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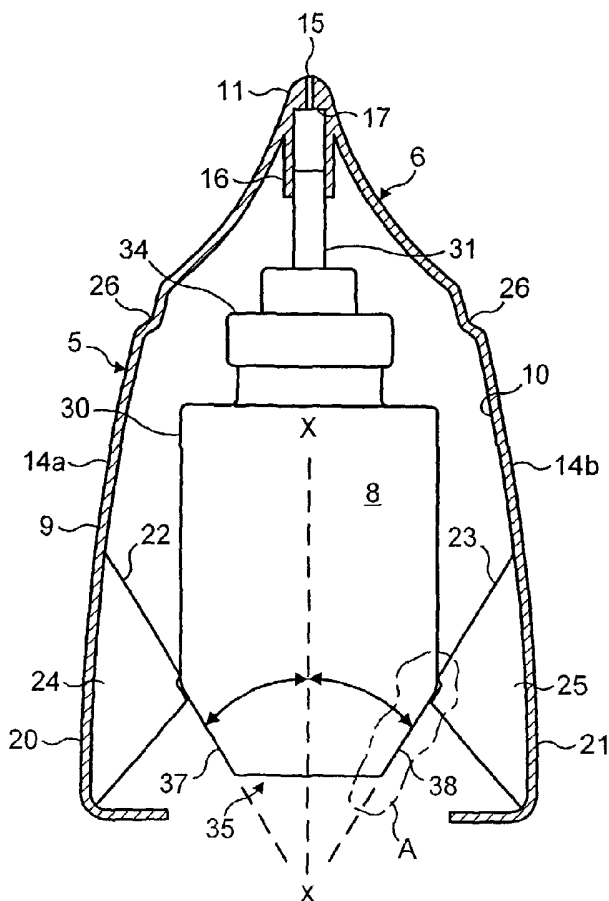
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(54) Title: A FLUID DISPENSING DEVICE



(57) Abstract: A fluid dispensing device (5, 105, 205, 305, 405, 505) is disclosed having a housing (9, 109, 209, 309, 409, 509) and a fluid discharge device (8, 108, 208, 308, 408, 508). The fluid discharge device (8, 108, 208, 308, 408, 508) is arranged to be actuated by one or more levers (20, 21; 120, 121; 170, 220, 221; 320, 321; 420, 421; 520) so as to apply a force transversely to the fluid discharge device (8, 108, 208, 308, 408, 508) which is used to move a container (30, 130, 230, 330, 430, 530) forming part of the fluid discharge device (8, 108, 208, 308, 408, 508) along a longitudinal axis of the fluid discharge device (8, 108, 208, 308, 408, 508) to cause actuation of a pump forming part of the fluid discharge device (8, 108, 208, 308, 408, 508). A pre-load means (28; 27, 28; 39, 40; 41, 42, 44; 144, 47a, 47b; 150, 152, 153; 224, 227; 342; 424x, 446; 425a; 427, 428; 560, 561) is used to prevent actuation of the pump until a pre-determined force is applied to each lever (20, 21; 120, 121; 170, 220, 221; 320, 321; 420, 421; 520) of sufficient magnitude to guarantee the production of a well developed efficient spray from the fluid dispensing device (5, 105, 205, 305, 405, 505).



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/04858

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61M11/02 B05B11/00

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 7 A61M B05B 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

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 899 365 A (HOCHRAINER DIETER ET AL) 4 May 1999 (1999-05-04)  column 1, line 51 - line 67 column 2, line 35 - column 3, line 4 claims 1,2; figure 6 ---	1-3, 8-17, 41-43, 48,49
Y	FR 2 812 826 A (VALOIS SA) 15 February 2002 (2002-02-15)  page 1, line 1 - line 5 page 2, line 2 - page 4, line 27 page 6, line 27 - page 10, line 16 claims 1-10; figures 1,2,3A,4,6A,6B,7,8A,8B,9A,9B,10,11 --- -/--	1-6, 8-26, 30-32, 34-36, 41-43

☒ 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.

"&" document member of the same patent family

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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	<p>GB 659 132 A (BETTY KEVITT ROTHERHAM; ROTHERHAM &amp; SONS LTD) 17 October 1951 (1951-10-17)</p> <p>page 1, line 11 - line 49 page 1, line 58 - page 2, line 57 claims 1,2; figures 1,2</p> <p>---</p>	<p>1-4, 12-23, 30-32, 36,41-43</p>
Y	<p>DE 196 10 456 A (PFEIFFER ERICH GMBH &amp; CO KG) 18 September 1997 (1997-09-18)</p> <p>column 1, line 3 - line 13 column 1, line 58 - column 3, line 19 column 3, line 43 - column 12, line 20 claims 1-14; figures 1,2,4,5,7,8</p> <p>---</p>	<p>1,2,4,5, 8-20, 41-43</p>
Y	<p>GB 1 097 254 A (NEOTECHNIC ENG LTD) 3 January 1968 (1968-01-03)</p> <p>page 1, line 9 - page 2, line 37 page 2, line 66 - page 4, line 44 claims 1-9; figures 1,3-5,8,9</p> <p>---</p>	<p>1,2,4, 12-17, 41-43</p>
Y	<p>US 6 189 739 B1 (VON SCHUCKMANN ALFRED) 20 February 2001 (2001-02-20)</p> <p>column 1, line 6 - column 2, line 57 column 5, line 31 - line 58 claim 1; figures 1,2,5,6,10</p> <p>---</p>	<p>1-6, 8-26, 30-32, 34-36, 41-43, 48,49</p>
Y	<p>US 4 083 476 A (SCHWARTZ HANS ET AL) 11 April 1978 (1978-04-11)</p> <p>column 1, line 8 - column 2, line 12 claim 1; figures 1-3</p> <p>---</p>	<p>1-6, 8-26, 30-32, 34-36, 41-43, 48,49</p>
A	<p>FR 2 807 954 A (CMC JEAN LOUIS VERMEIL) 26 October 2001 (2001-10-26) page 4, line 7 - line 18 figure 1</p> <p>-----</p>	<p>28,29</p>

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 03/04858

### 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.: 50, 51  
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:  
see FURTHER INFORMATION sheet PCT/ISA/210
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.:

#### 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**

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

1. Claims: 1-47

the subject-matter of independent claim 1, followed by dependent claims 2 to 47 defines a fluid dispensing device;

2. Claims: 48-49

the subject matter of independent claim 48, followed by dependent claim 49 defines a housing assembly.

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

Continuation of Box I.2

Claims Nos.: 50, 51

Claims 50 and 51 do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined, as said claims contain references to the drawings. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/04858

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