

(19)



(11)

EP 3 296 066 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
21.03.2018 Bulletin 2018/12

(51) Int Cl.:
B25H 3/00 (2006.01)

(21) Application number: **17191114.2**

(22) Date of filing: **14.09.2017**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
 GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
 PL PT RO RS SE SI SK SM TR**
 Designated Extension States:
BA ME
 Designated Validation States:
MA MD

(71) Applicant: **Edgecombe, Rob
Exeter Devon EX1 2QY (GB)**

(72) Inventor: **Edgecombe, Rob
Exeter Devon EX1 2QY (GB)**

(74) Representative: **Handsome I.P. Ltd
27-28 Monmouth Street
Bath BA1 2AP (GB)**

(30) Priority: **14.09.2016 GB 201615595**

(54) **BUCKET-TIDY AND METHOD OF ORGANISING ITEMS HELD WITHIN A BUCKET**

(57) Builders are required to carry a large number of tools in order to carry out their work. Although there are many forms of portable tool box and tote tray on the market, the relatively high cost of these items, together with their lack of versatility and relative fragility has led to builders using a "builder's bucket" (9) in which to carry their equipment. When items are placed into the bucket (9), smaller items tend to fall to the bottom of the bucket (9),

while larger items remain on top. According to the present invention, there is provided a bucket-tidy that may be inserted into a bucket (9) in order for equipment kept therein to be arranged tidily. In this way, items kept within the bucket may be quickly and easily retrieved by a user, without the need for searching, removing other items and/or emptying the bucket.

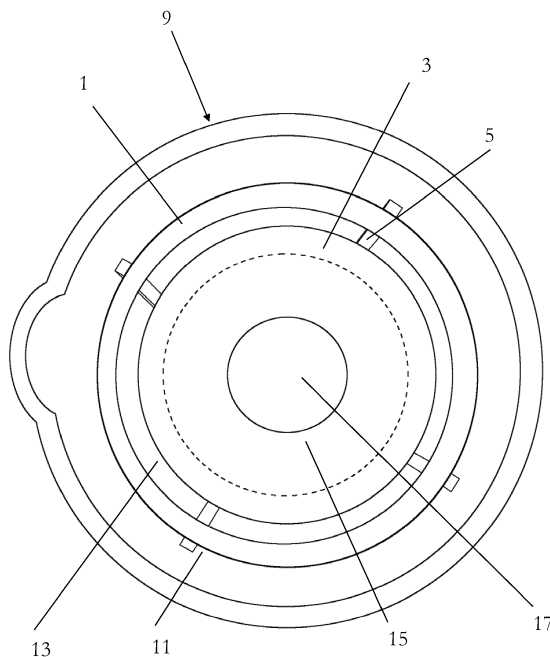


Figure 2

EP 3 296 066 A1

Description

[0001] The present invention relates generally to a bucket-tidy and a method of organising items held within a bucket and finds particular, although not exclusive, utility as a builder's bucket tidy.

[0002] Builders, bricklayers, stonemasons and other craftsmen, artisans and labourers are required to carry a large number of tools in order to carry out their work. For instance, a bricklayer may need to carry three or four trowels (for instance, of different sizes or to act as spares), a tape measure, several spools of twine/string/cord, chalk, hammers and/or mallets, chisels (again, of different sizes), pencils, goggles, and various other items useful to their trade.

[0003] Although there are many forms of portable tool box and/or tote tray on the market, the relatively high cost of these items, together with their lack of versatility and relative fragility has led to tradesman such as those mentioned above using a bucket in which to carry their equipment. Such buckets are ubiquitous and are generally referred to as "builder's buckets" in the trade.

[0004] Builder's buckets tend to be between approximately 12 and 16 litres in volume, in particular between 13 and 15 litres, for example 13 litres, 13.5 litres, 14 litres, 14.5 litres or 15 litres. These buckets also tend to be manufactured from a plastics material (for example polypropylene), have a spout/lip from which to pour cement, is provided with a pivotable carry handle (e.g. metal wire, often including a grip that may be made out of plastics material and may be rotatable on the handle). Buckets in general often have a shape substantially that of a conical frustum, such that multiple empty buckets of similar design may be stacked one inside another.

[0005] Although using such builder's buckets for carrying equipment avoids the need to frequently replace expensive tote trays that have been damaged, avoids the expense of purchasing large and potentially unwieldy tool boxes, and allows a tradesman to (for example) mix cement therein, using such builder's buckets presents its own problems.

[0006] As can be appreciated, when items are placed into the bucket, smaller items tend to fall to the bottom of the bucket, while larger items remain on top. Accordingly, if a user requires a pencil or tape measure, it is almost certainly going to be found at the bottom of the bucket, requiring the user to first empty the bucket. This is not only inconvenient, but may also pose a hazard to fellow workers.

[0007] According to a first aspect of the present invention, there is provided a bucket-tidy comprising a resilient retaining hoop configured to sit inside a bucket and grip an item placed between the retaining hoop and the bucket.

[0008] The bucket-tidy may be inserted into a bucket, for example a builder's bucket, in order for equipment kept therein to be arranged tidily. In particular, the bucket-tidy may allow such equipment to be arranged substan-

tially vertically (e.g. with substantially each item of equipment being arranged with its longest dimension orientated substantially vertically), for instance such that a portion of the item (e.g. a handle of the item) projects upwardly (e.g. out of a top of the bucket).

[0009] In this way, items kept within the bucket may be quickly and easily retrieved by a user, without the need for searching, removing other items and/or emptying the bucket.

[0010] The bucket-tidy comprises a retaining hoop configured to sit inside a bucket. In this way, items of equipment (such as trowels, chisels, etc.) may be held in place by the retaining hoop. For instance, items may be inserted between an external periphery of the hoop and an interior surface/wall of the bucket, such that the items are held between the hoop and the bucket, and may be substantially prevented from moving toward an interior of the hoop. Other configurations are also envisaged, such as the hoop comprising pockets for retention of items therein, or the hoop comprising an outer hoop and a radially inner hoop between which items may be placed.

[0011] The hoop is resilient and may be flexible. In this way, items of different sizes may be placed between the hoop and the bucket, with the hoop flexing to accommodate them. In particular, resilience of the hoop may act to grip the items to hold them securely in place.

[0012] The hoop may be substantially circular. The hoop may be substantially toroidal. The hoop may comprise a band. The hoop may have a shape comprising the curved surface of a cylinder or conic section.

[0013] The hoop may be sized such that it becomes wedged inside the bucket, for instance at a height above the bottom of the bucket.

[0014] The bucket-tidy may further comprise at least one vertical spacer, which may project substantially parallel to an axis of the hoop. In this way, when in use, the vertical spacer may maintain a minimum distance of the hoop from the bottom of the bucket. Accordingly, when in use, the hoop may not become wedged inside the bucket.

[0015] In this context, substantially parallel to an axis of the hoop may mean substantially vertically, when in use. However, this is not limited to absolutely vertical, and includes angles away from vertical up to, for instance 10 degrees, 20 degrees or 30 degrees. In preferred embodiments, the vertical spacer may project from the hoop at an angle to the axis of the hoop equal to the slope of the walls of the bucket into which it is to be placed; that is, the vertical spacer may project substantially parallel to the interior wall of the bucket.

[0016] There may be only one vertical spacer, or there may be a plurality of vertical spacers, in particular 2, 3, 4, 5, 6 or more vertical spacers.

[0017] The bucket-tidy may further comprise at least one radial spacer located on an exterior periphery of the hoop. In this way, the hoop may be spaced from the interior surface of the bucket, which may allow more room

for items to be inserted between the hoop and the bucket.

[0018] There may be only one radial spacer, or there may be a plurality of radial spacers, in particular 2, 3, 4, 5, 6 or more radial spacers.

[0019] The bucket-tidy may further comprise a lower hoop arranged to sit inside the bucket when in use, below the retaining hoop. In this way, items may be inserted between an external periphery of the lower hoop (in addition, or as an alternative, to the retaining hoop) and an interior surface/wall of the bucket, such that the items are held between the hoop(s) and the bucket, and may be substantially prevented from moving toward an interior of the hoop (s). Thus, items held by both hoops may be more securely held in position.

[0020] The configuration of the lower hoop may be substantially the same, or substantially similar, to the retaining hoop. In particular, the lower hoop may have a radius less than that of the retaining hoop. The lower hoop may be arranged to be coaxial with the retaining hoop.

[0021] The bucket-tidy may further comprising at least one lower radial spacer located on an exterior periphery of the hoop, similar to the at least one radial spacer. In some embodiments, the at least one lower radial spacer may comprise the at least one radial spacer; that is, at least one combined radial spacer may extend between the retaining hoop and the lower hoop. For instance, the at least one combined radial spacer may couple the retaining hoop to the lower hoop such that relative movement between the two are substantially inhibited.

[0022] In further embodiments, the at least one vertical spacer may comprise the at least one radial spacer, the at least one lower radial spacer, and/or the at least one combined radial spacer. For instance, at least one spacer may extend from the retaining hoop past the lower hoop to a base of the bucket, when in use.

[0023] The bucket-tidy of any one of claims 2 to 5, further comprising a floor arranged to cover, when in use, the base of the bucket into which the bucket-tidy is inserted. In particular, the floor may be spaced from the base of the bucket when in use. In this way, items may be placed below the floor, for instance, if they are spare or seldom used.

[0024] The floor may extend between the perimeter of the retaining hoop or the lower hoop, or may extend between a plurality of radial spacers, lower radial spacers, combined radial spacers, vertical spacers and/or spacers referred to above.

[0025] The floor may be integrally formed with the retaining hoop and/or the lower retaining hoop.

[0026] The floor may be removable. In this way, a user may be able to remove items stored below the floor without the need to remove the entire bucket-tidy from the bucket into which it has been inserted. The floor may comprise a perimeter wall configured such that, if removed from the bucket tidy, items resting on the floor are prevented from falling off.

[0027] The bucket-tidy may comprise a support (e.g. a flange or lug(s)), for instance located on the retaining

hoop, lower retaining hoop, radial spacer(s), lower radial spacer(s), combined radial spacer(s), vertical spacer(s) and/or spacer(s) referred to above, arranged such that in use the floor may rest upon the support.

[0028] The retaining hoop may have a radial thickness of between 0.5 and 2mm, in particular between 1 and 1.5mm. The retaining hoop may have an axial/vertical extent of between 10 and 100mm, in particular between 20 and 70mm, more particularly between 30 and 50mm, for example approximately 40mm.

[0029] The lower retaining hoop may have a radial thickness of between 0.5 and 2mm, in particular between 1 and 1.5mm. The lower retaining hoop may have an axial/vertical extent of between 10 and 100mm, in particular between 20 and 80mm, more particularly between 30 and 60mm, for example approximately 40 or 50mm.

[0030] The lower retaining hoop and the retaining hoop may be axially spaced from one another by a distance of between 10 and 100mm, in particular between 20 and 70mm, more particularly between 30 and 50mm, for example approximately 40mm.

[0031] The minimum distance of the hoop from the bottom of the bucket maintained by the vertical spacer may be between 10 and 150mm, in particular between 30 and 110mm, more particularly between 40 and 80mm, for example approximately 50, 60 or 70mm.

[0032] When inserted into a bucket, the retaining hoop may be spaced from an upper lip of the bucket by at least between 10 and 200mm, in particular between 20 and 10mm, more particularly between 30 and 70mm, for example approximately 40, 45 or 50mm.

[0033] When installed in the bucket tidy, the perimeter wall of the floor may project upwards to substantially the same height as the lower retaining band. In particular, the perimeter wall may project upwards/axially by between 10 and 100mm, in particular between 20 and 80mm, more particularly between 30 and 60mm, for example approximately 40, 45 or 50mm.

[0034] The radial spacer may have a radial thickness of between 5 and 30mm, in particular between 7 and 20mm, more particularly between 9 and 15mm, for example 10 or 12mm. In this way, the radial spacer may space the retaining hoop and/or lower retaining hoop from the interior wall of a bucket into which it has been inserted by a minimum distance of between 5 and 30mm, in particular between 7 and 20mm, more particularly between 9 and 15mm, for example 10 or 12mm.

[0035] According to a second aspect of the present invention, there is provided a method of organising items held within a bucket, the method comprising the steps of: providing a bucket; providing the bucket-tidy of the first aspect; inserting the bucket-tidy into the bucket; arranging items of equipment in a desired position within the bucket; and holding said items in position using the bucket-tidy.

[0036] According to a third aspect of the present invention, there is provided a system for organising items held within a bucket, the system comprising a bucket and a

bucket-tidy of the first aspect.

[0037] The above and other characteristics, features and advantages of the present invention will become apparent from the following detailed description, taken in conjunction with the accompanying drawings, which illustrate, by way of example, the principles of the invention. This description is given for the sake of example only, without limiting the scope of the invention. The reference figures quoted below refer to the attached drawings.

Figure 1 is a perspective view of a bucket-tidy.

Figure 2 is a perspective view of the bucket-tidy of figure 1 shown in use in a bucket.

[0038] The present invention will be described with respect to certain drawings but the invention is not limited thereto but only by the claims. The drawings described are only schematic and are non-limiting. Each drawing may not include all of the features of the invention and therefore should not necessarily be considered to be an embodiment of the invention. In the drawings, the size of some of the elements may be exaggerated and not drawn to scale for illustrative purposes. The dimensions and the relative dimensions do not correspond to actual reductions to practice of the invention.

[0039] Furthermore, the terms first, second, third and the like in the description and in the claims, are used for distinguishing between similar elements and not necessarily for describing a sequence, either temporally, spatially, in ranking or in any other manner. It is to be understood that the terms so used are interchangeable under appropriate circumstances and that operation is capable in other sequences than described or illustrated herein.

[0040] Moreover, the terms top, bottom, over, under and the like in the description and the claims are used for descriptive purposes and not necessarily for describing relative positions. It is to be understood that the terms so used are interchangeable under appropriate circumstances and that operation is capable in other orientations than described or illustrated herein.

[0041] It is to be noticed that the term "comprising", used in the claims, should not be interpreted as being restricted to the means listed thereafter; it does not exclude other elements or steps. It is thus to be interpreted as specifying the presence of the stated features, integers, steps or components as referred to, but does not preclude the presence or addition of one or more other features, integers, steps or components, or groups thereof. Thus, the scope of the expression "a device comprising means A and B" should not be limited to devices consisting only of components A and B. It means that with respect to the present invention, the only relevant components of the device are A and B.

[0042] Reference throughout this specification to "an embodiment" or "an aspect" means that a particular feature, structure or characteristic described in connection with the embodiment or aspect is included in at least one

embodiment or aspect of the present invention. Thus, appearances of the phrases "in one embodiment", "in an embodiment", or "in an aspect" in various places throughout this specification are not necessarily all referring to the same embodiment or aspect, but may refer to different embodiments or aspects. Furthermore, the particular features, structures or characteristics of any embodiment or aspect of the invention may be combined in any suitable manner, as would be apparent to one of ordinary skill in the art from this disclosure, in one or more embodiments or aspects.

[0043] Similarly, it should be appreciated that in the description various features of the invention are sometimes grouped together in a single embodiment, figure, or description thereof for the purpose of streamlining the disclosure and aiding in the understanding of one or more of the various inventive aspects. This method of disclosure, however, is not to be interpreted as reflecting an intention that the claimed invention requires more features than are expressly recited in each claim. Moreover, the description of any individual drawing or aspect should not necessarily be considered to be an embodiment of the invention. Rather, as the following claims reflect, inventive aspects lie in fewer than all features of a single foregoing disclosed embodiment. Thus, the claims following the detailed description are hereby expressly incorporated into this detailed description, with each claim standing on its own as a separate embodiment of this invention.

[0044] Furthermore, while some embodiments described herein include some features included in other embodiments, combinations of features of different embodiments are meant to be within the scope of the invention, and form yet further embodiments, as will be understood by those skilled in the art. For example, in the following claims, any of the claimed embodiments can be used in any combination.

[0045] In the description provided herein, numerous specific details are set forth. However, it is understood that embodiments of the invention may be practised without these specific details. In other instances, well-known methods, structures and techniques have not been shown in detail in order not to obscure an understanding of this description.

[0046] In the discussion of the invention, unless stated to the contrary, the disclosure of alternative values for the upper or lower limit of the permitted range of a parameter, coupled with an indication that one of said values is more highly preferred than the other, is to be construed as an implied statement that each intermediate value of said parameter, lying between the more preferred and the less preferred of said alternatives, is itself preferred to said less preferred value and also to each value lying between said less preferred value and said intermediate value.

[0047] The use of the term "at least one" may mean only one in certain circumstances.

[0048] The principles of the invention will now be de-

scribed by a detailed description of at least one drawing relating to exemplary features of the invention. It is clear that other arrangements can be configured according to the knowledge of persons skilled in the art without departing from the underlying concept or technical teaching of the invention, the invention being limited only by the terms of the appended claims.

[0049] Figure 1 is a perspective view of a bucket-tidy. The bucket-tidy comprises an upper retaining band 1 in the form of a flat strip curved around upon itself to form the surface of a conic section, and a lower retaining band 3 having a similar shape to the upper retaining band 1, but being of a smaller radius.

[0050] The upper retaining band 1 is connected to the lower retaining band 3 by four legs 5 spaced around the respective perimeters of the two bands 1,3. Each leg 5 is connected to an exterior of the upper retaining band 1 at an upper end of the respective leg 5. Each leg 5 is also connected to an exterior of the lower retaining band 3 at a point spaced from either end of the respective leg 5. The point may be a mid-point of the respective leg 5, or may be spaced from the mid-point. A lower end of the leg 5 project below the lower retaining band 3.

[0051] A floor 7 extends across the interior of the lower retention band 3, from the bottom of the lower retaining band 3, to allow items to be placed on the floor 7 and prevented from falling off by the lower retaining band 3, that acts as a perimeter wall.

[0052] Figure 2 is a perspective view of the bucket-tidy of figure 1 shown in use in a bucket 9. The floor 7 is removable, and is not shown in this figure for illustrative purposes. The bucket-tidy of figure 1 has been placed in the bucket 9 such that the lower end of the legs 5 rest on a base of the bucket. The legs 5 are configured to have the same slope as the interior wall of the bucket, such that the legs 5 are in contact with the interior wall of the bucket substantially along their entire length. However, it is also possible to use the bucket-tidy shown in larger buckets (or buckets having a more shallow sloping interior wall) where substantially only the lower end of the legs 5 are in constant contact with the bucket, to use the bucket-tidy in smaller buckets where the lower end of the legs 5 are spaced from the base of the bucket, and/or to use the bucket-tidy in buckets having a steeper sloped interior wall where substantially only the upper end of the legs 5 are in constant contact with the bucket.

[0053] Sections of an upper annular gap 11 and a lower annular gap 13 are shown in figure 2, into which items of equipment may be placed and held in position by the resilient nature of the upper retaining band 1 and/or lower retaining band 3, respectively.

[0054] With the floor 7 removed, a flange 15 may be seen extending toward the axis of the bucket-tidy from the bottom of the lower retaining band, defining a central hole 17 through which the base of the bucket 9 may be accessed by a user. The removable floor 7 may rest on this flange to prevent items within the bucket 9 accidentally falling into the base of the bucket 9.

[0055] The floor 7 may comprise a substantially circular shape, and may also be provided with an upwardly projecting perimeter wall such that when the floor 7 is removed from the bucket-tidy so that a user may access the base of the bucket 9 through the hole 17, items resting on the floor 7 may be retained thereon.

Claims

1. A bucket-tidy comprising a resilient retaining hoop (1) configured to sit inside a bucket (9) and grip an item placed between the retaining hoop (1) and the bucket.
2. The bucket-tidy of claim 1, further comprising at least one vertical spacer (5), projecting substantially parallel to an axis of the hoop (1).
3. The bucket-tidy of any preceding claim, further comprising at least one radial spacer (5) located on an exterior periphery of the hoop (1).
4. The bucket-tidy of any preceding claim, further comprising a lower hoop (3) arranged to sit inside the bucket (9) when in use, below the retaining hoop (1).
5. The bucket-tidy of any preceding claim, further comprising a floor (7) arranged to cover, when in use, the base of the bucket (9) into which the bucket-tidy is inserted.
6. The bucket-tidy of claim 5, in which the floor (7) is removable.
7. A method of organising items held within a bucket (9), the method comprising the steps of:
 - providing a bucket (9);
 - providing the bucket-tidy of any preceding claim;
 - inserting the bucket-tidy into the bucket (9);
 - arranging items of equipment in a desired position within the bucket (9); and
 - holding said items in position using the bucket-tidy.
8. A system for organising items held within a bucket (9), the system comprising a bucket (9) and a bucket-tidy of any one of claims 1 to 6.

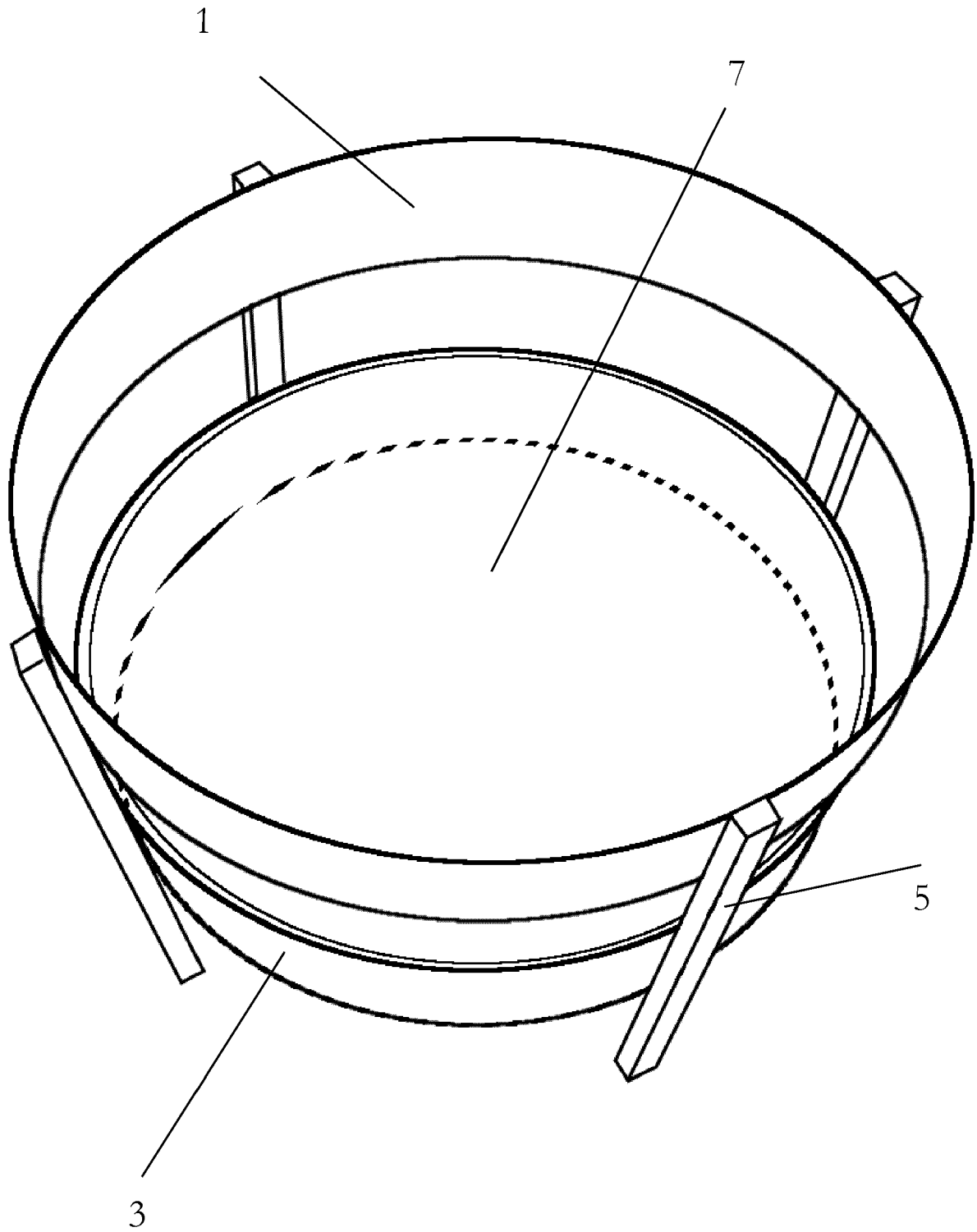


Figure 1

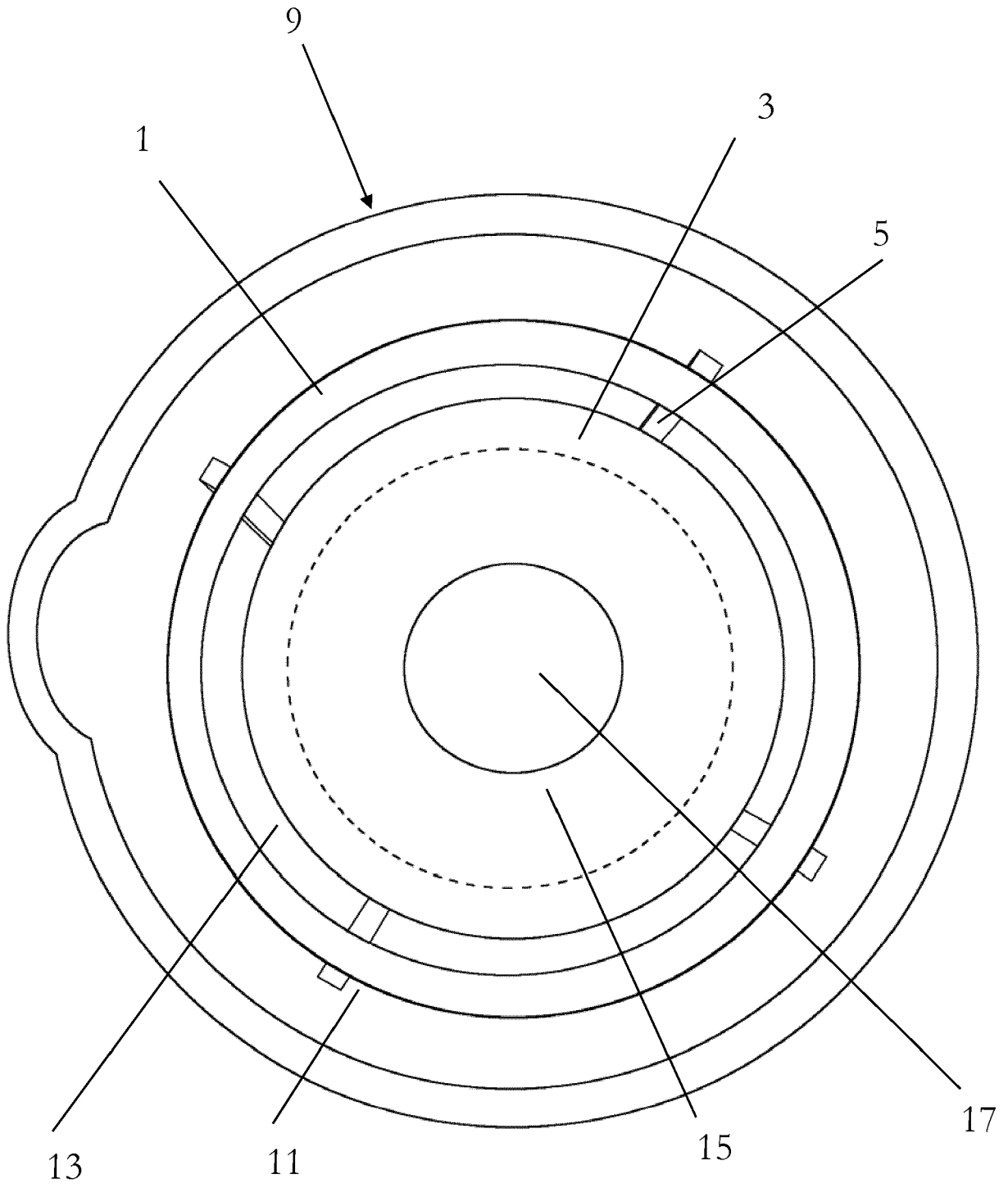


Figure 2



EUROPEAN SEARCH REPORT

Application Number
EP 17 19 1114

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 8 127 965 B1 (MILLER KIRK W [US]) 6 March 2012 (2012-03-06) * the whole document * -----	1-8	INV. B25H3/00
X	US 6 360 891 B1 (RIDEOUT JAY B [US]) 26 March 2002 (2002-03-26) * columns 3-5; figures * -----	1-5,7,8	
X	US 5 836 446 A (VARNOM LAURENCE T [US]) 17 November 1998 (1998-11-17) * columns 2,3; figures * -----	1-5,7,8	
X	US 5 924 568 A (ZAJONC ADAM E [US]) 20 July 1999 (1999-07-20) * the whole document * -----	1-5,7,8	
X	US 2005/252919 A1 (MORSE ROBERT O [US]) 17 November 2005 (2005-11-17) * pages 2,3; figures * -----	1-5,7,8	
X	US 5 350 065 A (DARREY JOHN J [US]) 27 September 1994 (1994-09-27) * columns 2-5; figures * -----	1,3,5-8	TECHNICAL FIELDS SEARCHED (IPC) B25H
X	US 4 993 551 A (LINDSAY BRIAN K [US]) 19 February 1991 (1991-02-19) * the whole document * -----	1,2,4,7, 8	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 6 February 2018	Examiner David, Radu
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03/02 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 17 19 1114

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

06-02-2018

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 8127965	B1	06-03-2012	NONE
US 6360891	B1	26-03-2002	NONE
US 5836446	A	17-11-1998	NONE
US 5924568	A	20-07-1999	NONE
US 2005252919	A1	17-11-2005	CA 2566147 A1 24-11-2005 US 2005252919 A1 17-11-2005 WO 2005111323 A2 24-11-2005
US 5350065	A	27-09-1994	NONE
US 4993551	A	19-02-1991	NONE

15

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82