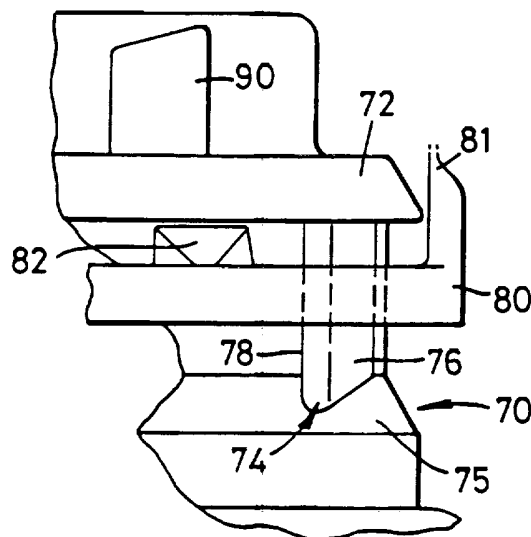




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification <sup>5</sup> : <b>B65D 41/34</b></p>	<p><b>A3</b></p>	<p>(11) International Publication Number: <b>WO 94/11267</b> (43) International Publication Date: 26 May 1994 (26.05.94)</p>
<p>(21) International Application Number: PCT/GB93/02341 (22) International Filing Date: 15 November 1993 (15.11.93) (30) Priority data: 9223779.1 13 November 1992 (13.11.92) GB 9226320.1 17 December 1992 (17.12.92) GB (71) Applicant (for all designated States except US): BEESON AND SONS LIMITED [GB/GB]; Hertford House, Denham Way, Rickmansworth, Hertfordshire WD3 2XB (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): KING, Witney, Milner [GB/GB]; KING, Roger, Milner [GB/GB]; White End Park Farm, Latimer, Bucks HP5 1UL (GB).</p>	<p>(74) Agent: HOWICK, Nicholas, Keith; Carpmaels &amp; Ransford, 43 Bloomsbury Square, London WC1A 2RA (GB). (81) Designated States: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). <b>Published</b> <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 29 September 1994 (29.09.94)</p>	

(54) Title: IMPROVEMENTS RELATING TO A TAMPER EVIDENT RING FOR A CONTAINER CLOSURE



## (57) Abstract

A closure is threadably securable to a container neck (70). The closure carries a tamper evident ring (80) which includes a collar from which extend a plurality of inwardly inclined resilient tabs (82). The tabs can flex outwardly relative to each other without stressing substantially the collar to enable the ring to fit easily over a projecting bead (72) on the neck. Ratchet stops (74) on the neck engage the tabs (82) to enable the ring to rotate relative to the neck in a screwing-on direction, but to restrict rotation in the opposite direction. When the closure is removed for the first time, the tabs (82) abut the ratchet stops (74) and the bead (72) to release the ring from the closure and to retain the ring securely on the neck. The ring can be of plastics and integrally joined to the closure by severable connections.

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# INTERNATIONAL SEARCH REPORT

Int. onal Application No

**PCT/GB 93/02341**

**A. CLASSIFICATION OF SUBJECT MATTER**  
**IPC 5 B65D41/34**

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)  
**IPC 5 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 practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	EP,A,0 154 611 (GUALA) 11 September 1985 see page 3, line 31 - page 8, line 27; figures 1-3	1-6  30
X A	FR,A,2 564 803 (PLASTIVIT) 29 November 1985 see page 2, line 17 - page 5, line 17; figures 1-4	1-5  30
X A	US,A,4 592 476 (YASADA) 3 June 1986 see column 3, line 29 - column 6, line 28; figures 1-6	33,34 1-4,6-8
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents :

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- "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
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- "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

**4 August 1994**

Date of mailing of the international search report

**16. 08. 94**

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

 International Application No  
 PCT/GB 93/02341

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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X	---	11-13, 16, 17, 28 21-23
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X	---	11-17, 23-28 21, 22, 29
A	EP,A,0 146 237 (CONTINENTAL WHITECAP) 26 June 1985 see page 4, line 13 - page 6, line 22; figures 1-9	
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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB93/02341

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

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

- claims 1-10 and 33-37: Assembly comprising a container, a closure and a tamper ring comprising a plurality of tabs or claws characterised by means of restricting rotation of the ring
- claims 11-32: Tamper ring and container assembly characterised by the tabs and collar construction

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 fee, this Authority did not invite payment of any additional fee.
  
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.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 93/02341

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