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(72) Inventor: **Nossbaum, Frederik Daniël**
2271 CA Voorburg (NL)

(74) Representative: **Voncken, Bartholomeus Maria**
Ch. et al
De Vries & Metman
Overschiestraat 180
1062 XK Amsterdam (NL)

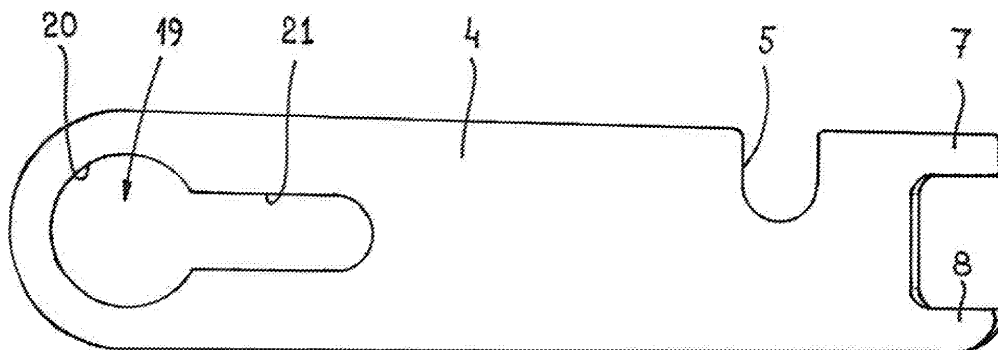
(71) Applicant: **Nossbaum, Frederik Daniël**
2271 CA Voorburg (NL)

(54) **Multifunctional tool**

(57) A tool (4) is provided for use in combination with a paint roller of the type comprising a hollow grip (1), a support bar (2) for a rotatable brush (3), said support bar (2) having a first end connected to the grip (1) and a second end extending substantially perpendicularly to the grip (1), and a rotatable brush (3) rotatably and re-

movably supported by said second end of the support bar (2). The tool (4) has outer dimensions allowing it to be received clampingly within the hollow grip (1) of the paint roller and being provided at its circumference with a recess (5) with a width larger than the diameter of the support bar (2). The tool further may have a forked end with two spaced fork members (7,8).

Fig. 1



Description

[0001] The invention relates to a tool for use in combination with a paint roller of the type comprising a hollow grip, a support bar for a rotatable brush, said support bar having a first end connected to the grip and a second end extending substantially perpendicularly to the grip, and a rotatable brush rotatably and removably supported by said second end of the support bar.

[0002] One of the problems associated with the use of such a paint roller is the fact that after use, or when wishing to apply a different paint, the rotatable brush has to be removed from the support bar. Because of the clamping force between the support bar and the brush this may be a difficult process requiring substantial strength and skills of the user. This process is made even more difficult by the fact that the brush to be removed is soaked with paint, making it nearly impossible to remove the brush in a neat manner without smearing paint onto hands or clothing.

[0003] It is an object of the present invention to provide a solution for this problem.

[0004] Thus in accordance with the present invention a tool is provided which has outer dimensions allowing it to be received clampingly within the hollow grip of the paint roller and being provided at its circumference with a recess with a width larger than the diameter of the support bar.

[0005] The recess allows the tool to be applied around the support bar adjacent to the rotatable brush. Applying pressure to the tool and thus to the brush then will remove the brush from the support bar (by sliding it off). When the tool is not used, it can be received within the hollow grip and always will be available when needed and will not get lost.

[0006] Preferably the tool has a forked end with two spaced fork members. This forked end may be used to remove a lid from a paint can but also may be used to reattach a lid to a paint can.

[0007] The use of the tool according to the present invention may be improved when it is substantially planar and the forked end includes an angle with the remainder of the tool. Handling the tool for removing a lid from a paint can then can be optimized ergonomically.

[0008] In one embodiment said angle is between 15° and 25°, and more preferably said angle is 20°.

[0009] In a special embodiment the tool is intended for use in combination with a paint can of the type having an upper opening which can be closed by a lid which comprises a central part and an outwardly projecting elevated rim with specific height. In accordance with this embodiment of the present invention the length of at least one fork member is less than said specific height.

[0010] As a result the tool may be used in an advantageous manner to reattach such a specific lid to the paint can by pressing the part of the forked end between the fork members against the elevated rim of the lid (pressing the lid into a sealing engagement with the remainder of

the paint can) while the tip of said fork member will remain free from the central part of the lid (which, therefore, cannot be damaged).

[0011] It is possible that one of the fork members has a leading end which is at least partly rounded. When a lid has to be reattached of the type having a circumferential groove, this offers the possibility of applying (with this rounded end) an increased force onto said groove without damaging the lid.

[0012] When, in accordance with another embodiment, the tool slightly tapers towards one end, its application within the hollow grip is made very easy, whereas nonetheless a tight and safe connection between the tool and hollow grip may be established.

[0013] In yet another embodiment the tool is intended for use in combination with a paint roller of the type comprising a hollow grip which is provided with a suspension opening. The tool may be provided then with an opening which will coincide with the suspension opening of the grip when the tool is received within said grip. As a result the tool does not prevent the paint roller from being suspended with its suspension opening from a suspension hook or alike which will extend through the suspension opening of the paint roller and through the opening in the tool.

[0014] Hereinafter the invention will be elucidated while referring to the drawings, in which:

Figure 1 shows a top plan view of a tool in accordance with the present invention;

Figure 2 shows a corresponding side view;

Figure 3 shows the process of removing the tool from a paint roller;

Figure 4 shows the use of the tool for removing a rotating brush from the paint roller;

Figure 5 shows the use of the tool for opening a first type of paint can;

Figure 6 shows the use of the tool for closing said paint can, and

Figure 7 shows the use of the tool for closing a second type of paint can.

[0015] The tool described here is intended for use in combination with a paint roller (figure 3) of the type comprising a hollow grip 1 and a support bar 2 for a rotatable brush 3. As known per se said support bar 2 has a first end connected to the grip 1 and a second end extending substantially perpendicularly to the grip 1, whereas the rotatable brush 3 is rotatably and removably supported by said second end of the support bar 2.

[0016] The tool 4 as represented in figures 1 and 2 has outer dimensions allowing it to be received clampingly within, and to be removed from the hollow grip 1 of the paint roller (figure 3) and is provided at its circumference with a recess 5 with a width larger than the diameter of the support bar 2. As a result the tool may be used as illustrated in figure 4 for sliding the brush 3 off the support bar 2 by applying pressure onto the brush towards the

free end of the support bar (according to arrow 6).

[0017] One end of the tool 4 has a forked end with two spaced fork members 7 and 8. As shown clearly in figure 2 the tool 4 is substantially planar, whereas the forked end (fork members 7,8) includes an angle α with the remainder of the tool. Said angle α may comprise between 15° and 25° and in the illustrated embodiment said angle α is substantially 20°. As a result, removing a lid 9 from a paint can 10 (with a hinging movement -arrow 11- as shown in figure 5) is comfortable.

[0018] The tool 4 may be used to close said lid 9 of the paint can 10 as illustrated in figure 6. The fork members 7,8 are pressed into a circumferential groove 12 of the lid 9 until the lid 9 is sealed with respect to the remainder 10 of the paint can.

[0019] As illustrated in figure 1 fork member 8 is partly rounded. When a lid 9 has to be reattached of the type having a circumferential groove 12, this offers the possibility of applying (with this rounded fork member 8) an increased force into said groove 12 without damaging the lid.

[0020] As illustrated in figure 7, the tool 4 also may be intended for use in combination with a paint can 13 of the type having an upper opening which can be closed by a lid 14 which comprises a lower central part 15 and an upwardly and outwardly projecting elevated rim 16 with specific height above the central part 15. The length of at least one of the fork members 7,8 (as used in figure 7, the length of fork member 8) than is less than said specific height. As a result the tool 4 may be used in an advantageous manner to reattach such a specific lid 14 to the paint can 13 by pressing the part 17 of the forked end between the fork members 7,8 against the top of the elevated rim 16 of the lid (pressing the lid into a sealing engagement with the remainder of the paint can) while the tip of said fork member will remain free from the central part 15 of the lid (which, therefore, cannot be damaged).

[0021] When the tool 4 slightly tapers towards one end (preferably towards the forked end), its application into the grip 1 of the paint roller is improved.

[0022] The tool 4 may be used in combination with a paint roller of the type comprising a hollow grip 1 which is provided with a suspension opening 18 (figure 3), in which case the tool is provided with an opening 19 which at least partly will coincide with the suspension opening 18 of the grip 1 when the tool 4 is received within said grip. In the specific embodiment shown the opening 19 comprises a wider part 20 to be gripped by the fingers of a user and a narrower part 21 which will coincide with the suspension opening 18 of the grip.

[0023] The invention is not limited to the embodiments described which may be varied widely within the scope of the invention as defined by the appending claims.

Claims

1. Tool for use in combination with a paint roller of the type comprising a hollow grip, a support bar for a rotatable brush, said support bar having a first end connected to the grip and a second end extending substantially perpendicularly to the grip, and a rotatable brush rotatably and removably supported by said second end of the support bar, **characterized in that** the tool has outer dimensions allowing it to be received clampingly within the hollow grip of the paint roller and being provided at its circumference with a recess with a width larger than the diameter of the support bar.
2. Tool according to claim 1, wherein one end of the tool has a forked end with two spaced fork members.
3. Tool according to claim 2, wherein the tool is substantially planar and wherein the forked end includes an angle with the remainder of the tool.
4. Tool according to claim 3, wherein said angle is between 15° and 25°.
5. Tool according to claim 4, wherein said angle is 20°.
6. Tool according to any of the claims 2-5, and intended for use in combination with a paint can of the type having an upper opening which can be closed by a lid which comprises a central part and an outwardly projecting elevated rim with specific height, wherein the length of at least one fork member is less than said specific height.
7. Tool according to claim 6, wherein one of the fork members has a leading end which is at least partly rounded.
8. Tool according to any of the previous claims, wherein the tool slightly tapers towards one end.
9. Tool according to any of the previous claims, and intended for use in combination with a paint roller of the type comprising a hollow grip which is provided with a suspension opening, wherein the tool is provided with an opening which will coincide with the suspension opening of the grip when the tool is received within said grip.

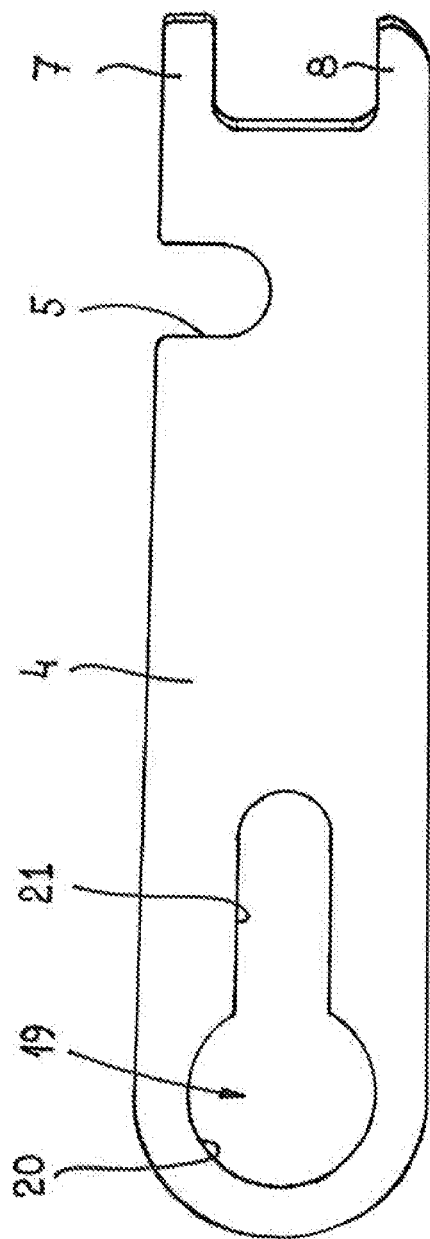


Fig. 1

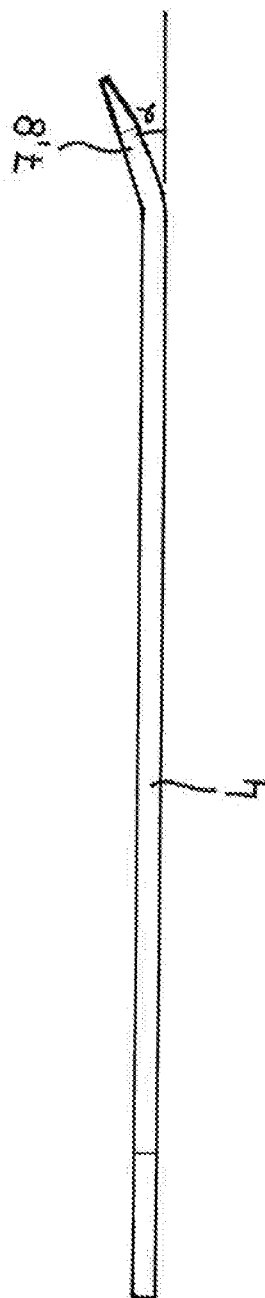


Fig. 2

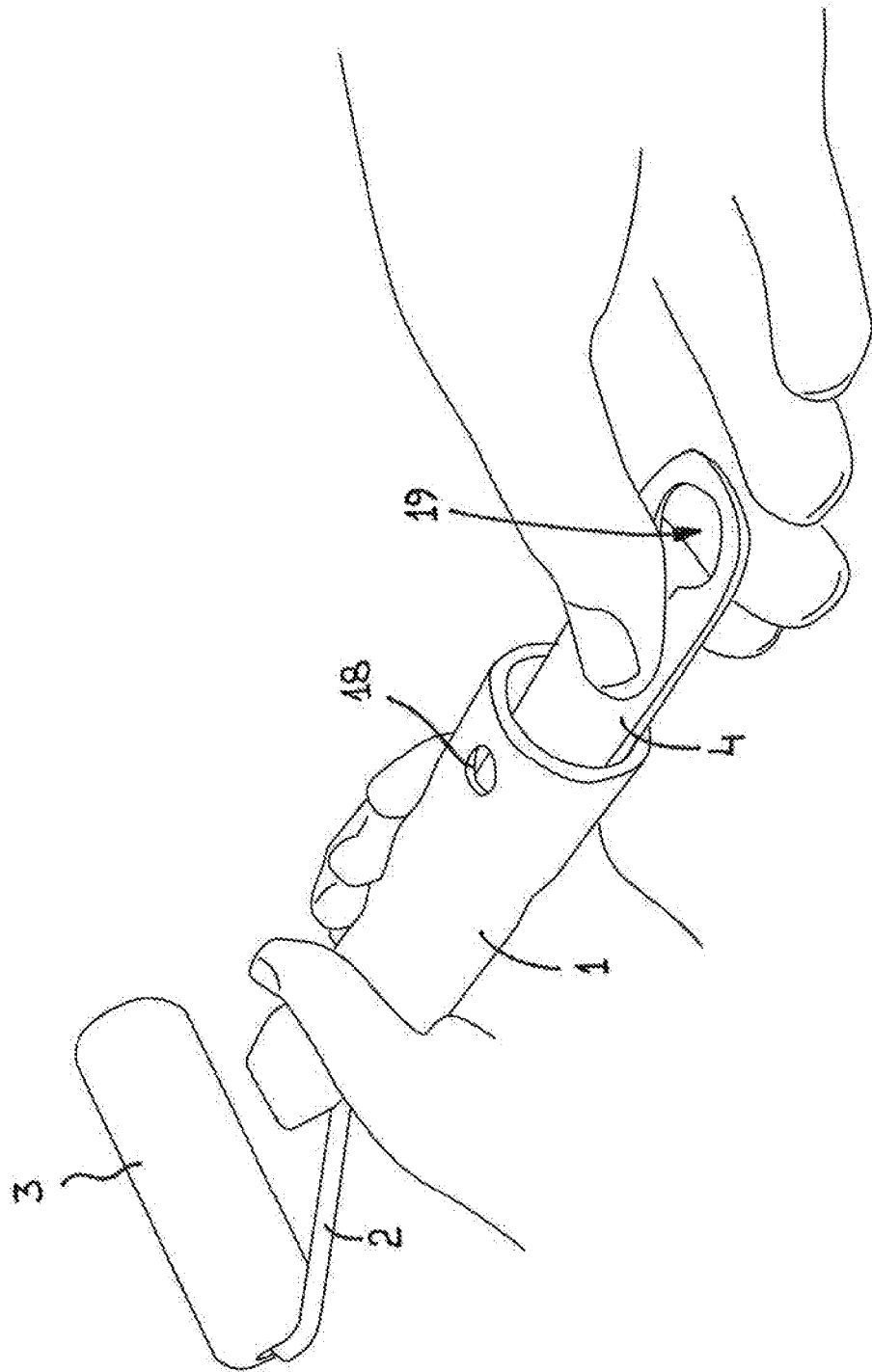


Fig. 3

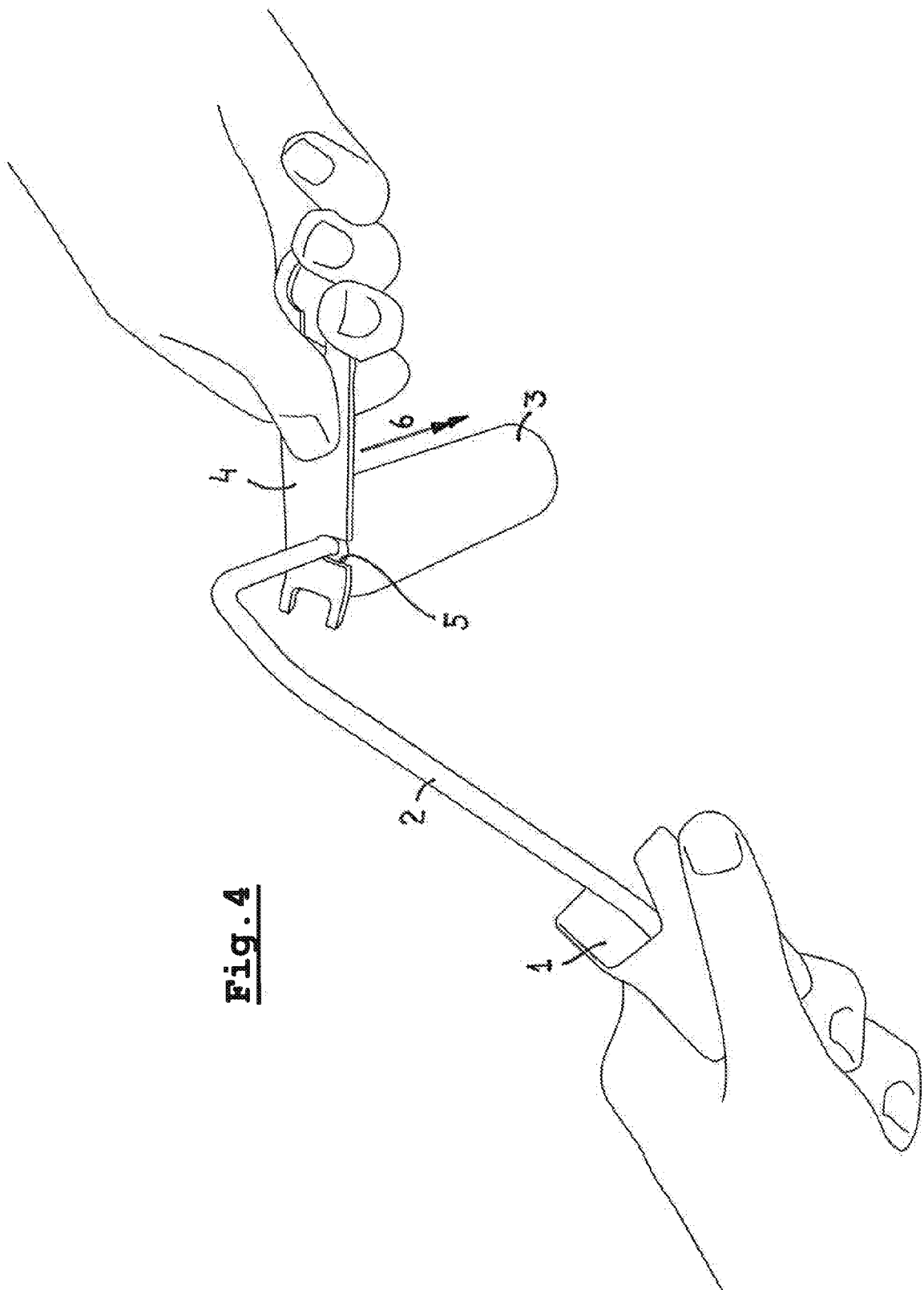


Fig. 4

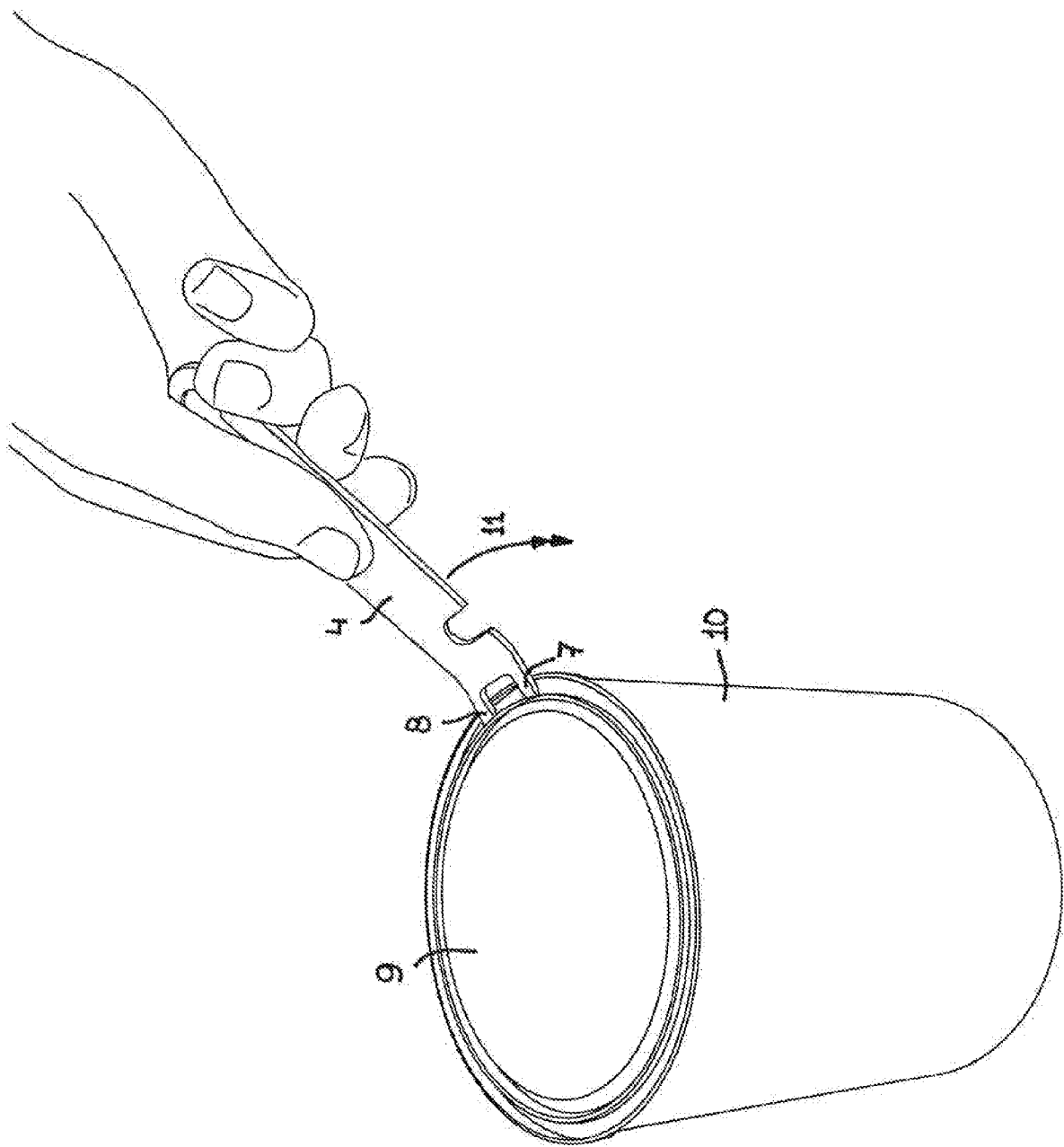


Fig. 5

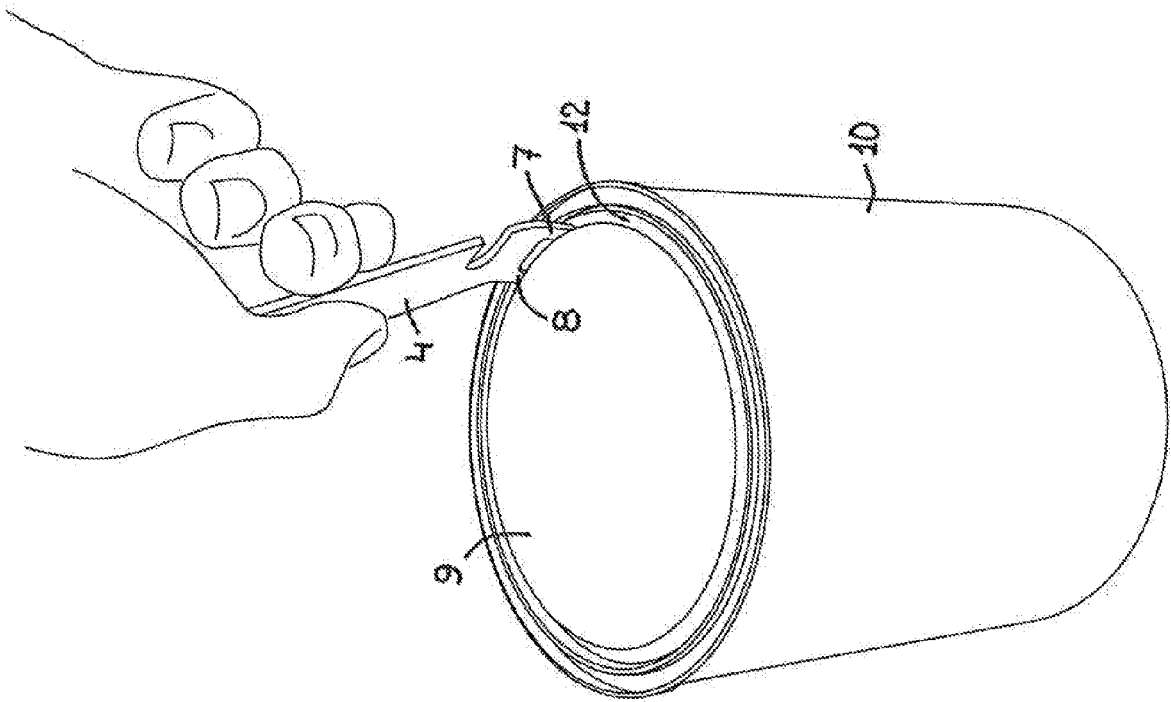


Fig. 6

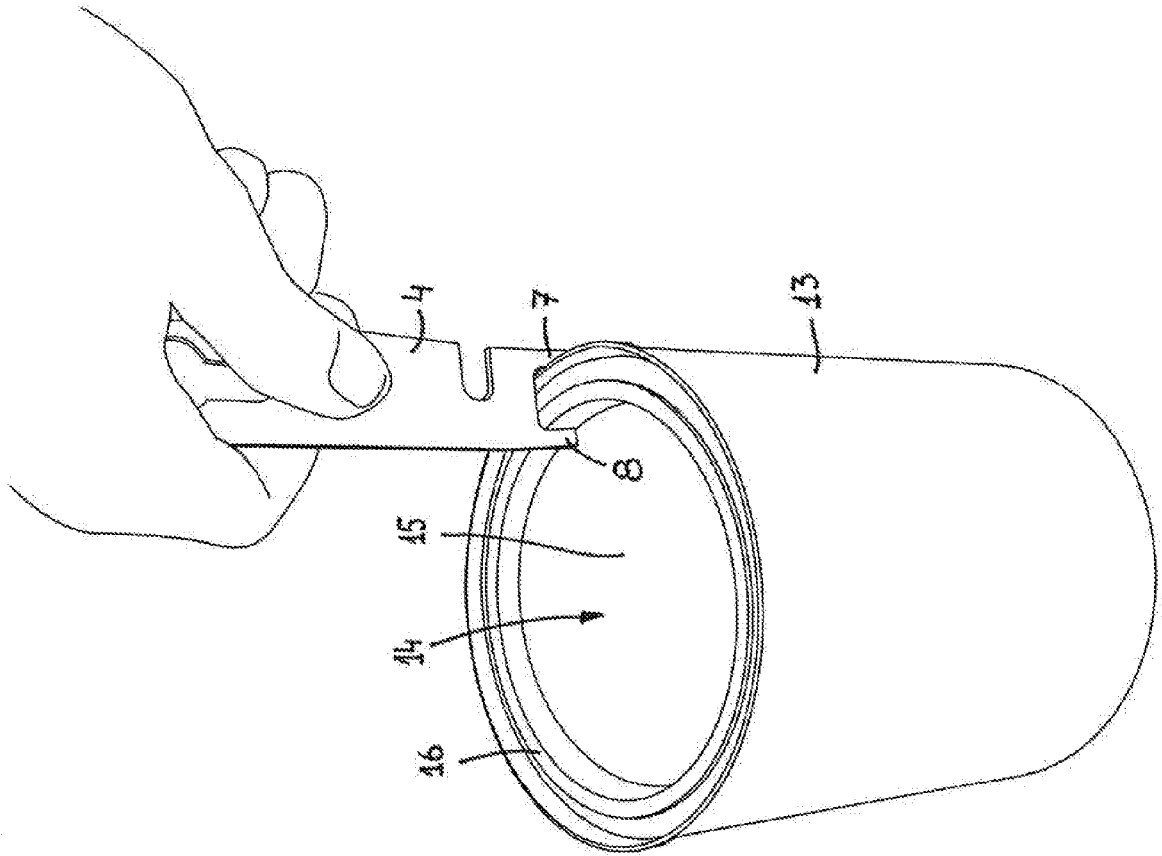


Fig. 7



EUROPEAN SEARCH REPORT

 Application Number
 EP 09 17 5884

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 5 440 853 A (ENGDAHL DAVID C [US]) 15 August 1995 (1995-08-15) * column 1, line 49 - column 2, line 54 * * figure 1 * -----	1-2	INV. B25B27/02 B05C17/02 B44D3/00 B25G1/08
X	US 4 982 471 A (BANNAN JOHN A [CA]) 8 January 1991 (1991-01-08) * column 3, line 4 - column 4, line 4 * * figures 1, 2, 3, 4 * -----	1-2,8-9	
X	US 2 524 475 A (RENTZ FRED W) 3 October 1950 (1950-10-03) * column 2, line 18 - column 4, line 10 * * figures 1-4 * -----	1-7,9	
X	US 6 421 860 B1 (ABBOTT PHILLIP G [US]) 23 July 2002 (2002-07-23) * column 2, line 50 - column 5, line 17; figures 1, 2 * -----	1-2,6-9	
X	US 2008/178393 A1 (KINSKEY TERRENCE P [US] ET AL) 31 July 2008 (2008-07-31) * paragraph [0002] - paragraph [0006] * * paragraph [0089] - paragraph [0102] * * figures 1-14 * -----	1-2,6,8-9	TECHNICAL FIELDS SEARCHED (IPC) B25B B05C B44D B25G
X	US 5 546 625 A (MEALEY SR EDDIE H [US]) 20 August 1996 (1996-08-20) * column 3, line 21 - column 4, line 65 * * figures 1, 2, 3 * -----	1-2,7-9	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 19 March 2010	Examiner Schultz, Tom
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			

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 EPO FORM 1503 03.82 (P04C01)

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

EP 09 17 5884

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
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19-03-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5440853	A	15-08-1995	NONE
US 4982471	A	08-01-1991	NONE
US 2524475	A	03-10-1950	NONE
US 6421860	B1	23-07-2002	NONE
US 2008178393	A1	31-07-2008	CA 2676818 A1 07-08-2008 WO 2008094997 A2 07-08-2008
US 5546625	A	20-08-1996	NONE