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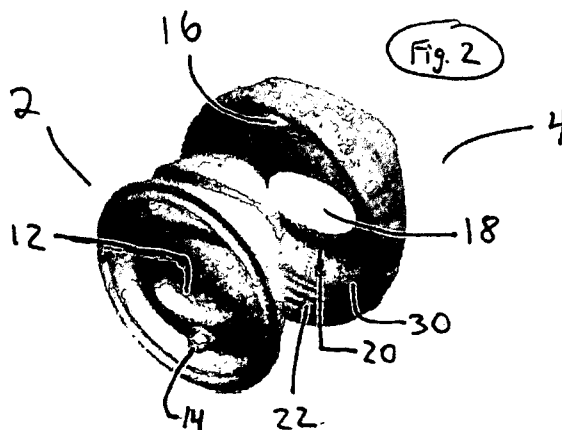
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Published:

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10 May 2012

(54) Title: NO-SPILL DRINKING PRODUCTS



(57) Abstract: Improved no-spill drinking products providing safer, stronger and more durable no-spill caps. An exemplary no-spill cap comprises a flexible member and a rigid member, said flexible member comprising an inner face, an outer face, a spout portion, an air vent, and a lip; the air vent comprises an outer surface and an inner surface such that the air vent is closed and air-tight when in a resting position, and the air vent is open when negative air pressure is applied to the inner surface; the rigid member comprises an inner face, an outer face, a first opening, a second opening, and a groove; when the flexible member is coupled with the rigid member by nesting the flexible member inside the rigid member such that the spout portion rests inside said first opening, the air vent is lined up with the second opening, and the lip is inserted in said groove.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2011/001601

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61J 11/00 (2012.01)

USPC - 215/11.4

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(8) - A61J 9/00, 11/00; B65D 23/06 (2012.01)

USPC - 215/11.1, 11.4; 220/203.11, 714

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)

PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2009/0139883 A1 (PY et al) 04 June 2009 (04.06.2009) entire document	24-25, 28

Y		15-22, 26-27, 29
Y	US 6,230,923 B1 (HUNG) 15 May 2001 (15.05.2001) entire document	1-4, 6-14, 22-23
Y	US 2005/0167437 A1 (STRUCKMEIER) 04 August 2005 (04.08.2005) entire document	1-4, 6-22, 29
Y	US 3,093,256 A (WOODBURY JR) 11 June 1963 (11.06.1963) entire document	1-4, 6-14, 16-23, 27
Y	US 2005/0258123 A1 (SILVER) 24 November 2005 (24.11.2005) entire document	7-9, 11, 20-21
Y	US 6,161,710 A (DIERINGER et al) 19 December 2000 (19.12.2000) entire document	8-10, 20-21, 26
Y	US 6,032,810 A (MEYERS et al) 07 March 2000 (07.03.2000) entire document	14
A	US 5,690,679 A (PRENTISS) 25 November 1997 (25.11.1997) entire document	15-16

 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

"I" 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

31 January 2012

Date of mailing of the international search report

14 FEB 2012

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2011/001601

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.: 5
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:

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.:

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.