

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2022/051357

International filing date (day/month/year)
30.11.2022

Priority date (day/month/year)
30.11.2021

International Patent Classification (IPC) or both national classification and IPC
INV. B65D45/32

Applicant
OWENS-BROCKWAY GLASS CONTAINER INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ 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 statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and 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

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of
this opinion

see form
PCT/ISA/210

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ 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 (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed.
 - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)),
 - ☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.
5. Additional comments:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-16, 18, 19</u>
	No: Claims	<u>17, 20</u>
Inventive step (IS)	Yes: Claims	<u>1-16, 18, 19</u>
	No: Claims	<u>17, 20</u>
Industrial applicability (IA)	Yes: Claims	<u>1-20</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

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 LU 33 480 A1

D2 WO 2006/000779 A2

D3 US 5 803 286 A

D4 US 6 158 604 A.

2 Claim 1

D1 is regarded as being the prior art closest to the subject-matter of claim 1, and discloses a multi-piece container closure assembly (35+38, see figure 5), comprising:

an inner closure (35, see figure 5), including an inner shell, having a base wall, and an inner shell outer skirt extending away from an outer periphery of the base wall, carrying external thread segments (36), and including an axially outward portion extending in a direction axially outwardly away from the base wall, and an axially inward portion extending in a direction axially inwardly away from the base wall and terminating in a grip petal portion having a plurality of circumferentially spaced petals (parts 16 between slots 15, see also figure 3) having radially inwardly projecting container engagement lugs and radially outwardly projecting outer shell engagement lugs (16, see figure 3), and a plug liner (41) carried by the inner shell (in D1 the plug liner 41 does not comprise a radially inner plug seal (84) as depicted in figure 26 of the application, but such a seal is only an optional feature that is not mentioned in claim 1, see also paragraph 46 or claim 10 of the current application); and
an outer shell (38), including a base wall (top part of 38), ~~an inner skirt extending away from the base wall, and an outer shell outer skirt extending away from an outer periphery of the base wall at a location spaced radially outwardly from the inner skirt,~~ and including an internally threaded portion (see figure 5 and page 9, first line) carrying internal thread segments and an unthreaded extension extending away from the threaded portion (see again figure 5) and on an axial side of the internally threaded portion opposite that of the base wall. The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The subject-matter of claim 1 therefore differs from this known assembly in that the outer shell includes an inner skirt extending away from the base wall and in that the outer shell outer skirt extends away from an outer periphery of the base wall at a location spaced radially outwardly from the inner skirt.

The problem to be solved by the present invention may therefore be regarded as providing means for engaging the outer shell with the inner closure when the closure is applied to the container.

The solution proposed in claim 1 of the present application is considered to involve an inventive step (Article 33(3) PCT). The problem to be solved is not mentioned in D1. In addition, D1 only shows an outer shell in the form of a ring (38). There is no hint for extending the base wall of the ring (38) and no suggestion for providing the base wall with an inner skirt allowing engagement of the inner closure and the outer shell. Outer shells with inner skirts are known, see D2 figure 5A, but the outer shell of D2 is provided with internal threads on the inner skirt itself, not on the outer shell as required by the wording of claim 1. Hence, the subject-matter of claim 1 is not obvious in view of the available prior art.

- 3 The present application does not meet the criteria of Article 33(2) PCT, because the subject-matter of claim 17 is not new.

D1 discloses figure 5 an inner closure (35) for a multi-piece container closure assembly, comprising:

an inner shell, including a base wall, and an outer skirt extending away from an outer periphery of the base wall, carrying external thread segments (36), and including an axially outward portion extending in a direction away from the base wall, and an axially inward portion extending in a direction away from the base wall and terminating in an axially inward grip petal portion having a plurality of circumferentially spaced petals (parts 16 between slots 15, see also figure 3) having radially inwardly projecting container engagement lugs (16, see figure 3) and radially outwardly projecting outer shell engagement lugs, and a plug liner (41) ~~molded~~ to the inner shell. In D1, the plug liner is not molded to the inner shell but carried by the inner shell. The wording "molded to the inner shell" implies that the plug liner is attached to the inner shell by a molding process. The technical properties imparted by this molding process, such as the connection strength between the liner and the inner shell, are not different from the technical properties of the connection plug liner 41/inner shell (36) of D1. Hence, all the technical features of claim 17 are known from D1. The subject-matter of claim 17 is not novel.

- 4 The present application does not meet the criteria of Article 33(2) PCT, because the subject-matter of claim 20 is not new.

D3 discloses figure 7 an outer shell for (the outer shell is suitable for a multi-piece container) a multi-piece container closure assembly, comprising:
a radially continuous base wall (2, see also figure 1);
an outer skirt (1) extending away from an outer periphery of the base wall and including an internally threaded portion including thread segments, and an unthreaded extension extending away from the threaded portion and on an axial side of the internally threaded portion opposite that of the base wall (see figure 1); and
an inner skirt extending away from the base wall at a location spaced radially inwardly from the outer skirt (the inner seal 4 is considered to be an inner skirt), and carrying ramped stop lugs (see figure 7, the face 16 in combination with the heel 21 of the vents create what is considered as ramped stop lugs) projecting in a radially outward direction. Hence, all the technical features of claim 20 are known from D3. The subject-matter of claim 20 is not novel.

- 5 The present application does not meet the criteria of Article 33(3) PCT, because the subject-matter of claim 20 does not involve an inventive step in view of D4. D4 discloses an outer shell (1) for a multi-piece container closure assembly, comprising:

a radially continuous base wall (see figure 1a) ;
an outer skirt extending away from an outer periphery of the base wall and including an internally threaded portion including thread segments (112), and an unthreaded extension extending away from the threaded portion and on an axial side of the internally threaded portion opposite that of the base wall (see figure 1a); and
an inner skirt extending away from the base wall at a location spaced radially inwardly from the outer skirt, (see figure 3B) and carrying ~~ramped~~ stop lugs (34) projecting in a radially outward direction. The subject-matter of claim 1 therefore differs from this known outer shell in that the stop lugs are ramped. Modifying the parts (34) in such a way that they are sloped or ramped is obvious for the skilled person trying to solve the problem of facilitating engagement or allowing only one direction for engagement. Thus, the subject-matter of claim 20 does not involve an inventive step (Article 33(3) PCT) in view of D4 alone.

- 6 Claims 2-16 are dependent on one or more independent claims whose subject-matter is considered as being new and inventive, as discussed above, and as such said dependent claims also meet the requirements of the PCT with respect to novelty and inventive step. The subject-matter of dependent claims 18 and 19 is novel and involve an inventive step.

Re Item VII

Certain defects in the international application

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D1 is not mentioned in the description, nor is this document identified therein.

Re Item VIII

Certain observations on the international application

Claim 1 relates to a multi-piece container assembly while claim 17 to an inner closure for a multi-piece container closure assembly and claim 20 to an outer shell for a multi-piece container closure assembly. The multi-piece container closure assembly of claim 1 comprises an inner closure and an outer shell. To avoid clarity objections and non-unity objection and since the subject-matter of claims 17 and 20 is not novel, claims 17-20 should be deleted.