

(19)



(11)

EP 2 839 758 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
25.02.2015 Bulletin 2015/09

(51) Int Cl.:
A45D 20/12 (2006.01)

(21) Application number: **14179334.9**

(22) Date of filing: **31.07.2014**

(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

(71) Applicant: **Pages Aventin, Eduardo**
22004 Huesca (ES)

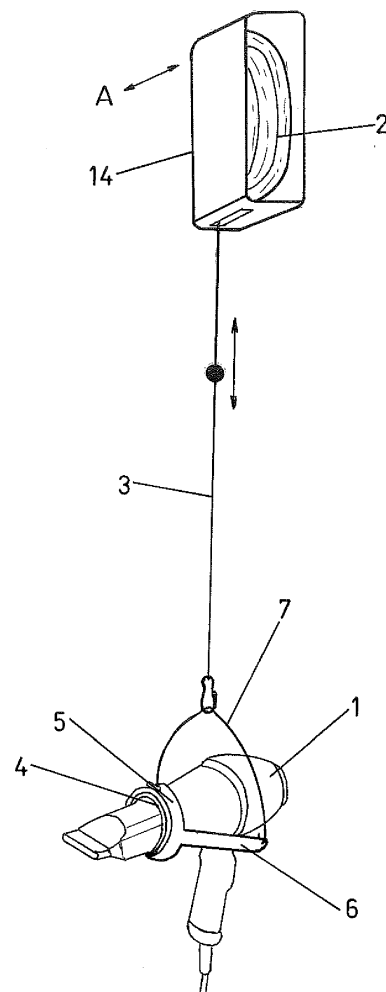
(72) Inventor: **Pages Aventin, Eduardo**
22004 Huesca (ES)

(74) Representative: **Ungria López, Javier**
Avda. Ramón y Cajal, 78
28043 Madrid (ES)

(30) Priority: **12.08.2013 ES 201330993 U**

(54) Support device for manual hair dryers in suspended position

(57) Support device for manual hair dryers in suspended position, based on a "balance" mounted up high, equipped with a thread-like element, from which the dryer is hung, in order to be able to place it at the desired height, the joining device used to join the dryer (1) to the thread-like element (3) of the balance (2) being formed by a first ring-shaped body (4) attached to the dryer (1) body; a second ring-shaped body (5) with a pair of divergent axial arms (6) and; a handle (7), which is joined to the ends of the pair of divergent axial arms (6) of the second ring-shaped body (5), hung on the thread-like element (3) of the balance (2), the first ring-shaped body (4), attached to the dryer body (1), being guided rotationally by the second ring-shaped body (5) which clasps it, the manual hair dryer thus being suspended, thereby facilitating the use thereof, given that the user only needs to manually move or direct the dryer, without having to support it "free-hand", thus obtaining better working conditions.

**Fig.1****EP 2 839 758 A1**

Description

OBJECT OF THE INVENTION

[0001] The following invention, as expressed in the title of the present specification, relates to a support device for manual hair dryers in suspended position, in such a way that, by means of the device presented, it is possible to position the manual hair dryer in a suspended position relative to a work station, by means of a balance, the hair dryer being used in said work station for quite a long period of time, it being possible to adapt the static suspended position of the same to the desired height, the aim being for the support device, through which the hair dryer is joined to the thread-like element hung from a balance, to facilitate normal use of the hair dryer.

[0002] Therefore, as the manual hair dryer is suspended, it is easier to use the same, and the worker or operator must only manually move or direct the dryer, without having to support it "freehand", thus obtaining better working conditions.

APPLICATION FIELD

[0003] In the present specification, a device used to arrange manual hair dryers in suspended position in fixed work stations is described, which is especially designed for use in public hair-dressing salons, where the worker must hold the manual hair dryer during long periods of time, supporting it "freehand" throughout the working day.

BACKGROUND OF THE INVENTION

[0004] Traditionally, there are a great many fixed work stations wherein the operators or workers must use an implement, such as a manual hair dryer, during their working day, in such a way that even if the same is light in weight, since it must be handled for a long period of time, it ends up producing fatigue, which furthermore, with time, may escalate into injuries to the shoulders or back or other parts of the body.

[0005] Indeed, as it is well known, manual hair dryers are used a great deal in the hair-dressing sector, thus meaning that, with the aim of being able to dry hair in a better, more efficient way, the most powerful hair dryers available tend to be used. Nevertheless, these have the drawback of being heavier and, as a result, accelerate the fatigue experienced by operators.

[0006] Therefore, although manual hair dryers are not excessively heavy, the continuous use thereof, in addition to producing a certain level of fatigue, frequently cause operators to end up suffering from shoulder and back pain as well, these problems being more acute amongst female operators than male operators, as a result, generally speaking, of their slighter build.

[0007] Furthermore, these drawbacks mean that, mainly, female operators, who are more likely to experi-

ence fatigue and suffer from certain types of back ache, try to use the lightest manual hair dryers possible, even if they have more powerful hair dryers that weigh more, in an attempt to reduce fatigue as far as possible.

[0008] Likewise, as is well known, manual hair dryers usually have a corresponding cable that serves to connect them to the power supply. This connection to the hair dryer is made at the free end of the gripping handle thereof, which usually makes handling the same using either hand difficult.

[0009] Similarly, in many fixed work stations, for example assembly lines, operators must use somewhat heavy manual tools that weigh a certain amount during their working day. These end up causing fatigue and even pain, particularly back pain.

[0010] Indeed, in all of these cases, operators usually have to hold the implement or tool "freehand" when using the same, only having some kind of support upon which to place the implement or tool when not in use. However, what are referred to as "balances" are also known about, which simply make it possible to keep a tool suspended.

[0011] One example of this can be found in document ES 1052081, property of the same holder as that of the present document, wherein a "device for arranging tools in suspended working position" is described, the same being constituted by a flexible element that may be adjusted and positioned, with a pulley to which the implement is linked, a cord passing through this pulley, the ends of which are attached to the implement, in supports of the shell thereof, the same being arranged laterally to the transversal gravitational axis thereof, in an upper position, relative to the free end of the gripping handle thereof.

[0012] Document ES 1 070 451 might equally be quoted, which likewise pertains to the same holder as that of the present document, wherein a "device for arranging manual hair dryers in suspended working position" is described, which is based on a flexible element, which is attached to the ceiling at one end and facilitates the regulation of the height thereof, to which a pulley is attached, in such a way that the device is formed by a thread-like element that passes through the pulley, one of the ends of which is attached to the rear lower portion of the manual dryer and the other end thereof branching off into two arms, which are attached to the end of a semi ring-shaped body, guided by a central groove to a mortise around the frontal tubular body of the manual dryer, this manual dryer, in the lower rear portion, with an electrical cable connection, having a first counterweight, with a second counterweight on the free end of the gripping handle thereof.

DESCRIPTION OF THE INVENTION

[0013] In the present specification, a support device for manual hair dryers in suspended position is described, which aims to resolve the drawbacks mentioned, bearing in mind that the use of a simple "balance", which keeps the hair dryer suspended at the desired height, is

not valid, since the anchoring must enable normal use of the dryer, i.e. must be able to adapt to various positions and rotations.

[0014] For this reason, said device is based on a "balance", which is mounted up high, the dryer being attached to a thread-like element thereof in such a way that it remains at the desired height, where the joining device used to join the dryer to the thread-like element is formed by:

- > a first ring-shaped body, attached to the dryer body,
- > a second ring-shaped body, provided with a pair of divergent axial arms; and
- > a handle, which is essentially semi-circular in shape, that is joined to the ends of the arms of the second ring-shaped body and hung on the thread-like element of the balance,

the second ring-shaped body being guided rotationally by the first ring-shaped body, which it clasps.

[0015] On its internal circular surface, the first ring-shaped body, attached to the dryer body, has at least one pair of small lugs that fit into respective hollows in the dryer body.

[0016] Moreover, on the internal circular surface of the second ring-shaped body, a hollow is defined around the circumference thereof into which the first ring-shaped body fits, being perfectly guided and enabling rotational movement thereof.

[0017] In a practical embodiment, the first and second ring-shaped bodies are defined by two half-bodies attached to one another, in such a way that said attachment may be produced by means of anchoring screws.

[0018] Each half-body that forms the second ring-shaped body has an outwards diverging axial arm.

[0019] Furthermore, the divergent axial arms that are integral to the second ring-shaped body end in a small tab, these tabs being arranged in parallel and provided with a through-hole that joins to the handle.

[0020] In order to complement the description to be made below, with the aim of facilitating a better understanding of the characteristics of the invention, the present specification is accompanied by a set of drawings, which provide an illustrative, non-limiting representation of the most characteristic details of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021]

Figure 1. Shows a perspective view of a dryer equipped with a support device for hanging thereof from the thread-like element of a balance, which is arranged up high and may be moved using a runner.

Figure 2. Shows a view of the first and second ring-shaped bodies, it being possible to observe how, in the assembly thereof, the second ring-shaped body clasps the first ring-shaped body, as well as the pair of small lugs, which are diametrically opposed and present on the internal face of the first ring-shaped body.

Figure 3. Shows a view of the previous figure, it being possible to observe the second ring-shaped body provided with a pair of divergent axial arms that end in a small tab with a through-hole.

Figure 4. Shows a view of Figure 3 according to another relative position, it being possible to observe the second ring-shaped body provided with a pair of divergent axial arms, which end in a small tab and remain in a parallel position.

Figure 5. Shows a perspective view of Figure 2, it being possible to observe how the first ring-shaped body is fitted into the internal circular surface of the second ring-shaped body, a detail of a cross-section of both having been represented.

Figure 6. Shows a frontal view of the first ring-shaped body, it being possible to observe the pair of small lugs on the internal circular surface thereof and a detail of the positioning of the attachment screws of the half-bodies forming the same.

DESCRIPTION OF A PREFERRED EMBODIMENT

[0022] In view of the figures mentioned and in accordance with the numbering adopted therein, it is possible to observe how, starting with a traditional dryer 1, a support device is linked to the same, in order for it to be hung from the thread-like element 3 relative to a balance 2, which is arranged up high and may be moved in order to span a greater area within the work station.

[0023] In Figure 1 of the drawings, it is thus possible to observe how the balance 2 is housed in a shell 14, to be attached to a runner (not represented), in order to enable the movement thereof, according to arrow "A", in addition to being able to span a greater area within the work stations.

[0024] The support device is therefore fundamentally based on a first ring-shaped body 4 and a second ring shaped body 5, provided with a pair of divergent axial arms 6 and a handle 7, which is joined to the pair of divergent axial arms 6 and hung on the thread-like element 3 of the balance 2.

[0025] The first ring-shaped body 4, defined by two half-bodies attached by means of screws thus has a pair of small lugs 8 on its internal circular surface, which, in the assembly thereof, are fitted into respective small complementary hollows in the dryer 1 body, remaining perfectly attached upon joining both half-bodies by

means of a pair of screws, arranged in secant position on the adjoining plane thereof.

[0026] In Figure 6, it is further possible to observe how the first ring-shaped body 4 is formed by two half-bodies, which are joined and attached to the body of the dryer 1 by means of a pair of screws arranged in secant position on their adjoining planes in corresponding hollows 13 thereof.

[0027] Moreover, on the internal circular surface of the second ring-shaped body 5, which is equally made out of two half-bodies, there is a recess around the circumference, into which the first ring-shaped body 4 fits, being joined to the same with the possibility of rotation, in such a way that in the detail shown in Figure 5, it is possible to observe said configuration, presented by way of example given that it may be any other form equivalent to the same.

[0028] The pair of divergent axial arms 6 integral to the second ring-shaped body 5 end in a small tab 9, with a through-hole 10 that joins to the handle 7, in such a way that in the assembly of said second ring-shaped body 5, clasping the first ring-shaped body 4, said tabs 9 are parallel to one another, thus facilitating the handling of the dryer 1 during normal use, without any problems when it comes to rotating the first ring-shaped body 4 relative to the second ring-shaped body 5 anchored to the handle 7 hung on the thread-like element 3.

[0029] In an alternative practical embodiment of the invention, the pair of arms 6 may end in a tab 9 similar in width to the arm 6, as shown in detail in Figure 3 of the drawings.

[0030] In this way, the device can be assembled simply and quickly, given that the first ring-shaped body 4 is firstly attached to the dryer 1 body, thus meaning that the two half-bodies forming said first ring-shaped body 4 are arranged with the small lug 8 fitted into the corresponding small complementary hollow in the body of the dryer 1 and are attached by means of a pair of screws arranged in the hollows 13 made to this end.

[0031] The second ring-shaped body 5 is subsequently arranged such that the two half-bodies forming the same clasp the first ring-shaped body 4 and are attached by a pair of screws. In the various figures, it is possible to observe how the two half-bodies that form the second ring-shaped body 5 have protuberances 11 and 12 on their adjoining plane, in which the corresponding screws that constitute the attachment there between are attached, whilst enabling the rotation of the first ring-shaped body 5 relative to the second ring-shaped body 4.

[0032] In accordance with that described, the manual hair dryer 1 is arranged perfectly in a static suspended position and when handled, furthermore may be perfectly and simply directed towards the desired point, without having to support the weight of the same, in turn resulting in improved working conditions.

[0033] Thus, using the thread-like element 3 of the balance 2, the height of which may be adjusted and positioned, the dryer 1 is adapted to the suitable height, in

accordance with usage height, practically being suspended, in a weightless position, thus facilitating the handling thereof, without having to support its weight, simply by directing it towards the desired spot.

[0034] Ultimately, the device is to be used in manual hair dryers used in professional hair-dressing salons, thus making it possible for the dryer to remain in a static, suspended position, in such a way that operators only have to direct it in order to use it, without having to support its weight, this constituting a significant advantage in terms of use, since it prevents pain, mainly in the shoulders and back.

Claims

1. **A support device for manual hair dryers in suspended position**, said device being based on a "balance", which is mounted up high and equipped with a thread-like element from which the dryer is hung, in order to be able to place it at the desired height, **characterised in that** the joining device used to join the dryer (1) to the thread-like element (3) of the balance (2) is constituted by:

- > a first ring-shaped body (4) attached to the dryer (1) body;
- > a second ring-shaped body (5) provided with a pair of divergent axial arms (6); and
- > a handle (7), which is essentially semi-circular in shape, that is joined to the ends of the pair of divergent axial arms (6) of the second ring-shaped body (5), hung on the thread-like element (3) of the balance (2),

the first ring-shaped body (4), attached to the dryer (1) body, being guided rotationally by the second ring-shaped body (5), which clasps it.

2. **The support device for manual hair dryers in suspended position**, according to claim 1, **characterised in that** the first ring-shaped body (4), which attaches to the dryer body (1) has at least one pair of small fitting lugs (8) on its internal surface that fit into respective small complementary hollows in the dryer (1) body.

3. **The support device for manual hair dryers in suspended position** according to claim 1, **characterised in that** on the internal circular surface of the second ring-shaped body (5) a hollow is defined around the circumference thereof into which the first ring-shaped body (4) fits.

4. **The support device for manual hair dryers in suspended position** according to claim 1, **characterised in that** both the first ring-shaped body (4) and the second ring-shaped body (5) are defined by two

half-bodies that are attached to one another.

5. **The support device for manual hair dryers in suspended position** according to claim 1, **characterised in that** each half-body that forms the second ring-shaped body (5) has an outwardly divergent axial arm (6). 5
6. **The support device for manual hair dryers in suspended position** according to claim 1, **characterised in that** the pair of divergent axial arms (6) that are integral to the second ring-shaped body (5) end in small tabs (9), arranged in parallel and provided with a through-hole (10) that joins to the hanging handle (7). 10 15

20

25

30

35

40

45

50

55

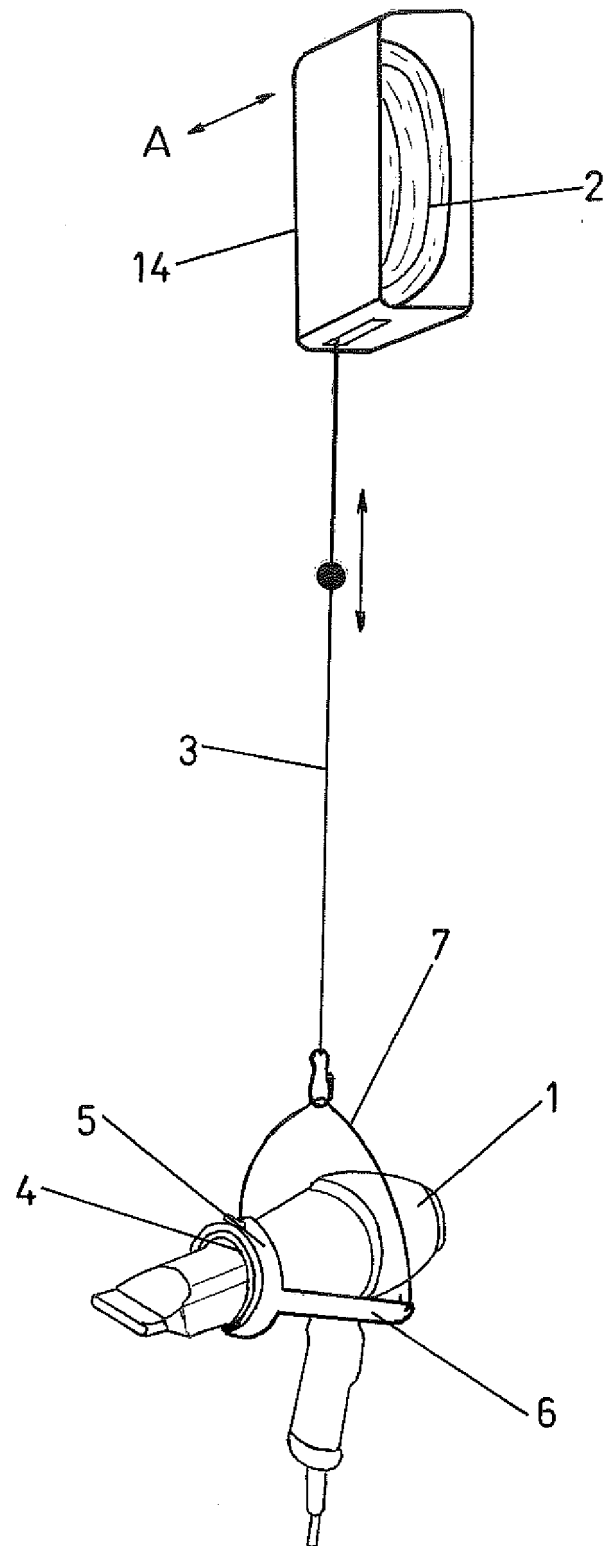


Fig.1

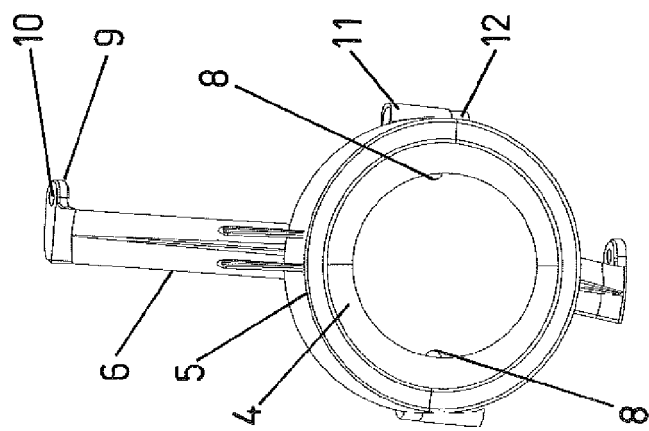


Fig. 2

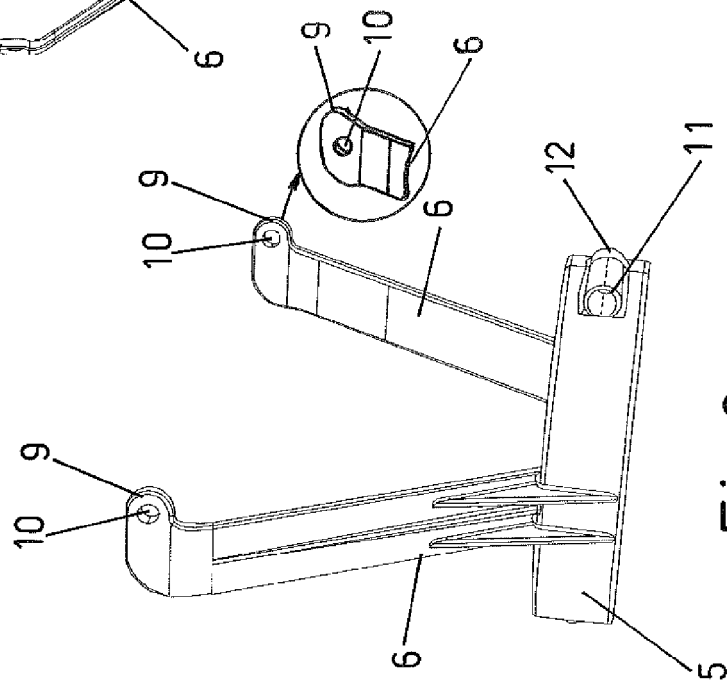


Fig. 3

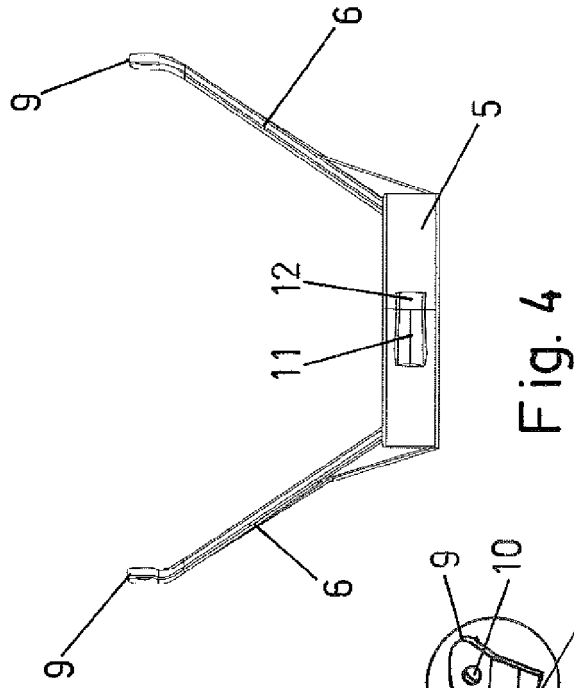


Fig. 4

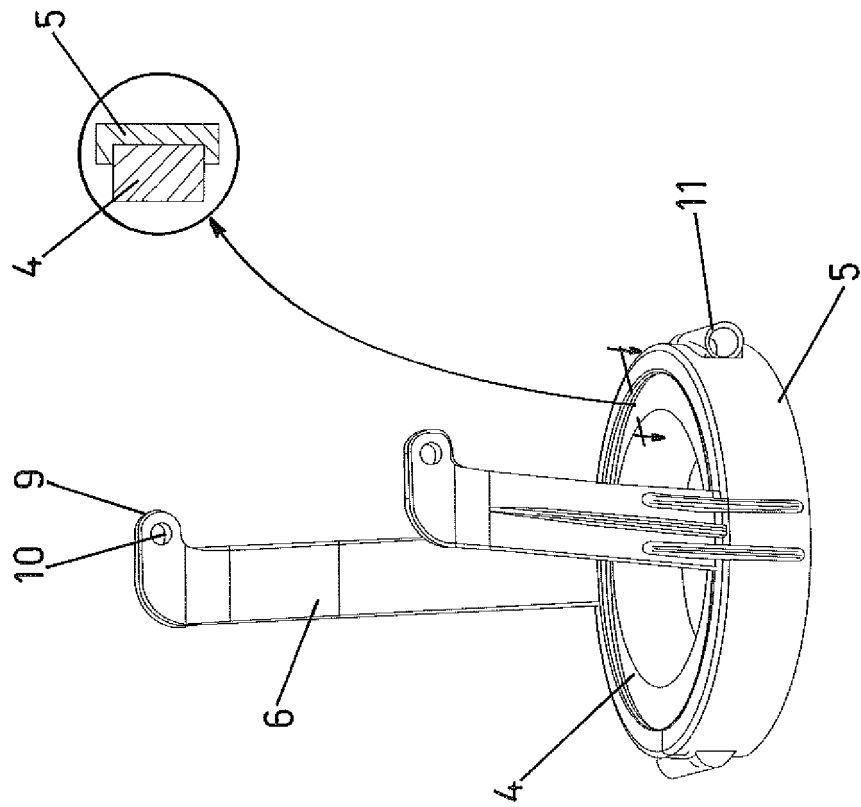


Fig. 5

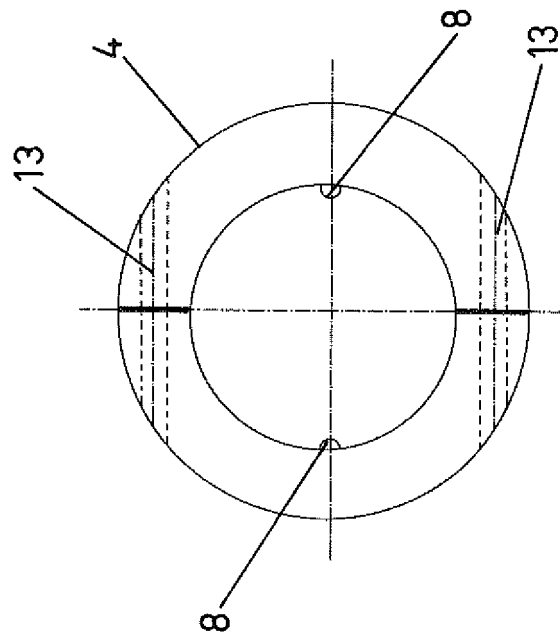


Fig. 6



EUROPEAN SEARCH REPORT

Application Number
EP 14 17 9334

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)
A,D	ES 1 070 451 U (PAGES AVENTI, E.) 1 September 2009 (2009-09-01) * the whole document *	1	INV. A45D20/12
A	DE 76 15 031 U1 (BUCHNER, E.) 27 January 1977 (1977-01-27) * figure 1 *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			A45D
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		13 January 2015	Hinrichs, Wiebke
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			

1
EPO FORM 1503 03.82 (P04C01)

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

EP 14 17 9334

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.

13-01-2015

10

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
ES 1070451	U	01-09-2009	NONE	
DE 7615031	U1	27-01-1977	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

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- ES 1052081 [0011]
- ES 1070451 [0012]