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- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

[Continued on next page]

(54) Title: UNIT FOR DISPENSING FLUIDS OR MIXTURES AND RELEVANT DISPENSING DEVICE

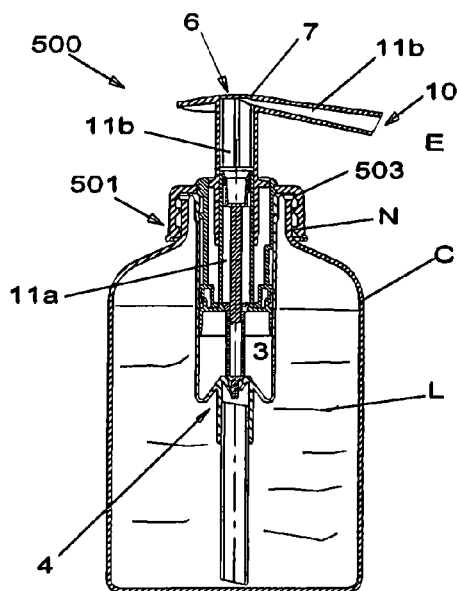


Fig. 1

(57) Abstract: The present invention is a unit (1, 1a) for dispensing fluids (L) suited to be applied to a container, and comprises: a hollow body (2) defining a suction/compression chamber (3) for a fluid (L), provided with a suction duct (4) for the fluid (L), to which a piston (5) is slidingly coupled, wherein said piston (5) can be moved from a first lower position to a second upper position; valve means (19) suited to regulate the flow of the fluid (L) from the suction duct (4) into the suction/compression chamber (3) and to regulate its outflow towards a communication duct (Ha) in hydraulic communication with an outlet duct (11b) of the device; locking means (16) that can be activated by the user to lock the piston (5) in one of the lower and upper positions. Said valve means (19) comprise two elements (20, 21) slidingly coupled with each other so that when the piston (5) is locked in the first lower position the first element (20) creates a first tight area (20a) suited to prevent the passage of the fluid (L) from the suction duct (4).



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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
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ADD.

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.
X	US 3 361 078 A (COOPRIDER WALTER W) 2 January 1968 (1968-01-02)	1-3, 6-10, 12-16, 19,20, 24,25,28
Y	column 1, line 61 - column 2, line 8 column 3, lines 8-49 column 4, line 4 - column 5, line 53 column 6, lines 61-66 column 7, lines 29-35 column 8, lines 4-20 figures	4,17,18, 21-23
X	WO 2008/146319 A (EMSAR S P A [IT]; CARTA LAMBERTO [IT]) 4 December 2008 (2008-12-04) page 6, line 28 - page 9, line 14; figures	1-4,6,8, 11, 14-20, 24,28

☒ 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
"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

Date of the actual completion of the international search

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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.
X	JP 58 122066 A (CANYON CORP) 20 July 1983 (1983-07-20)	1-3, 8, 16, 19, 20, 24, 25, 28
Y	* abstract; figures	4, 17, 18, 21-23
X	US 5 806 721 A (TADA TETSUYA [JP]) 15 September 1998 (1998-09-15)	1-4, 6, 8, 16-20, 24, 25
Y	column 11, line 45 - column 12, line 10; figures	21-23
Y	EP 1 460 001 A1 (KITAMURA SACHIKO [JP]) 22 September 2004 (2004-09-22) paragraph [0127]; figure 62 figures	4, 17, 18, 21-23
Y	WO 97/13585 A1 (PARK TOWERS INT BV [NL]; HEIJDEN EDGAR IVO MARIA V D [NL]) 17 April 1997 (1997-04-17)	1-4, 6-10, 12-16, 19, 20, 24-28
	page 9, line 16 - page 10, line 23; figures	
Y	WO 2006/112701 A1 (KELTEC B V [NL]; BROUWER MARKUS FRANCISKUS [NL]) 26 October 2006 (2006-10-26)	1-4, 6-10, 12-16, 19, 20, 24-28
	page 12, line 13 - page 13, line 17; figures	
A	EP 1 266 696 A1 (TAPLAST SRL [IT]) 18 December 2002 (2002-12-18) the whole document	1, 21-23, 26-28
A	JP 4 037552 U (UNKNOWN) 30 March 1992 (1992-03-30) figures	1
A	JP 2007 015693 A (TOYO SEIKAN KAISHA LTD) 25 January 2007 (2007-01-25) figures	5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2010/000415

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 all searchable 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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-16, 19, 20, 24, 25, 28

Document US3361078 discloses all the features of the preamble of claim 1, therefore it is considered that claims 1-16,19-20,24-25,28 are directed to a fluid dispenser comprising locking means enabling the lock of the plunger in both upper and lower positions. It is considered that the fluid dispenser having locking means enabling the lock of the plunger in both upper and lower positions comprises a "first special technical feature".

2. claims: 17, 18

Claims 17-18 are directed to a fluid dispenser comprising stopping means defining two extreme angular positions. It is considered that the fluid dispenser having stopping means defining two extreme angular position comprises a "second special technical feature".

3. claims: 21-23

Claims 21-23 are directed to a fluid dispenser comprising selector means allowing the selection of the dispensed quantity. It is considered that the fluid dispenser having selector means allowing the selection of the dispensed quantity comprises a "third special technical feature".

4. claims: 26, 27

Claims 26-27 are directed to a foam dispenser comprising a mixing chamber. It is considered that the foam dispenser having a mixing chamber comprises a "forth special technical feature".

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2010/000415

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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