



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/28303

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B65D 1/02 (2014.01)

CPC - B65D 1/0246

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)

CPC: B65D 1/0246

IPC(8): B65D 1/02 (2014.01)

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

CPC: F01P11/0214; B65D17/165

IPC(8): B65D 1/12, B65D 25/42; B65D 41/04 (2014.01) USPC: 220/604; 220/288; 220/906; 215/44

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

PatBase; ProQuest Dialog; Google Patents; Google Web; Google Scholar

Search Terms: outsert% thread% form% fit% metal% bottle% flask% cylinder% antirotation anti-rotation ROPP roll on pilfer proof tube% container% receptacle collar% ring% fitting% independent separate

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category*     | Citation of document, with indication, where appropriate, of the relevant passages                                               | Relevant to claim No.             |
|---------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| X<br>---<br>Y | US 2007/0051687 A1 (Olson). 08 March 2007 (08.03.2007). Figs. 1-5, 7; para [0025], [0027], [0028], [0030]-[0032], [0034]-[0035]. | 1, 11, 12<br>-----<br>2-10, 13-15 |
| Y             | US 3,144,964 A (Goff et al.). 18 August 1964 (18.08.1964). Col 3, ln 18-20.                                                      | 2                                 |
| Y             | US 3,227,318 A (Rieder). 04 January 1966 (04.01.1966). Figs. 2-3; col 2, ln 27-36.                                               | 3, 15                             |
| Y             | US 2003/0197018 A1 (Chupak). 23 October 2003 (23.10.2003). Figs. 1, 4-7; para [0030], [0032].                                    | 4-5, 7-10, 13-14                  |
| Y             | US 2003/0132188 A1 (Beek et al.). 17 July 2003 (17.07.2003). Para [0010].                                                        | 6                                 |

☐ Further documents are listed in the continuation of Box C.

\* 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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

11 September 2014 (11.09.2014)

Date of mailing of the international search report

03 OCT 2014

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents  
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/28303

## 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 extra 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 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.:  
1-15

### 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.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/28303

Continuation of:

Box III - Observations where unity of invention is lacking

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I: Claims 1-15, drawn to a metallic bottle with a threaded neck or a method for making same, the metallic bottle including a bottom dome portion; a body portion; a neck portion extending upwardly from the body portion; a retention bead on the neck portion of the metallic bottle; a threaded outsert positioned on the neck portion above the retention bead; a curl formed on an uppermost portion of the neck portion, wherein the curl retains the threaded outsert on the neck portion; and an opening positioned on the neck portion above the curl, wherein the threaded neck has a predetermined geometry adapted to receive a twist-off closure.

Group II: Claims 16-20, drawn to a method for forming a threaded neck on a neck portion of a metallic bottle, comprising providing the metallic bottle, the metallic bottle comprising a bottom dome portion, a body portion, a neck portion extending upwardly from the body portion, and an opening positioned on an uppermost portion of the neck portion; forming the uppermost portion of the neck portion to create a curl with an increased metal thickness; positioning the metallic bottle in a mandrel and rotating the metallic bottle around a substantially vertical axis of the metallic bottle; positioning a vertical roller in contact with an interior surface portion of the neck portion and positioning an exterior roller in contact with an exterior surface portion of the curl, wherein the exterior roller has a contoured surface portion; and providing a compressive force between the vertical roller and the exterior roller to form the threaded neck, the threaded neck adapted to receive a twist-off closure.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group I requires the special technical features of a threaded outsert positioned on the neck portion above a retention bead, and a curl formed on an uppermost portion of the neck portion that retains the threaded outsert on the neck portion.

Group II requires the special technical features of forming an uppermost portion of a neck portion to create a curl with an increased metal thickness; positioning the metallic bottle in a mandrel and rotating the metallic bottle around a substantially vertical axis of the metallic bottle; positioning a vertical roller in contact with an interior surface portion of the neck portion and positioning an exterior roller in contact with an exterior surface portion of the curl, wherein the exterior roller has a contoured surface portion; and providing a compressive force between the vertical roller and the exterior roller to form the threaded neck, the threaded neck adapted to receive a twist-off closure.

The only features shared by Groups I and II that would otherwise unify the groups, is a metallic bottle [and method of manufacture thereof, generally] including a bottom dome portion; a body portion; a neck portion extending upwardly from the body portion; and an opening positioned on the neck portion above a curl, wherein the threaded neck has a predetermined geometry adapted to receive a twist-off closure. However, these technical features do not represent a contribution over prior art, because the shared technical features are anticipated by US 5,718,352 A to Diekhoff et al. (hereinafter 'Diekhoff').

Diekhoff teaches a metallic bottle (90 in Figs. 28-29; col 9, ln 47-col 11, ln 7) and method of manufacture thereof (title, abstract, etc.) including a bottom dome portion (95 in Fig. 28); a body portion (91 in Fig. 28); a neck portion (97 in Fig. 29) extending upwardly from the body portion; and an opening (not numbered, above curl 100 in Fig. 28) positioned on the neck portion above a curl (100 in Fig. 28), wherein the threaded neck (99 in Fig. 28) has a predetermined geometry adapted to receive a twist-off closure.

As the common technical features were known in the art at the time of the invention, they cannot be considered common technical features that would otherwise unify the groups.

Therefore, Groups I and II lack unity under PCT Rule 13.