



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

(51) International Patent Classification <sup>6</sup> : <b>A61M 15/00</b>		<b>A3</b>	(11) International Publication Number: <b>WO 99/36115</b>
			(43) International Publication Date: 22 July 1999 (22.07.99)
(21) International Application Number: PCT/IB99/00032 (22) International Filing Date: 13 January 1999 (13.01.99) (30) Priority Data: 09/008,184      16 January 1998 (16.01.98)      US 09/149,708      8 September 1998 (08.09.98)      US (71) Applicant: 1263152 ONTARIO INC. [CA/CA]; 725 Third Street, London, Ontario N5V 5G4 (CA). (72) Inventors: BLACKER, Richard; 1371 Commissioners Road, London, Ontario N6K 4H8 (CA). ENGELBRETH, Daniel, K.; 45-536 Third Street, London, Ontario N5V 4R5 (CA). SCHMIDT, James, N.; 22 Foxchapel, London, Ontario N6G 122 (CA).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>  (88) Date of publication of the international search report: 23 September 1999 (23.09.99)	
(54) Title: INDICATING DEVICE FOR USE WITH A DISPENSING DEVICE  (57) Abstract <p>An indicating device for use with a dispensing device that dispenses metered dosages of a medicament from a container (100) having a valve (110) moveable between an open and closed position. In a preferred embodiment, the container (100) is reciprocally moveable within the housing (10) along a longitudinal axis. The housing (10) preferably has a well (18) adapted to receive a valve stem (110) and an exhaust port (26). The well (18) communicates with the port (26) such that the metered dosage of medicament is dispensed through the port (26) when the valve (110) is moved to the open position. An indicator assembly comprises an indicator member (50) that includes dosage indicia (66) visible to a user. In a preferred embodiment, the indicator assembly is provided in an indicator module (120). A method for dispensing measured dosages is also provided, along with a kit capable of being assembled as an inhalation device. A delivery system having a key member (300) and a key entry passageway is also provided.</p>			

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav	TM	Turkmenistan
BF	Burkina Faso	GR	Greece		Republic of Macedonia	TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's	NZ	New Zealand		
CM	Cameroon		Republic of Korea	PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 99/00032

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 6 A61M15/00

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 6 A61M

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	GB 2 191 032 A (GLAXO GROUP LTD) 2 December 1987 (1987-12-02)	1-4, 65-68
Y	page 1, line 5 - line 10; figures page 3, line 70 - page 4, line 60 page 2, line 6 - page 3, line 37 ---	23-25
Y	WO 92 09324 A (MINNESOTA MINING & MFG) 11 June 1992 (1992-06-11) page 1, line 3 - line 7; figures page 9, line 29 - page 12, line 13 ---	23-25
X	EP 0 488 609 A (CIBA GEIGY AG) 3 June 1992 (1992-06-03) column 1, line 1 - line 15; figures column 2, line 52 - column 5, line 22 page 13 --- -/--	1,3,4

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in 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
- \*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.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

14 April 1999

Date of mailing of the international search report

16. 07. 1999

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

ZEINSTRA, H

# INTERNATIONAL SEARCH REPORT

International Application No

PL./IB 99/00032

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 5 482 030 A (KLEIN DAVID)            9 January 1996 (1996-01-09)            column 1, line 7 - line 24; figures            column 13, line 48 - column 14, line 47            -----</p>	1-4,65

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 99/00032

### 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:

see additional 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 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.:

1, 2, 3, 4, 5, 23-25, 65, 66-68

Remark on Protest

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

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

1. Claims: 1,2,3,4,5,23-25,65,66-68

Dispenser housing, kit and method.

2. Claims: 1,6-9,60-64

Container and housing with key member.

3. Claims: 1,10-17,18,19,22,37-54,55-59,79-83

Display of the indicating device and method.

4. Claims: 1,20-21,26-36,69-78

Worm mechanism of the indicating device.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 99/00032

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2191032	A	02-12-1987	AU 598250 B	21-06-1990
			AU 7196287 A	29-10-1987
			CA 1258054 A	01-08-1989
			DK 209987 A	26-10-1987
			EP 0254391 A	27-01-1988
			FI 871799 A	26-10-1987
			JP 63035265 A	15-02-1988
			US 4817822 A	04-04-1989
-----				
WO 9209324	A	11-06-1992	AU 9060491 A	25-06-1992
			DE 69108929 D	18-05-1995
			DE 69108929 T	23-11-1995
			EP 0559757 A	15-09-1993
			US 5349945 A	27-09-1994
-----				
EP 0488609	A	03-06-1992	AU 8818191 A	28-05-1992
			CA 2056093 A	28-05-1992
			FI 915543 A	28-05-1992
			HU 67242 A	28-03-1995
			JP 4272759 A	29-09-1992
			PT 99583 A	31-12-1993
-----				
US 5482030	A	09-01-1996	NONE	
-----				