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(54) **A beverage dispensing system**

(57) A beverage dispensing system comprises an elongated housing, a dispensing line having a dispensing end and a keg connection end. The elongated housing defines a tapping end supporting a tap handle and a mounting end for mounting the system to a supporting surface. The elongated housing comprises a first housing part and a second housing part. The first housing part is pivotally connected to the second housing part so as to allow the first housing part and second housing part to be pivoted between a closed position and an open position.

A longitudinal recess is provided within the elongated housing. The longitudinal recess is exposed when the first housing part and second housing part are in the open position. The longitudinal recess is concealed when the first housing part and second housing part are in the closed position. The housing parts allow, when in the open position, access to the recess for positioning the dispensing line into the elongated housing and in the recess and allow the recess to receive and retain the dispensing line.

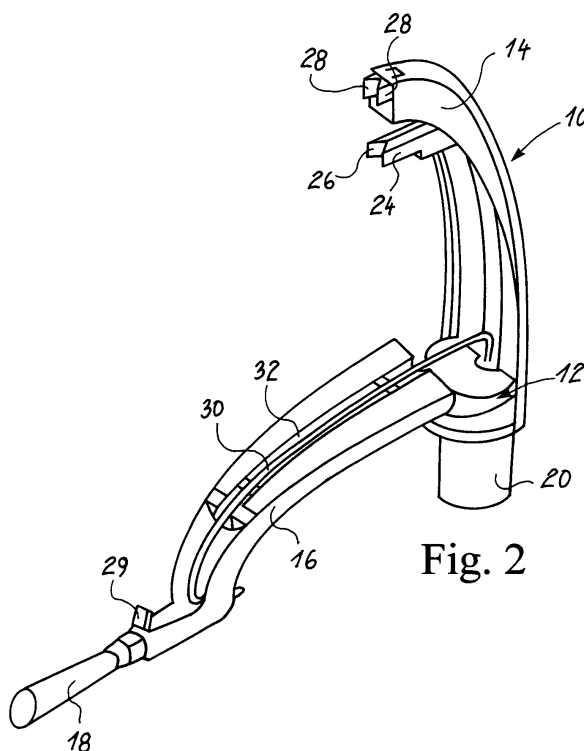


Fig. 2

Description

[0001] This invention relates to a beverage dispensing system.

[0002] The applicant company produces and sells a professional draught beer system named DraughtMaster™ comprising a beverage dispensing system and a chill chamber in which the keg or pack containing carbonate beer is received. The keg or pack containing carbonated beer comprises a flexible bottle or bag, which is exposed to an elevated pressure from the outside for dispensing the beer. The flexible bottle or bag is connected through a dispensing line to a shut-off valve, which is guided through a channel of the beverage dispensing system and is received within and operated by means of a tap handle for operating the shut-off valve between an open and a closed position.

[0003] In operation, the dispensing line is to be mounted properly within the beverage dispensing system. This, however, may be a complicated process since the dispensing line is to be pushed through the inside of the beverage dispensing system. The dispensing line must be guided and retained properly and be correctly connected and fixed to the tap handle.

[0004] It is therefore an object of the present invention to provide a beverage dispensing system which makes the above described mounting process less complicated and simplifies the retaining of the dispensing in the beverage dispensing system. Furthermore, it is an object of the present invention to ease and improve the process of connecting and fixating the dispensing line to the tap handle.

[0005] The above objects, the above advantage, and the above feature together with numerous other objects, advantages, and features, which will be evident from the below detailed description of the present invention, are, in accordance with a first aspect of the present invention, obtained by a beverage dispensing system comprising:

an elongated housing,
a dispensing line having a dispensing end and a keg connection end,
said elongated housing defining
a tapping end supporting a tap handle, and
a mounting end for mounting said system to a supporting surface,
said elongated housing comprising
a first housing part and a second housing part,
said first housing part being pivotally connected to said second housing part so as to allow said first housing part and second housing part be pivoted between a closed position and an open position,
a longitudinal recess being provided within said elongated housing,
said longitudinal recess being exposed when said first housing part and second housing part being in said open position,
said longitudinal recess being concealed when said

first housing part and second housing part being in said closed position, and

said housing parts allowing, when in said open position, access to said recess for positioning said dispensing line into said elongated housing and in said recess and said recess to receive and retain said dispensing line.

[0006] The tap handle may like a conventional draught beer system comprise a valve for closing off in a first position the dispensing of beverage from the dispensing line and in a second position allow dispensing of beverage from the dispensing line. The valve itself may constitute a separate component as covered by applicant's co-pending European patent applications or, alternatively, constitute an integral component of the dispensing line or further alternatively be implemented by a pinching mechanism causing the dispensing line to be sealed off by the action of an eccentric element or similar component squeezing the dispensing line firmly together and consequently sealing off the dispensing line in the above-mentioned second position in which the dispensing of beverage from the dispensing line is blocked.

[0007] The aspects of the invention will be explained in more detail below in connection with advantageous embodiments of the invention with reference to the drawings, in which:

Figs. 1 and 2 are perspective and schematic views of a first embodiment of a beverage dispensing system shown in a closed and open position, respectively,

Fig. 3 is a perspective and schematic view of a second embodiment of a beverage dispensing system hinged along a longitudinal side shown in an open position,

Fig. 4 is a perspective and schematic view of a third embodiment of a beverage dispensing system hinged at a tapping end shown in an open position,

Figs. 5 and 6 are perspective, schematic and partly cut away views of details of mounting a dispensing line to a beverage dispensing system,

Fig. 7 is a perspective and schematic view of a fourth embodiment of a beverage dispensing system hinged below the tapping end shown in an open position,

Fig. 8 is a perspective and schematic view of a fifth embodiment of a beverage dispensing system hinged along a longitudinal side shown in an open position, and

Fig. 9 is a perspective and schematic view of a sixth embodiment of a beverage dispensing system hinged at a mounting end shown in an open position.

[0008] Throughout the below description and in the drawings, identical components or elements present in different figures of the drawings are designated the same reference numerals, and components or elements differing from a previously described component or element, respectively, however serving basically the same functional purpose as the previously described component or element, respectively, are designated the same reference numeral as the previously described component or element, respectively, however added a marking for indicating the geometrical difference from the previously described component or element, respectively.

[0009] Figs. 1 and 2 are perspective and schematic views of a first and presently preferred embodiment of a beverage dispensing system designated the reference numeral 10 in its entirety. The beverage dispensing system 10 comprises a housing 12 composed of two housing parts 14 and 16. The housing 12 is of an overall elongated configuration and defines opposite ends, a first end constituting a tapping end, at which a tap handle 18 is provided and an opposite second end, at which end a fixture 20 is provided for fixating the housing 12 of the beverage dispensing system 10 to a supporting surface such as a supporting table surface, which is not shown in the drawings.

[0010] In Fig. 1, the two housing parts 14 and 16 of the housing 12 are joined to one another providing a closed housing, in which a dispensing line shown in Fig. 2 and designated the reference numeral 30 is enclosed, which dispensing line connects a shut-off valve of the tap handle 18 to a keg or pack, in which carbonated beer is contained, which shut-off valve is operated by means of the tap handle 18 for shifting the shut-off valve between an open and a closed state for dispensing and shut-off of dispensing of carbonated beer from the keg or pack, respectively. The beverage dispensing system 10 constitutes a component of a draught beer system also including the dispensing line and as is well known in the art, a refrigerator system for cooling the beer contained within the keg or pack and additional components well known in the art per se. It is to be realised that the present beverage dispensing system may be used in connection with a draught beer system similar to the commercially available DraughtMaster™ system produced and sold by the applicant company, in which a collapsible keg or pack is used, however, the beverage dispensing system according to the present invention may alternatively be used in combination with a conventional draught beer system, in which non-carbonised beer containing metal kegs and carbonising pressurised containers are used.

[0011] In Fig. 2, the housing components 14 and 16 are separated from one another exposing the interior of the housing 12, and consequently exposing the beverage dispensing line 30 for allowing easy access to the beverage dispensing line when shifting the beverage dispensing line 30.

[0012] The two housing parts 14 and 16 are hinged to one another, as is illustrated in Fig. 2 by means of a hinge

provided at the bottom of the housing 12 above the fixture 20. In Fig. 1, the hinge interconnecting the housing parts 14 and 16 is disclosed and designates the reference numeral 22.

[0013] As is illustrated in Fig. 2, the housing part 14 is provided with an inwardly protruding pin 24 having an V-shaped recessed end 26 serving to catch around the freely exposed dispensing line 30 when the housing is pivoted relative to the hinge 22 for joining the housing part 16 to the housing part 14 for providing the closed state as is illustrated in Fig. 1. In addition, the housing parts 14 and 16 are provided with cooperating locking elements 28 and 29, the locking element 28 being provided at the upper end of the housing part 14 and serving to catch with and lock to the locking element 29 of the housing part 16. For disengaging the housing part 16 from the housing part 14, the locking element 29 may be disengaged from the locking elements 28 of the housing part 14.

[0014] For properly fixating the dispensing line 30 within the assembled housing 12, the housing part 16 is provided with an internal recess 32, in which the dispensing line 30 is received, which recess preferably further comprises catching elements for arresting and fixating the dispensing line 30 in its intentional position relative to the housing part 16. The catching elements are shown in greater details in Figs. 5 and 6 illustrating two alternative variants of the catching elements, the one variant comprising inwardly protruding fins 36 shown in Fig. 5, whereas in Fig. 6, the catching elements are constituted by pivotally journalled flanges, one of which is designated the reference numeral 36', which is pivotally journalled for allowing the flange to be moved from an open position shown in dotted line to a closed position shown in solid line, in which closed position the dispensing line 30 is arrested in its intentional position shown in Fig. 6 and received in the recess 32.

[0015] As is evident from Fig. 2, the tap handle and consequently the shut-off valve operated by means of the tap handle 18 are joined to the housing part 16, which is pivotally journalled relative to the stationary housing part 14. It is contemplated that the provision of the tap handle 18 and the shut-off valve operated by the tap handle 18 at the movable part 16 is the most advantageous since, provided the tap handle 18 is connected to the movable part, as is illustrated in Fig. 2, the proper mounting and positioning of the dispensing line 30 is most easily accomplished. In a variant of the first embodiment shown in Fig. 1, the tap handle 18 and the shut-off valve operated by the tap handle 18 are supported by the stationary housing part 14, in which a recess similar to the recess 32 of the housing part 16 shown in Fig. 2 is provided, in which embodiment the movable housing part 16 simply constitutes a front closure.

[0016] Fig. 3 is a perspective and schematic view of a second embodiment of a beverage dispensing system in an open position. The first embodiment of Figs. 1 and 2 is modified into the second embodiment in that the two

housing parts 12' and 14' are pivotally joined by means of the hinge 22', which hinge is mounted along a longitudinal edge 15 between the housing parts 14' and 16'. The tap handle 18 is mounted at the tapping end of the housing part 16' and swings with the housing part 16', when the housing part 16' is moved from and away from the housing part 14', which constitutes a stationary housing part in the open position shown in Fig. 3, access is easily obtained to the interior of the housing 12' of the beverage dispensing system 10' and the dispensing line 30 is easily positioned in the recess 32' and retained therein. In a variant of the second embodiment, the recess is provided in the housing part 14' and provides the same function. The housing parts 14' and 16' are each provided with locking and arresting elements 28' and 29', respectively.

[0017] Fig. 4 is a perspective and schematic view of a third embodiment of a beverage dispensing system 10". The housing part 16" is pivotally connected to the stationary housing part 16" by means of a hinge 22" at the top end of the housing 12".

[0018] Fig. 7 is a perspective and schematic view of a fourth embodiment of a beverage dispensing system 10''' is shown in an open position. The housing part 16''' is pivotally connected by means of a hinge 22''' below the top end of the housing 12''' to the other housing part 14'''.

The housing parts 14''' constitutes, as is evident from Fig. 7, a main housing part of the housing 12''' relative to which main housing part the housing part 16''' can be pivoted between a closed position and the open position. In the main housing part 14''', a longitudinal recess 42 is provided in which the dispensing line not shown can be positioned and retained. Alternatively or additionally a longitudinal recess may be provided in the housing part 16'''. The longitudinal recess 42 is exposed, when the housing parts 14''' and 16''' are in the open position. Conversely, the longitudinal recess 42 is concealed when the housing parts 14''' and 16''' are in the closed position. Like the above described first, second and third embodiments, the housing parts 14''' and 16''' are provided with locking and arresting elements 28'''.

[0019] In Figs. 8 and 9, a fifth and a sixth embodiment, respectively, of the beverage dispensing system is shown designated the reference numerals 10^{iv} and 10^v, respectively. The fifth and sixth embodiments shown in Figs. 8 and 9, respectively, basically differs from the fourth embodiment shown in Fig. 7 in that the movable housing part 16^{iv} is in Fig. 8 hinged relative to the stationary or main housing part 14^{iv} along a longitudinal edge of the two housing parts 14^{iv} and 16^{iv} similar to the second embodiment shown in Fig. 3, whereas in the sixth embodiment 10^v shown in Fig. 9, the movable housing part 16^v is hinged to the bottom of the housing part 14^v of the housing 12^v similar to the first embodiment shown in Figs. 1 and 2. No further detailed description of the fifth and sixth embodiments is contemplated to be needed in view of the above description of the first, second, third and fourth embodiments.

[0020] Although the present invention has above been described with reference to advantageous and presently preferred embodiments of the aspects of the invention, numerous modifications and changes of the embodiments may be deduced and all such modifications and changes perceivable by a person having ordinary skill in the art are consequently to be considered part of the present invention, the protective scope of which is rather to be interpreted in accordance with the pending patent claims.

Claims

1. A beverage dispensing system comprising:

an elongated housing,
a dispensing line having a dispensing end and a keg connection end,
said elongated housing defining
a tapping end supporting a tap handle, and
a mounting end for mounting said system to a supporting surface,
said elongated housing comprising
a first housing part and a second housing part,
said first housing part being pivotally connected to said second housing part so as to allow said first housing part and second housing part be pivoted between a closed position and an open position,
a longitudinal recess being provided within said elongated housing,
said longitudinal recess being exposed when said first housing part and second housing part being in said open position,
said longitudinal recess being concealed when said first housing part and second housing part being in said closed position, and
said housing parts allowing, when in said open position, access to said recess for positioning said dispensing line into said elongated housing and in said recess and said recess to receive and retain said dispensing line.

2. The beverage dispensing system according to claim 1, said first housing part and said second housing part each being provided with locking and opening means allowing said housing parts to be fixed and positioned in said closed position and allowing said housing parts from said closed position to be moved from one another to said open position.

3. The beverage dispensing system according to claim 1 or 2, further comprising actuating means at said tapping end,
said dispensing end of said dispensing line being controlled by said actuating means,
said tap handle being connected to said actuating

means and being movable between a first and a second operational position so as to allow said tap handle to control the opening of said dispensing end of said dispensing line in said first operational position, and

to control the shutting off said dispensing end of said dispensing line in said second operational position.

4. The beverage dispensing system according to claim 1 - 3, said pivotally connection of said first housing part with said second part being provided at said mounting end of said housing. 10
5. The beverage dispensing system according to claim 1 - 3, said pivotally connection of said first housing part with said second part being provided at said tapping end of said housing. 15
6. The beverage dispensing system according to claim 1 - 3, said pivotally connection of said first housing part with said second part being provided at a location extending along a longitudinal side of said elongated housing. 20
7. The beverage dispensing system according to claims 1 - 6 further comprising a first through going bore at said mounting end of said housing allowing said keg connection end of said dispensing line to be directed through said bore to and/or from e.g. a remote beer keg. 25
30
8. The beverage dispensing system according to claim 1 - 7 further comprising a second through going bore at said mounting end of said housing allowing cooling means to be directed into said housing for cooling said dispensing line. 35
9. The beverage dispensing system according to claims 1 - 8, said first housing part comprising said tap handle and said actuating means, 40
10. The beverage dispensing system according to claims 1 - 8, said second housing part comprising said tap handle and said actuating means. 45
11. The beverage dispensing system according to any of the preceding claims, said beverage is beer.
12. The beverage dispensing system according to any of the preceding claims, said recess being provided with one flap or a pair of opposite flaps for locking said dispensing line. 50
13. The beverage dispensing system according to any of the preceding claims, a hinged bridge being provided transversal to and across said recess for locking said dispensing line, said dispensing line being received in said recess prior to closing said bridge. 55

14. The beverage dispensing system according to claim 13, said hinged bridge, in an open position, allowing access for positioning and/or gripping said dispensing line.

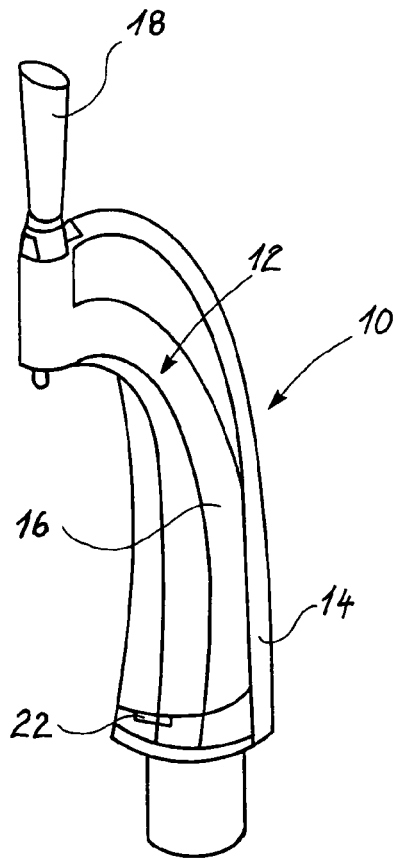


Fig. 1

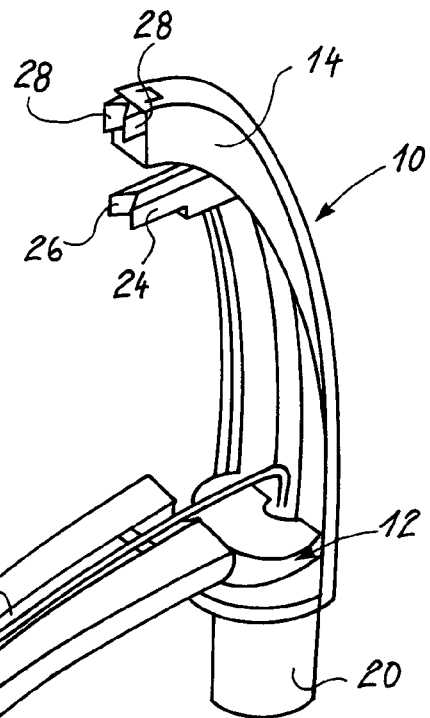
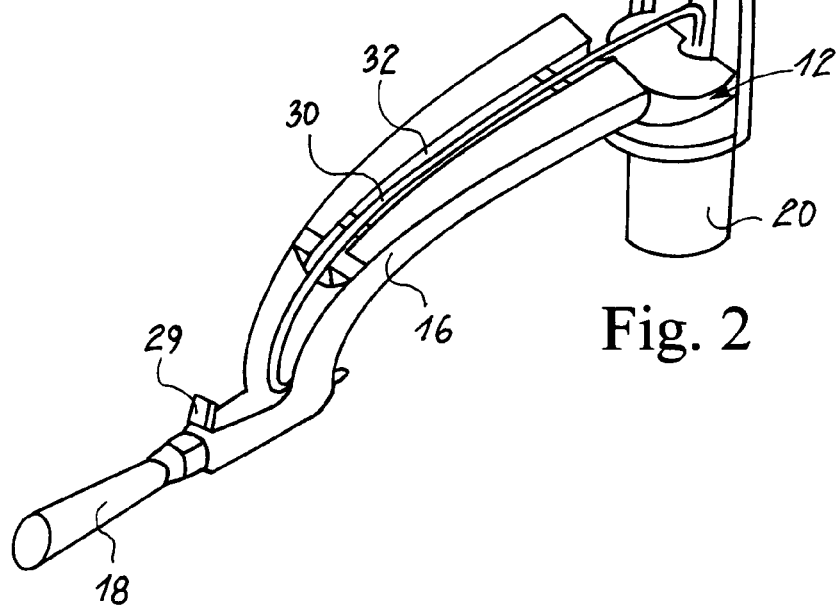


Fig. 2



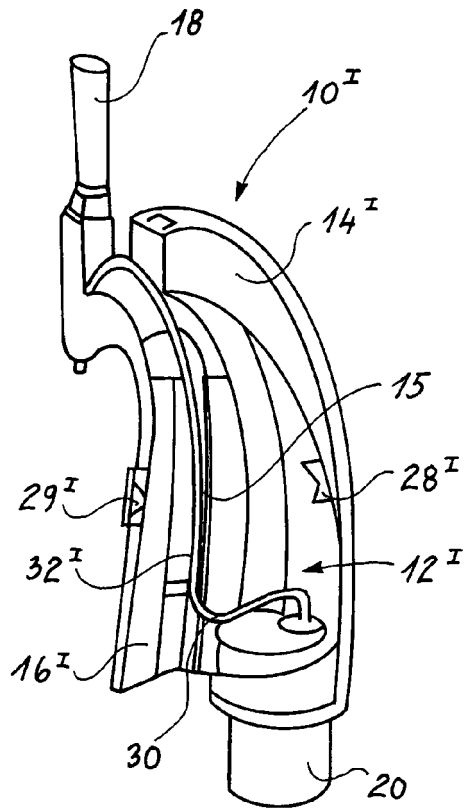


Fig. 3

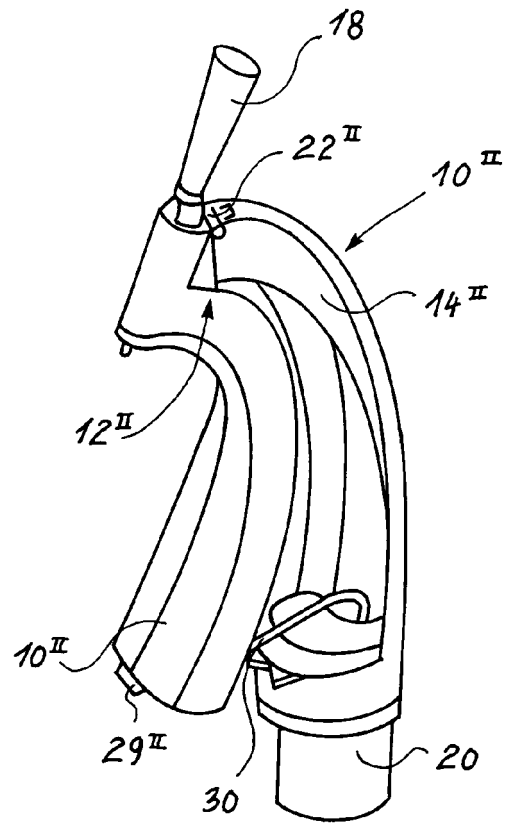


Fig. 4

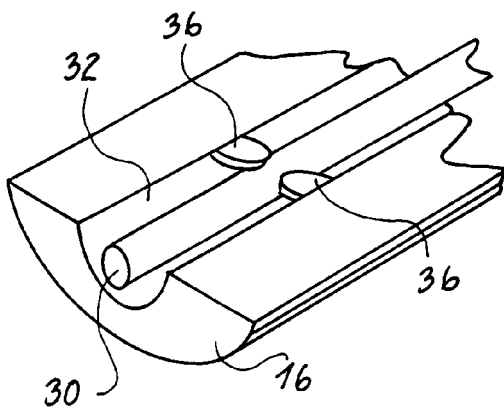


Fig. 5

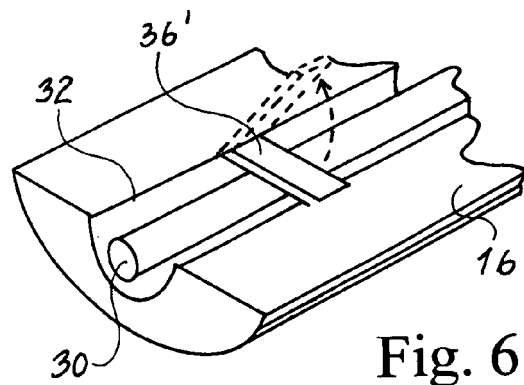


Fig. 6

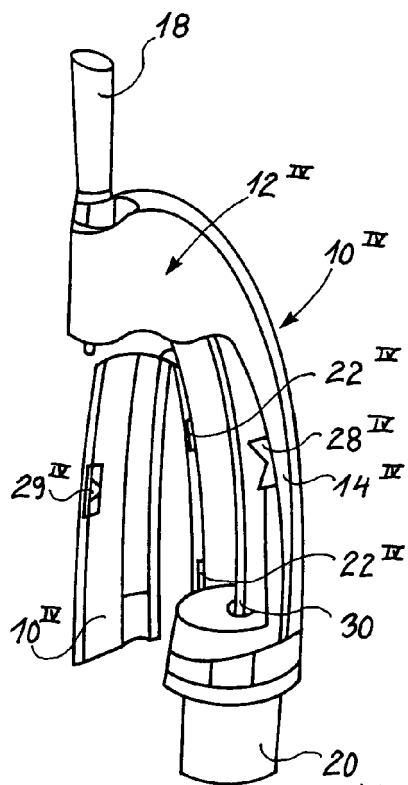


Fig. 8

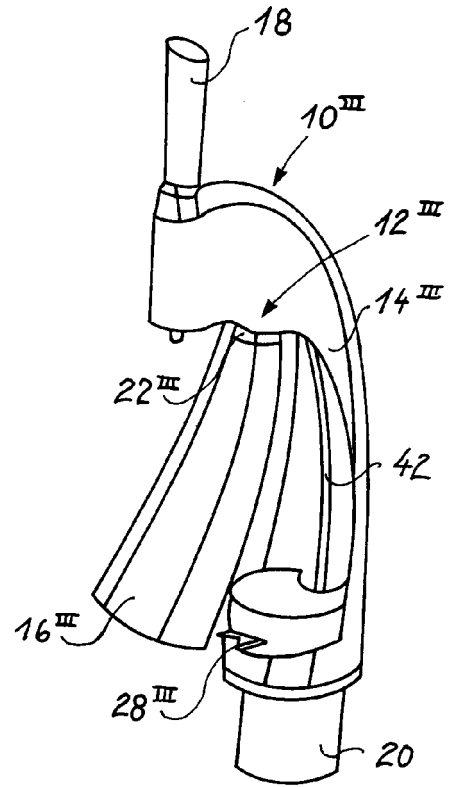


Fig. 7

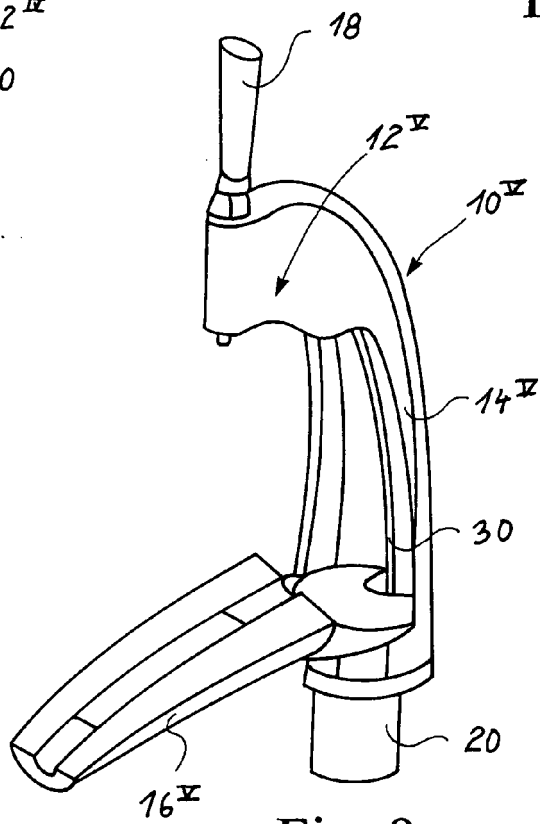


Fig. 9



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 38 8023

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	WO 2006/103566 A (CELLI SPA [IT]; CELLI GOFFREDO [IT]) 5 October 2006 (2006-10-05) * page 2, line 31 - page 3, line 12 * * page 4, line 12 - page 5, line 12 * * page 6, lines 35,36; figures * -----	1-11	INV. B67D1/06 B67D1/08
A	GB 2 358 854 A (PORTER LANCASTRIAN LTD [GB]) 8 August 2001 (2001-08-08) * page 3, lines 5-22; figures 3,4 * -----	1	
A	GB 2 286 818 A (MICROFLOW UK LIMITED [GB]) 30 August 1995 (1995-08-30) * page 1, paragraph 3 - page 2, paragraph 1; figures 1,4,5 * -----		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			B67D
Place of search		Date of completion of the search	Examiner
Munich		23 October 2007	Müller, Claus
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 (P04/C01)

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

EP 07 38 8023

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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23-10-2007

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