

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 September 2007 (27.09.2007)

PCT

(10) International Publication Number
WO 2007/109606 A3

- (51) International Patent Classification:
A61M 15/00 (2006.01) B65D 81/26 (2006.01)
- (21) International Application Number:
PCT/US2007/064296
- (22) International Filing Date: 19 March 2007 (19.03.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/783,270 17 March 2006 (17.03.2006) US
- (71) Applicant (for all designated States except US): CSP TECHNOLOGIES, INC. [US/US]; 1030 Riverfront Center, P.O. Box 710, Amsterdam, NY 12010 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): ABRAMS, William, S. [US/US]; 2200 Longwood Drive, Auburn, AL 36832 (US).
- (74) Agent: SCHINDLER, Barry, J.; Greenberg Traurig LLP, Met Life Building, 200 Park Avenue, New York, NY 10166 (US).

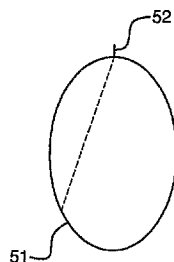
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 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).

Declaration under Rule 4.17:

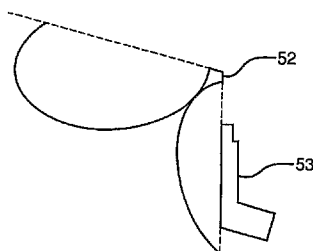
— of inventorship (Rule 4.17(iv))

[Continued on next page]

(54) Title: MOISTURE-TIGHT PRIMARY PACKAGING FOR A DRY POWDER INHALER



A



B

(57) Abstract: In one embodiment, the present invention relates to a primary package (51) that houses a dry powder inhaler (53) comprising: a) the dry powder inhaler, wherein the dry powder inhaler comprises a mouthpiece, body and actuator; b) the primary package, when in a closed position, completely houses the dry powder inhaler within an inner portion of the package, wherein: i) the primary package comprises a re-sealable mechanism, ii) the dry powder inhaler is mechanically secured to the primary package so that, when to primary package is in an open position, the mouthpiece and actuator of the dry powder inhaler is accessible while, simultaneously, the dry powder inhaler is secured within the primary package, and iii) the primary package has a sealant mechanism so that, when the primary package is in the closed position, a moisture-tight seal is formed.



WO 2007/109606 A3



Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

13 December 2007

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/064296

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61M15/00 B65D81/26

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)
A61M 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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 428 380 A1 (RIKER LABORATORIES INC [US]) 22 May 1991 (1991-05-22) column 2, lines 41-43 - lines 50-52 column 3, line 30 - column 5, line 19 claims 1,4,11; figures 1-5	1-9
Y	WO 2004/041337 A (GLAXO GROUP LTD [GB]; BONNEY STANLEY GEORGE [GB]; DAVIES MICHAEL BIRSH) 21 May 2004 (2004-05-21) page 1, line 31 - page 2, line 17 page 7, line 6 - page 9, line 24 figures	1-9
Y	EP 0 028 929 A2 (STERWIN AG [CH]) 20 May 1981 (1981-05-20) page 2, lines 1-11 page 4, lines 11-29 figures 1-3,6-8	1-9
	-/--	

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	*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
E earlier document but published on or after the international filing date	*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
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)	*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.
O document referring to an oral disclosure, use, exhibition or other means	*&* document member of the same patent family
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 8 October 2007	Date of mailing of the international search report 17/10/2007
--	---

Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Azaïzia, Mourad
--	--

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/064296

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 03/063754 A1 (GLAXO GROUP LTD [GB]; BONNEY STANLEY GEORGE [GB]; RAND PAUL KENNETH [G] 7 August 2003 (2003-08-07) page 2, lines 18-27 page 17, line 22 - page 18, line 14 figures 1a-1e page 20, line 28 - page 21, line 10 figures 2a-2c -----	1-9
A	WO 03/030974 A (LILLY CO ELI [US]; NESBITT ROBERT R [US]) 17 April 2003 (2003-04-17) the whole document -----	1-9
A	US 5 833 066 A (HARGUS SUSAN D [US] ET AL) 10 November 1998 (1998-11-10) the whole document -----	1-9
A	WO 2004/105727 A (AVENTIS PHARMA LTD [GB]; HEATON NICHOLAS [GB]; HEATON ZOE [GB]) 9 December 2004 (2004-12-09) the whole document -----	1-9

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/064296

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0428380	A1	22-05-1991	AU 637649 B2 03-06-1993
			AU 6664990 A 23-05-1991
			CA 2029736 A1 15-05-1991
			DE 69003923 D1 18-11-1993
			DE 69003923 T2 05-05-1994
			DK 428380 T3 13-12-1993
			ES 2044453 T3 01-01-1994
			JP 3207375 A 10-09-1991
WO 2004041337	A	21-05-2004	AT 355094 T 15-03-2006
			AU 2003279369 A1 07-06-2004
			EP 1558313 A1 03-08-2005
			JP 2006505314 T 16-02-2006
			US 2006084908 A1 20-04-2006
EP 0028929	A2	20-05-1981	DE 3067711 D1 07-06-1984
			DK 471380 A 08-05-1981
			FI 803472 A 08-05-1981
			NO 803343 A 08-05-1981
WO 03063754	A1	07-08-2003	EP 1471868 A1 03-11-2004
			JP 2005515841 T 02-06-2005
WO 03030974	A	17-04-2003	EP 1436030 A1 14-07-2004
			US 2005172961 A1 11-08-2005
US 5833066	A	10-11-1998	US 6056118 A 02-05-2000
WO 2004105727	A	09-12-2004	AR 047619 A1 01-02-2006
			AU 2004243223 A1 09-12-2004
			BR PI0410701 A 13-06-2006
			CA 2527088 A1 09-12-2004
			CN 1832890 A 13-09-2006
			EP 1626913 A2 22-02-2006
			JP 2007504277 T 01-03-2007
			KR 20060023539 A 14-03-2006
			MA 27804 A1 01-03-2006
			MX PA05012757 A 13-02-2006
			US 2006147537 A1 06-07-2006
			ZA 200509099 A 30-08-2006