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(71) Applicant (for all designated States except US): **LEAF-GREEN LIMITED** [GB/GB]; 35 Fairfield Rise, Wollaston, Stourbridge, West Midlands DY8 3PQ (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LAILLER, Keith** [GB/GB]; 35 Fairfield Rise, Wollaston, Stourbridge, West Midlands DY8 3PQ (GB). **RODD, Timothy** [GB/GB]; Chart House, Sandy Lane, Lyndhurst, Hants WO43 7DN (GB).

(74) Agents: **HILL, Richard** et al.; Wilson Gunn, Charles House, 148/9 Great Charles Street, Birmingham B3 3HT (GB).

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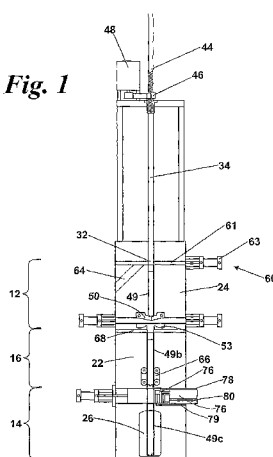
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(54) Title: MANUAL PUMP TYPE FLUID DISPENSER AND A METHOD OF MANUFACTURING SUCH A DISPENSER

**Fig. 1**



(57) Abstract: A manual pump action dispenser for dispensing at least one liquid from a container, the dispenser comprising a base and a cap (114) having an outlet (144) for the liquid, the base being mountable to or forming part of a container and the cap (114) being mountable to the base for movement relative to the base between a rest position and an actuated position, the dispenser further comprising a flexible insert (116) locatable between the base and the cap (114) to define a first pump chamber (122) for dispensing said at least one liquid, the insert being adapted to engage with the base to define an inlet through which said at least one liquid to be dispensed can enter the first pump chamber, the dispenser further comprising an inlet valve operable to enable liquid to enter the first pump chamber (122) through the inlet and an outlet valve arrangement operable to control the release of liquid from the first pump chamber through the outlet, in which the insert also defines a second pump chamber (123) for dispensing a second fluid.

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/GB2008/002558

## A. CLASSIFICATION OF SUBJECT MATTER

INV. 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)

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

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|           | -/--                                                                                                                                                   |                       |



Further documents are listed in the continuation of Box C.



See patent family annex.

### \* Special categories of cited documents:

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- \*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
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- \*G\* document member of the same patent family

Date of the actual completion of the international search

8 April 2009

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Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040,  
Fax: (+31-70) 340-3016

Authorized officer

Eberwein, Michael

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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         | WO 98/30332 A (UNILEVER PLC [GB]; UNILEVER NV [NL]) 16 July 1998 (1998-07-16)<br>page 8, line 11 - line 16<br>-----                       | 19,46                 |
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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB2008/002558

## 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.:  
  
19-44, 46-93
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: 1-18

A manual pump action dispenser for dispensing at least one liquid from a container, the dispenser comprising a base and a cap having an outlet for the liquid, the base being mountable to or forming part of a container and the cap being mountable to the base for movement relative to the base between a rest position and an actuated position, the dispenser further comprising a flexible insert locatable between the base and the cap to define a first pump chamber for dispensing said at least one liquid, the insert being adapted to engage with the base to define an inlet through which said at least one liquid to be dispensed can enter the first pump chamber, the dispenser further comprising an inlet valve operable to enable liquid to enter the first pump chamber through the inlet and an outlet valve arrangement operable to control the release of liquid from the first pump chamber through the outlet, in which the insert also defines a second pump chamber for dispensing a second fluid.

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2. claims: 19-44

A manual pump dispenser comprising a container and a cap, the container having a main body for holding a volume of liquid to be dispensed, an open neck region through which the liquid to be dispensed can be introduced into the container and an integral dip tube extending from within or close to the neck region towards a base of the container, the cap having an outlet for the liquid and being mountable to the container for movement between a rest position and an actuated position, the dispenser further comprising a flexible insert locatable between the neck region of the container and the cap to define a pump chamber for the liquid, the insert defining an inlet through which the liquid to be dispensed can enter the pump chamber from the dip tube, the dispenser also comprising a one way inlet valve operable to enable liquid to enter the pump chamber through the inlet and a one way outlet valve arrangement operable to control the release of liquid from the pump chamber into the outlet.

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3. claim: 45

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

A manual pump action dispenser for dispensing a liquid from a container, the dispenser comprising a base and a cap having an outlet for the liquid, the base being mountable to or forming part of the container and the cap being mountable to the base for movement between a rest position and an actuated position, the dispenser further comprising a flexible insert locatable between the base and the cap to define a pump chamber for the liquid, the insert being adapted to engage with the base to define an inlet through which the liquid to be dispensed can enter the pump chamber, the dispenser further comprising a one way inlet valve operable to enable liquid to enter the pump chamber through the inlet and a one way outlet valve arrangement operable to control the release of liquid from the pump chamber into the outlet, in which the cap is manufactured integrally with the base and is connected thereto by means of a flexible lanyard.

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## 4. claims: 46-93

A manual pump action dispenser for dispensing a liquid from a container, the dispenser comprising a base and a cap having an outlet for the liquid, the base being mountable to or forming part of the container and the cap being mountable to the base for movement between a rest position and an actuated position, the dispenser further comprising a flexible insert locatable between the base and the cap to define a pump chamber for the liquid, the insert being adapted to engage with the base to define an inlet through which the liquid to be dispensed can enter the pump chamber, the dispenser further comprising a one way inlet valve operable to enable liquid to enter the pump chamber through the inlet and a one way outlet valve arrangement operable to control the release of liquid from the pump chamber into the outlet, the dispenser having a trigger type actuation surface adapted to be gripped by a users fingers and pulled towards the container to actuate the dispenser.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No  
PCT/GB2008/002558

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