. Independent claims 1, 10, 13 each recites a special technical feature over D1-D6, as set forth in Section 3 below. Since each independent claim recites a special technical feature, the pending claims are re-united. Applicant therefore respectfully requests withdrawal of the lack of unity objections.

3. The present claims are novel and inventive (Item V)

No combination of WO01/85560 (D1), US 3,003,681 (D2), EP 0893358 (D3), DE 3925871 (D4), US 3,112,047 (D5), and GB 1463579 (D6) discloses or suggests a flexible container with (i) four individual panels of flexible film material, wherein the four panels are sealed together to form each of the following four container parts (i) a body portion, (ii) a neck portion, (iii) a tapered transition portion, and (iv) a flare portion and the width of the flare portion gradually increases from the neck portion to the expanded end; and the flare portion defines a frustoconical-shaped inner volume when the flexible container is in an expanded configuration.

D1 fails to disclose a container made from four individual panels that are sealed together so that each of the four panels form all the container parts—and, in particular, the four panels form the neck portion and flare portion. D1's discharge spout (19) is formed from only two walls (not four walls); namely the top wall (3) and one of the sidewalls. See D1 abstract, Fig. 1.

D2 and D4 each discloses a container made from two films, not four films as Applicant claims. See D2 Figures 22-24; see also D4 2:16-27.

D3's container lacks a flare portion. The width of D3's spout 2 is uniform and does not gradually increase from the neck portion to the expanded end, as does Applicant's flare portion. See D3 Figure 5.

D5's bag (14) is formed from a single film that is folded over and heat sealed to itself. D5, 2:30-45; D5 Figure 1. D5's single film bag fails to disclose or suggest Applicant's flexible container made from four individual film panels.

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The D6 container is formed from two films, film (20) and (22)—not four films as Applicant claims.

3. Miscellaneous

A. Applicant will attend to the alleged “relevant background art” objection, as applicable, in the national phase.

B. Applicant will attend to the alleged “reference signs” objection, as applicable, in the national phase.

In view of the foregoing, Applicant submits the pending claims are novel and inventive in view of D1-D6.

Respectfully submitted,



Ted J. Barthel

Dated: 16 August 2016

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CLAIM CORRESPONDENCE CHART

Original Claim No.	Renumbered Claims No.	Status	Description	Basis
1	N/A	Amended	Add clarity	¶¶ 32-34
2	"	Original	"	"
3	"	Original	"	"
4	"	Original	"	"
5	"	Original	"	"
6	"	Original	Add clarity	¶ 42
7	"	Original	Add clarity	¶ 45
8	"	Canceled	"	"
9	8	Original	"	"
10	9	Original	"	"
11	10	Original	"	¶ 32-34
12	11	Original	"	"
13	12	Original	"	"
14	13	Amended	Add clarity	¶¶ 32-34
15	14	Original	"	"
16	N/A	Canceled	"	"
17	N/A	Canceled	"	"
18	15	Original	"	"
19	16	Original	"	"
20	17	Original	"	"
21	18	New	"	¶ 47
22	19	New	"	¶ 47
23	20	New	"	¶ 47

REPLACEMENT PAGE

CLAIMS

1. A flexible container comprising:
four individual panels of flexible film material, the four panels sealed together to form each of the following (i)-(iv)
 - (i) a body portion;
 - (ii) a neck portion, and a flare portion that extends from the neck portion;
 - (iii) a tapered transition portion joining the body portion and the neck portion;
 - (iv) the neck portion having a reduced width, the flare portion having an expanded end; and
the width of the flare portion gradually increases from the neck portion to the expanded end.
2. The flexible container of claim 1 wherein the expanded end has a width that is greater than the width of the neck portion.
3. The flexible container of any of claims 1-2 wherein the expanded end has a width that is from 1.1 times to 8.0 times greater than the width of the neck portion.
4. The flexible container of any of claims 1-3 wherein the flexible container comprises at least one handle.
5. The flexible container of any of claims 1-4 comprising a fitment inserted into the flare portion.
6. The flexible container of claim 5 wherein the fitment comprises a base having a circular cross section, the base sealed to each of the four panels in the neck portion.
7. The flexible container of claim 6 wherein the seal between the base and the neck portion defines an excess flare portion having an open expanded end.
8. The flexible container of any of claims 5-7 wherein the fitment is composed of a polymeric composition having an Izod impact resistance from 50 J/m to 500 J/m.

REPLACEMENT PAGE

9. The flexible container of any of claims 5-8 wherein the panels are formed from a multilayer film having a seal layer comprising a polymer; and

the fitment comprises a polyolefin having an Izod impact resistance from greater than 50 J/m to 500 J/m and a melt temperature (T_m) greater than or equal to the T_m of the seal layer polymer.

10. A flexible container comprising:

four individual panels of flexible film material, the four panels sealed together to form each of the following (i)-(iv)

(i) a body portion;

(ii) a neck portion, and a flare portion that extends from the neck portion;

(iii) a tapered transition portion joining the body portion and the neck portion;

(iv) the neck portion having a reduced width, the flare portion having an expanded end;

the width of the flare portion gradually increases from the neck portion to the expanded end; and

a fitment attached to the neck portion, the fitment composed of a polymeric composition having an Izod impact resistance from greater than 50 J/m to 500 J/m.

11. The flexible container of claim 10 wherein the fitment comprises a base having a circular cross section, and the base has a wall thickness from 0.15 mm to 1.9 mm.

12. The flexible container of any of claims 10-11 wherein

each panel includes a bottom face comprising two opposing peripheral tapered seals, each peripheral tapered seal extending from a respective peripheral seal, each peripheral tapered seal comprising an inner edge, the peripheral tapered seals converging at a bottom seal area;

the front panel bottom face comprises a first line defined by the inner edge of the first peripheral tapered seal and a second line defined by the inner edge of the second peripheral tapered seal inner edge, the first line intersecting the second line at an apex point in the bottom seal area;

REPLACEMENT PAGE

the front panel bottom face has a bottom distalmost inner seal point on the inner edge; and
the apex point is separated from the bottom distalmost inner seal point by a distance from
0 mm to less than 8.0mm.

13. A flexible container comprising:

four individual panels of flexible film material, the four panels sealed together to form each
of the following (i)-(iv)

- (i) a body portion;
- (ii) a neck portion having a reduced width;
- (iii) a tapered transition portion between the body portion and the neck portion;
- (iv) the neck portion having a reduced width, the flare portion has an expanded end,
the width of the flare portion gradually increases from the neck portion to the flare portion
expanded end; and
a seal formed in the expanded end.

14. The flexible container of claim 13 wherein the seal is a heat seal.

15. The flexible container of any of claims 13-14 wherein the seal is re-sealable.

16. The flexible container of any of claims 13-15 comprising a closure for the seal.

17. The flexible container of Claim 1 wherein the flare portion defines a frustoconical-shaped
inner volume when the flexible container is on an expanded configuration.

18. The flexible container of Claim 10 wherein the flare portion defines a frustoconical-shaped
inner volume when the flexible container is on an expanded configuration.

19. The flexible container of Claim 13 wherein the flare portion defines a frustoconical-
shaped inner volume when the flexible container is on an expanded configuration.