



(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 158(3) EPC

(43) Date of publication:
12.11.2008 Bulletin 2008/46

(51) Int Cl.:
B65D 25/38 (2006.01) **B65D 47/24** (2006.01)
B65F 1/14 (2006.01)

(21) Application number: **07704753.8**

(86) International application number:
PCT/ES2007/000044

(22) Date of filing: **29.01.2007**

(87) International publication number:
WO 2007/085677 (02.08.2007 Gazette 2007/31)

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

(72) Inventors:
• **Grau I Camprubi, Miquel Angel**
08980 San Feliu de Llobregat (ES)
• **Lara I Aimerich, Raquel**
08980 San Feliu de Llobregat (ES)

(30) Priority: **30.01.2006 ES 200600199**

(71) Applicants:
• **Grau I Camprubi, Miquel Angel**
08980 San Feliu de Llobregat (ES)
• **Lara I Aimerich, Raquel**
08980 San Feliu de Llobregat (ES)

(74) Representative: **Reinhardt, Harry et al**
Reinhardt & Pohlmann Partnerschaft,
Grünstrasse 1
75172 Pforzheim (DE)

(54) **DRUM FOR CITY BINS**

(57) **Can for an urban recycling bin**, where the can comprises a first mouth for the liquid inside it to exit and a handle, and it is **characterized by** the fact that it also has an additional mouth provided with a cover. The area around this first mouth is substantially flat, and the upper part of the handle is substantially aligned with this flat area. A can is designed for collecting oil for subsequent introduction into the urban bin for recycling. The urban recycling bin comprises at least one tank for the wastes that it must contain and at least one opening for these wastes, and it is **characterized by** the fact that at least one opening is adapted for insertion of the mouth of the can. Thus an urban recycling tank is achieved that is adapted for liquid wastes, e.g., domestic oil.

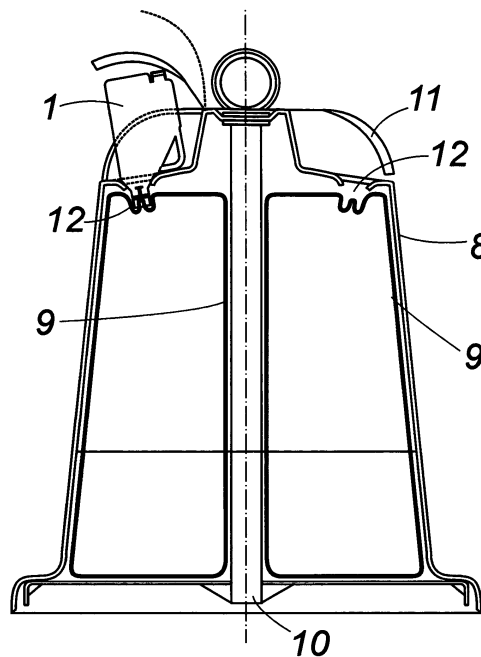


Fig. 3

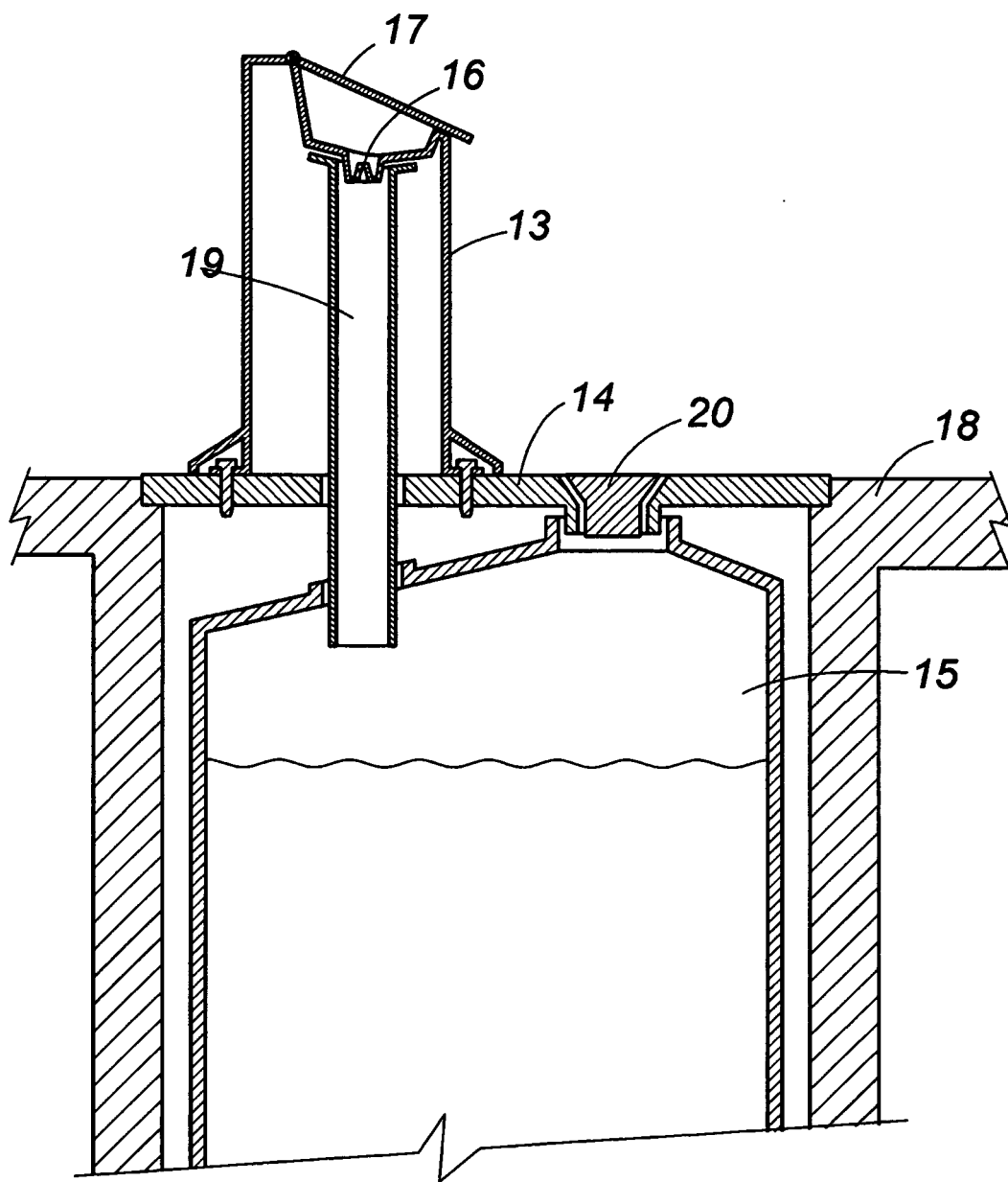


Fig. 4

Description

OBJECT OF THE INVENTION

[0001] The object of this application for an Invention Patent is a can for an urban recycling bin, which fulfills the function for which it is intended and provides several advantages that will be described hereinafter, apart from others inherent in its organization and constitution.

[0002] More specifically, the invention refers to a can for containing domestically used oils and similar and mineral oils, for subsequent disposal in an urban bin for recycling.

BACKGROUND OF THE INVENTION

[0003] At present and as reference to the state of the art, it should be mentioned that it is customary for the oil used in a kitchen to be thrown down the drain, which represents a drawback for reasons of pollution, as it is not recycled at all.

[0004] This is primarily due to the inexistence of urban collection sites for this type of oil, e.g., urban recycling bins adapted for this type of waste.

[0005] The can of the invention succeeds in resolving these drawbacks and also offers other advantages that will be described hereinafter.

[0006] Furthermore, there are currently different types of urban recycling bins for different types of wastes, e.g., cardboard, plastic, organic waste and batteries. These bins are located on the street and enable users to classify wastes of this kind for subsequent recycling.

[0007] However, there are some wastes that cannot be systematically collected, e.g., oil used in a kitchen. At present, it is customary for the oil used in a kitchen to be thrown down the drain, which represents a drawback for reasons of pollution, as explained above.

[0008] The bin of the invention succeeds in resolving these drawbacks and also offers other advantages that will be described hereinafter.

DESCRIPTION OF THE INVENTION

[0009] The can for an urban recycling bin that is the object of this invention comprises a first mouth for the liquid inside it to exit and a handle, and it is characterized by the fact that it also has an additional mouth fitted with a cover.

[0010] Advantageously, the area around this first mouth is substantially flat, and the upper part of this handle is substantially aligned with this flat area.

[0011] This first mouth is preferentially provided with a movable closure element.

[0012] The can is adapted for directly introducing the oil from, for example, a frying pan or deep fryer through the additional mouth.

[0013] In addition, the area around this first mouth substantially facilitates supporting the can on a complemen-

tary urban bin, which comprises at least one tank for the wastes that it must contain and at least one opening for these wastes, and it is characterized by the fact that at least one opening is adapted for insertion of the mouth of a can of the type described above.

[0014] Advantageously, the area around this opening is substantially flat.

[0015] Each opening is preferentially provided with an associated articulated lid.

[0016] According to a preferential embodiment, the bin of this invention comprises at least two openings, each one of which is communicated with a separate tank.

[0017] This urban recycling bin is a bin adapted for housing wastes such as domestic oil, which can be easily collected from the users' homes with the can described above.

[0018] In addition, in an alternative bin embodiment, a vegetable oil recycling tank is provided for urban use to be installed on sidewalks, which fundamentally comprises an exterior frame, a sealed cover and an underground tank.

[0019] The exterior frame is provided with an entry opening to pour in the used oil, and it is secured to the iron cover on the street's sidewalk, with the particularity that this entry opening communicates with a pipe through which the used oil falls down to the underground tank, where the poured oil is stored.

[0020] The sealed cover is suitable for securing to the exterior frame and has a sealed top through which the used oil is removed from the underground tank by means of a pump truck.

[0021] To complement the description provided below and in order to help better understand its characteristics, this description is accompanied by a set of drawings whose figures show, on an illustrative and non-limitative basis, the most significant details of the invention.

BRIEF DESCRIPTION OF THE FIGURES

[0022]

Figure 1. Shows a side cross section view of the can.

Figure 2. Shows a front view of the can.

Figure 3. Shows a cross section view of the bin with the can in operating position.

Figure 4. Shows a schematic cross section view of an alternative embodiment of the bin.

DESCRIPTION OF A PREFERENTIAL EMBODIMENT

[0023] In view of the above mentioned figures and in accordance with the numbering used, a preferential, although not limitative, embodiment of the invention can be seen; this consists of a can for an urban recycling bin, with this can - 1- presenting a first mouth -2- for the liquid contained in it, preferentially domestic oil, to exit.

[0024] This first mouth -2- comprises a movable closure element -3- to facilitate the introduction of the oil

into a complementary urban recycling bin.

[0025] The can -1- also has an additional mouth -4- provided with a cover -5- to introduce the oil into it directly from a container such as a frying pan or a deep fryer.

[0026] In addition, the can -1- also comprises a handle -6-, the upper part of which is substantially aligned with an area -7- located around this first mouth -2- that is substantially flat.

[0027] The urban recycling bin comprises an exterior frame -8- on the inside of which, according to the embodiment shown in figure 3, there are two tanks -9- to contain the oil poured inside it through two openings -12-.

[0028] Each of these openings -12- is adapted to facilitate the insertion of a can -1-. Each opening -12- has an associated articulated lid -11-. Around each opening -12-, there is a substantially flat area for supporting the can -1- and to facilitate introduction of its contents into the corresponding tank -9-.

[0029] In addition, the bin also has an internal support structure -10- formed by a central column.

[0030] Figure 4 shows an alternative embodiment of the bin, which has been provided with a vegetable oil recycling tank for urban use to be installed on sidewalks, and which basically comprises an exterior frame -13-, a sealed cover -14-, and an underground tank -15-.

[0031] The exterior frame -13- is provided with an entry opening -16-, adapted to the mouth of the used oil can to facilitate pouring of the oil and which is usually covered with a collapsible lid -17-. This exterior frame -13- is secured to the iron cover on the street's sidewalk -18-, with the particularity that this entry opening -16- communicates with a pipe -19- through which the used oil falls down to the underground tank -15-, where the poured oil is stored.

[0032] The sealed cover -14- is suitable for securing to the exterior frame -13- and has a sealed top -20- through which the used oil is periodically removed from the underground tank -15- by means of a pump truck.

Claims

1. CAN FOR AN URBAN RECYCLING BIN, where the can (1) comprises a first mouth (2) for the liquid inside it to exit and a handle (6), and the urban recycling bin comprises at least one tank (9) for the wastes that it must contain and at least one opening (12) for these wastes, **characterized by** the fact that the can (1) also has an additional mouth (4) provided with a cover (5).
2. CAN FOR AN URBAN RECYCLING BIN, as per claim 1, **characterized by** the fact that the can (1) has an area (7) around this first mouth (2) that is substantially flat, and the upper part of the handle (6) is substantially aligned with this flat area (7).
3. CAN FOR AN URBAN RECYCLING BIN, as per

claim 1, **characterized by** the fact that the can (1) has a movable closure element (3) for the first mouth (2).

4. CAN FOR AN URBAN RECYCLING BIN, as per the preceding claims, **characterized by** the fact that the bin has at least one opening (12) adapted for the insertion of the mouth of the can (1).
5. CAN FOR AN URBAN RECYCLING BIN, as per the preceding claims, **characterized by** the fact that the bin has an area around this opening (12) that is substantially flat.
6. CAN FOR AN URBAN RECYCLING BIN, as per claims 1 to 4, **characterized by** the fact that the bin has, in each opening (12), an associated articulated lid (11).
7. CAN FOR AN URBAN RECYCLING BIN, as per claims 1 to 4, **characterized by** the fact that the bin comprises at least two openings (12), each of which is communicated with a separate tank (9).
8. CAN FOR AN URBAN RECYCLING BIN, as per claims 1 to 3, **characterized in that** the alternative embodiment of the bin has been provided with a vegetable oil recycling tank for urban use to be installed on sidewalks, which has an exterior frame (13) secured to the iron lid on the street's sidewalk (18), with the particularity that the entry opening (16) of this exterior frame (13) communicates with a pipe (19) that leads into an underground tank (15), where the poured oil is stored.
9. CAN FOR AN URBAN RECYCLING BIN, as per claims 1, 2, 3 and 8, **characterized in that** a sealed cover (14) has been provided that is suitable for securing to the exterior frame (13), with this cover (14) being provided with a sealed top (20) in order to periodically remove the used oil from the underground tank (15) by means of, for example, a pump truck.
10. CAN FOR AN URBAN RECYCLING BIN, as per claims 1, 2, 3 and 8, **characterized in that** the entry opening (16) is adapted to the mouth of the used oil can, thus facilitating pouring of the oil.

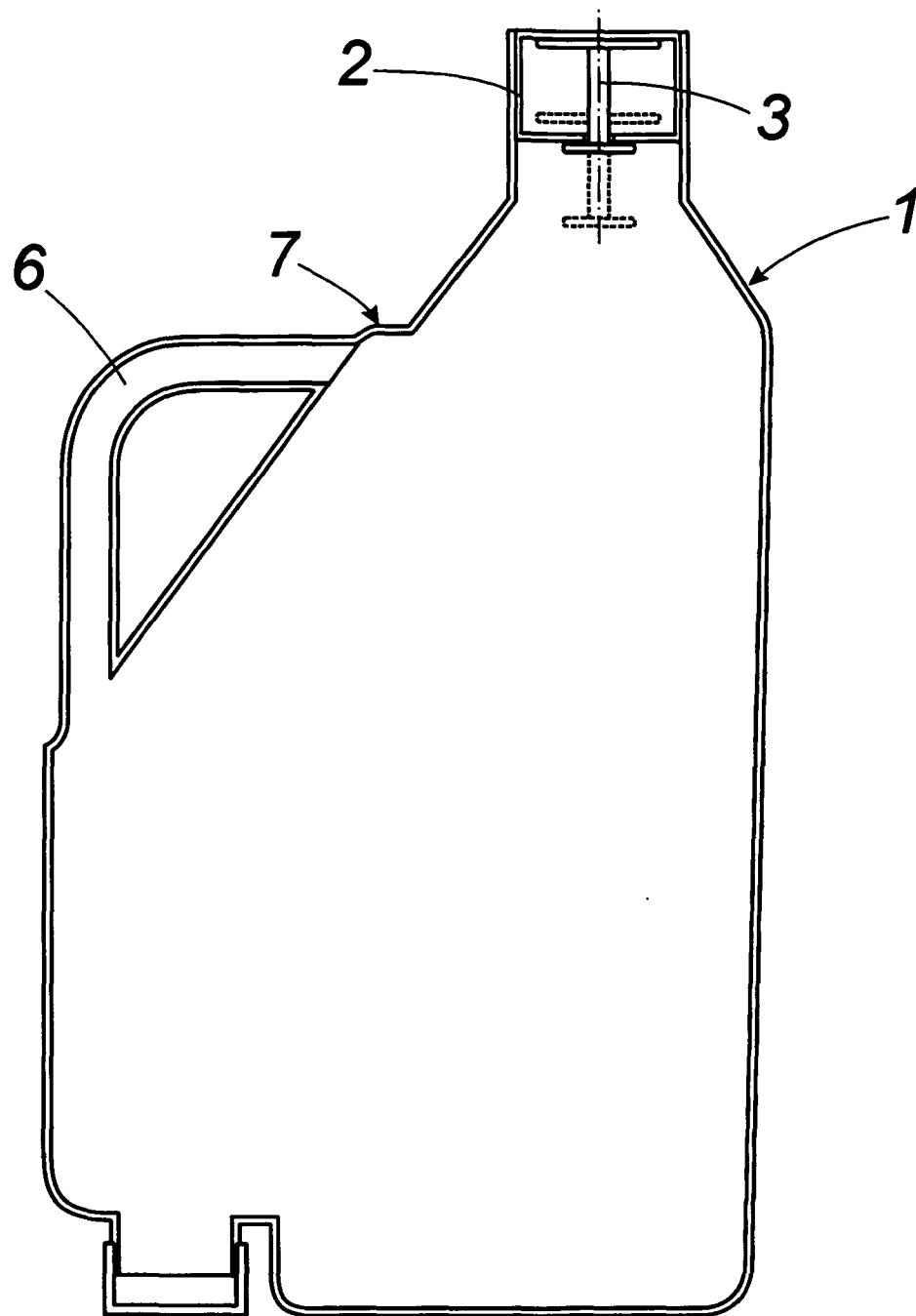


Fig. 1

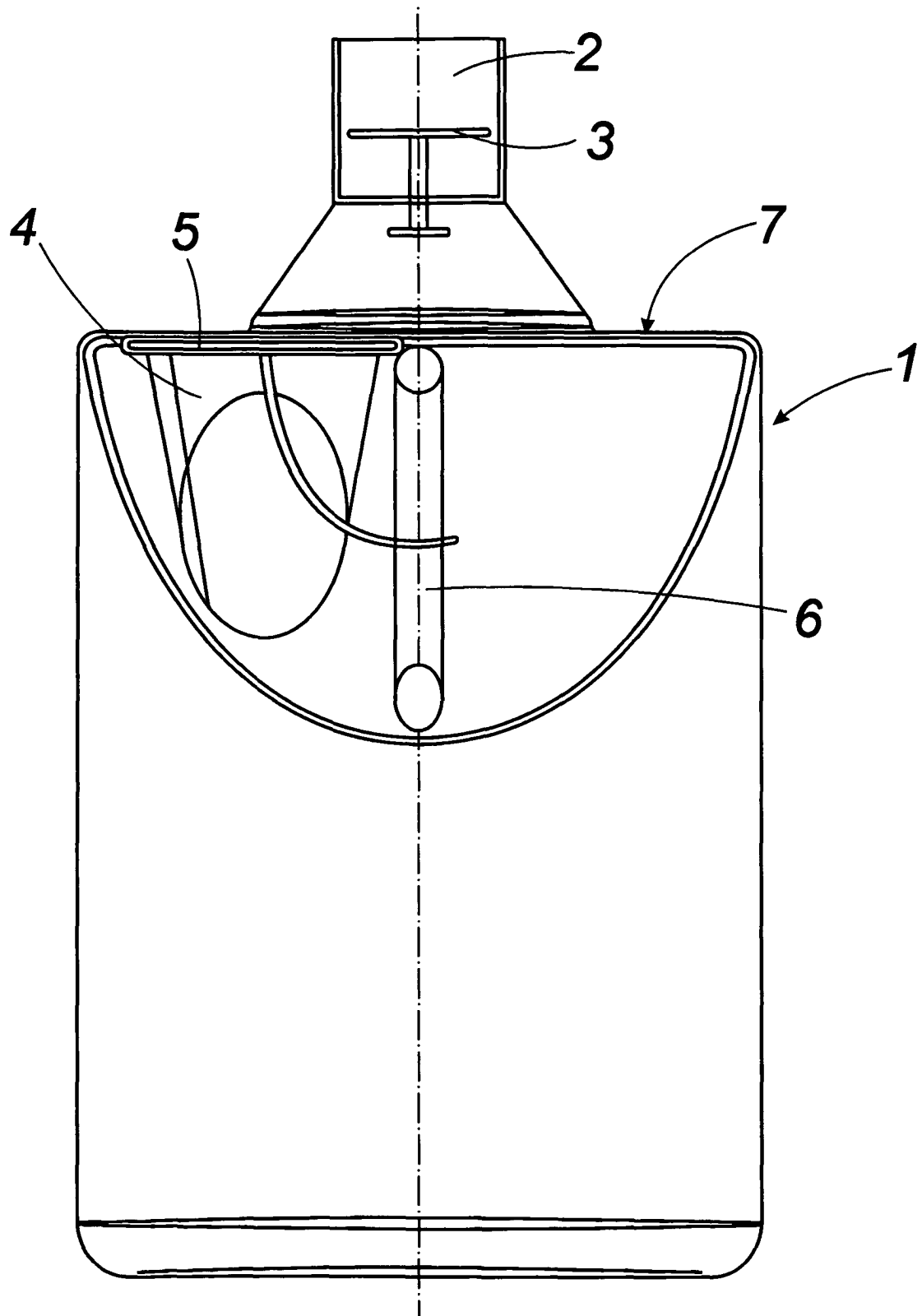


Fig. 2

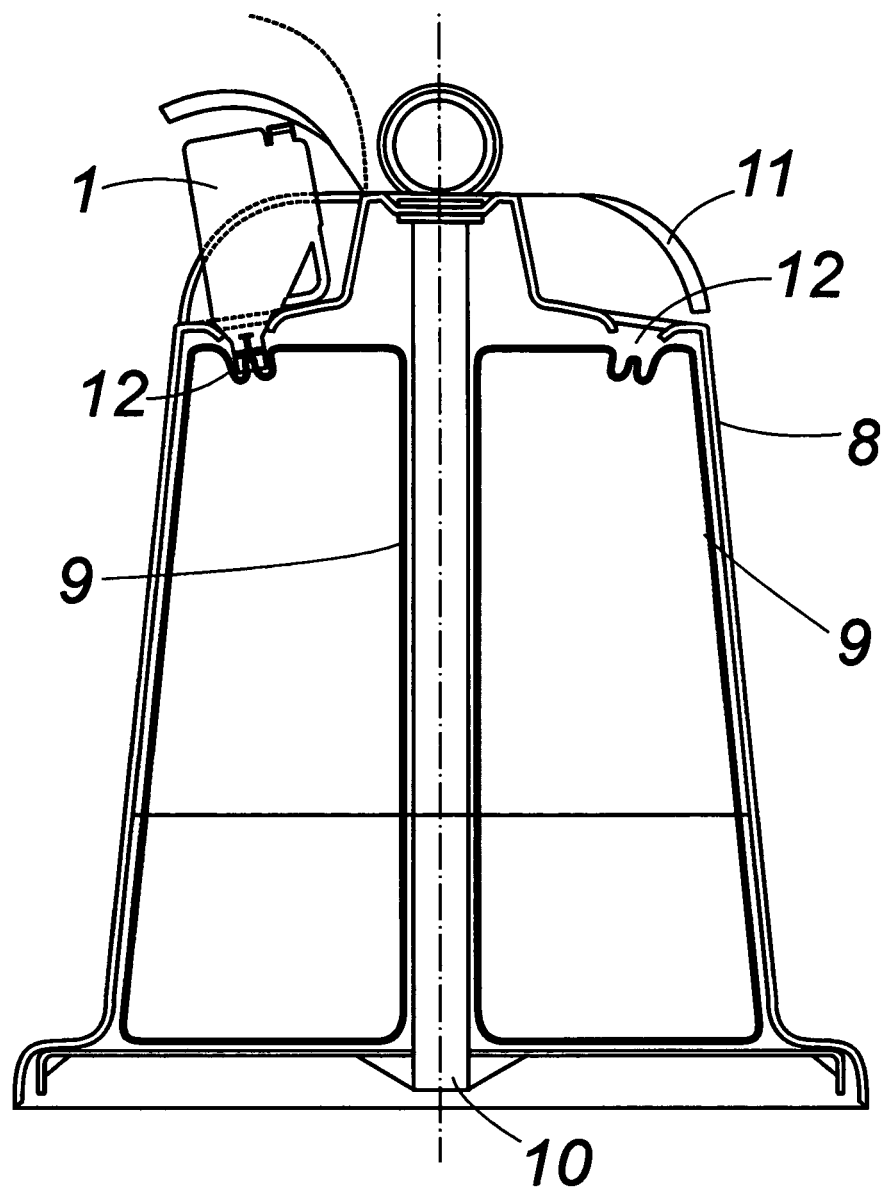


Fig. 3

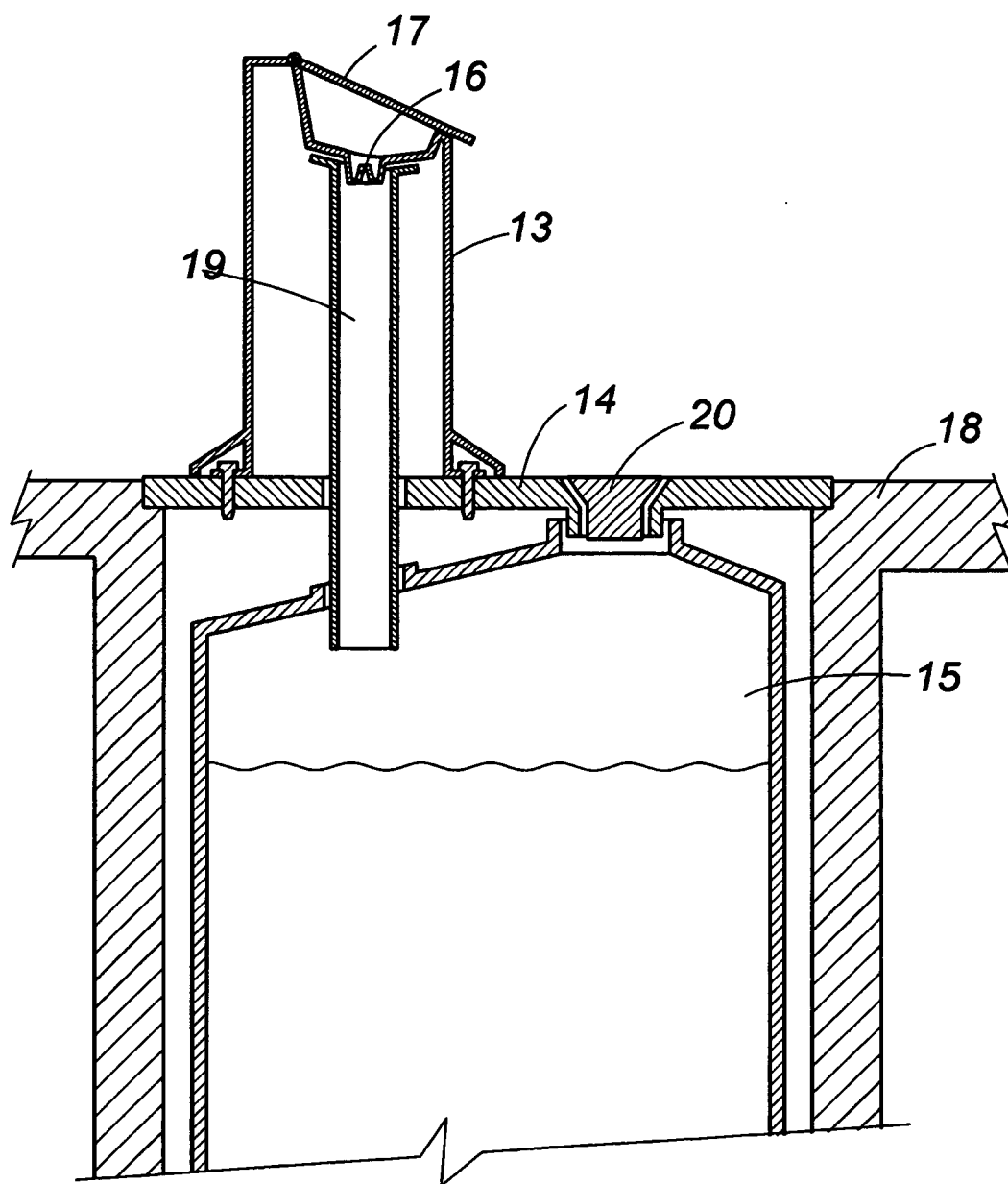


Fig. 4

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ ES 2007/000044

A. CLASSIFICATION OF SUBJECT MATTER

see extra sheet

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)

B65D25/38,B65D47/24,B65F1/14

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

B65D25/38,B65D47/24E,B65D47/24A2,B65F1/14

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CIBEPAT,EPODOC,WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5597097 A (Morris) 28.01.1997, column 4, line 15 - column 8, line 67; images.	1,2,4,5
A	GB 2320924 A (Lawrence) 08.07.1998, the whole document.	2,3
A	US 6223792 B1 (Slagle) 01.05.2001, abstract; images.	2,3
A	DE 20216407U U1 (Erhard & Soehne, GmbH) 30.01.2003, abstract; images.	4-7
A	DE 20004798U U1 (Ilkzell Isoliertechnik GmbH) 10.08.2000, abstract; image 1.	4-7

☐ 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 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

29 March 2007 (29.03.2007)

Date of mailing of the international search report

(18/04/2007)

Name and mailing address of the ISA/
O.E.P.M.Paseo de la Castellana, 75 28071 Madrid, España.
Facsimile No. 34 91 3495304

Authorized officer

V. Anguiano Mañero

Telephone No. +34 91 349 55 38

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/ ES 2007/000044

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
US5597097A A	28.01.1997	NONE	-----
GB2320924A A	08.07.1998	NONE	-----
US6223792B B	01.05.2001	NONE	-----
DE20216407UU U	30.01.2003	NONE	-----
DE20004798UU U	10.08.2000	NONE	-----

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ ES 2007/000044

CLASSIFICATION OF SUBJECT MATTER

B65D 25/38 (2006.01)

B65D 47/24 (2006.01)

B65F 1/14 (2006.01)