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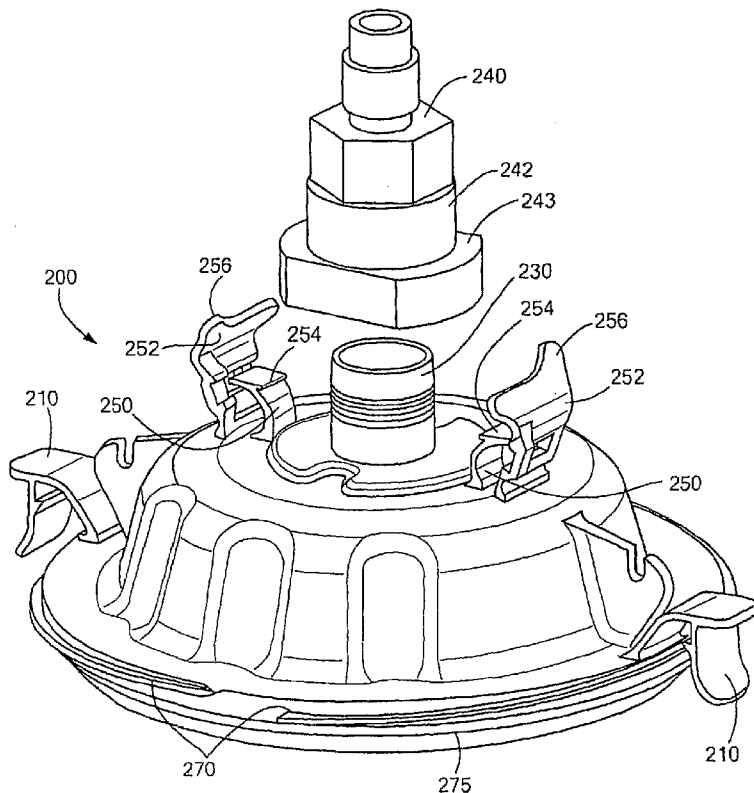
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[Continued on next page]

(54) Title: LIQUID SUPPLY ASSEMBLY



(57) Abstract: A connector system for attaching a liquid container to a spray gun. The connector system includes a lid (200) with a liquid outlet (230) and an adapter (240) for releasably connecting the outlet with the liquid inlet port of a spray gun. The lid includes interlocking tab assemblies (250-252) for releasably attaching the adapter to the lid. Each tab assembly includes two tabs, with one tab adapted to secure the adapter to the lid when the tabs are interlocked. The connector system combines with an outer cup, a ring for insertion into the mouth of the cup and a collapsible liner for insertion into the ring to form a liquid container system. The ring includes internal threads or segments that cooperate with a peripheral flange on the lid to lock the lid to the ring, securing the lip of the liner. The lid includes a flexible gasket to form a liquid tight seal with the liner. The lid-liner-ring thus forms a liquid tight unit that may be inserted into and removed from the outer cup while containing a fluid such as paint.

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European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/071176

A. CLASSIFICATION OF SUBJECT MATTER

INV. B05B7/24

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)

B05B

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)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005/067502 A1 (BOUIC PHILLIP J [GB] ET AL) 31 March 2005 (2005-03-31) the whole document	1-8, 20-25
A	WO 2004/094072 A (3M INNOVATIVE PROPERTIES CO [US]; JOSEPH STEPHEN C P [US]; SILTBERG DA) 4 November 2004 (2004-11-04) the whole document	1-8, 20-25
P,X	WO 2006/065850 A (GERSON CO INC LOUIS M [US]; GERSON RONALD L [US]; BRUNELL ROBERT A [US]) 22 June 2006 (2006-06-22) the whole document	9-18
P,A		1, 19, 26
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 Further documents are listed in the continuation of Box C. See patent family annex.

* 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 document but published on or after the international filing date
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- *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.
- *&* document member of the same patent family

Date of the actual completion of the international search

15 February 2008

Date of mailing of the international search report

26/02/2008

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INTERNATIONAL SEARCH REPORT

International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 847 809 A (RANSBURG CORP [US]) 17 June 1998 (1998-06-17) cited in the application column 5, line 42 - column 6, line 16 -----	9-19, 26-29
A	WO 03/006170 A (3M INNOVATIVE PROPERTIES CO [US]) 23 January 2003 (2003-01-23) page 6, line 23 - page 12, line 7 figures -----	9,19,26
A	WO 2004/037433 A (3M INNOVATIVE PROPERTIES CO [US]) 6 May 2004 (2004-05-06) the whole document -----	9,16,26
A	WO 03/045575 A (RUDA MARTIN [DE]) 5 June 2003 (2003-06-05) page 12, line 12 - page 13, line 14; figures -----	9,19,26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/071176

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 additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. As all searchable claims could be searched without effort justifying an 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.

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8 20-25

an interlocking tab assembly

2. claims: 9-18

a cup and its liner

3. claims: 19 26-29

a liquid tight container.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/071176

Patent document cited in search report	A1	Publication date	Patent family member(s)	Publication date
US 2005067502	A1	31-03-2005	US 2006054719 A1	16-03-2006
WO 2004094072	A	04-11-2004	CN 1771092 A EP 1610905 A1 JP 2006521924 T US 2006261185 A1	10-05-2006 04-01-2006 28-09-2006 23-11-2006
WO 2006065850	A	22-06-2006	CA 2595507 A1 EP 1835997 A1	22-06-2006 26-09-2007
EP 0847809	A	17-06-1998	CA 2219842 A1 DE 69719926 D1 US 5816501 A	16-06-1998 24-04-2003 06-10-1998
WO 03006170	A	23-01-2003	CA 2453177 A1 EP 1404456 A2 JP 2004534700 T RU 2291748 C2 TW 562706 B US 2003006311 A1 US 2003006310 A1	23-01-2003 07-04-2004 18-11-2004 20-01-2007 21-11-2003 09-01-2003 09-01-2003
WO 2004037433	A	06-05-2004	AU 2003284999 A1 CA 2501688 A1 EP 1554052 A1 JP 2006503706 T US 2004140373 A1	13-05-2004 06-05-2004 20-07-2005 02-02-2006 22-07-2004
WO 03045575	A	05-06-2003	AT 294644 T AU 2002342550 A1 DE 10295453 D2 EP 1446232 A1 ES 2242074 T3	15-05-2005 10-06-2003 14-10-2004 18-08-2004 01-11-2005