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(54) **Device for actuating dispensing valves**

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Description

wherein:

[0001] The present invention relates to a device for actuating valves for dispensing liquids from containers, such as bag-in-box containers for beverages, placed on a seating and supporting base.

[0002] Apparatuses for dispensing liquids from containers provided with a tap have already been proposed in the state of the art, such apparatuses comprising a seating and supporting base for one or each container and a lever system that is articulated to the base in order to detachably engage the pouring valve of each container and is provided with a manual actuation lever for applying pressure to the top of the pouring valve in order to open it and therefore dispense the liquid.

[0003] Reference should be made, in this regard, to EPA-0884269-A1, also by the same Applicant, which discloses a device conform to the preamble of claim 1.

[0004] However, the lever systems proposed so far allow to pour liquids only from containers provided with press-open valves or taps, i.e., valves or taps which open by applying pressure to the top of said valve so as to lower their internal valve element elastically-loaded for the automatic closure of the valve once the valve element is no longer pressed by the lever system.

[0005] In addition to the above mentioned press-open valves, taps or valves for containers of the lift-open type are also commercially available, i.e., taps or valves that have a substantially rigid top and can be opened by lifting one or more abutments that protrude from the valve body and are rigidly coupled to the internal valve element of the valve, which is elastically loaded for automatic closure once the lifting action has ceased.

[0006] Currently, lift-open valves are opened manually with one's fingers by lifting two mutually opposite objects with the index and middle fingers and by resting the thumb on the top of the valve.

[0007] The aim of the present invention is to provide an actuation device that allows to pour liquids from containers provided with a lift-open valve.

[0008] An object of the present invention is to allow the use of the device for dispensing liquids from containers provided with either press-open or lift-open valves.

[0009] Another object of the present invention is to provide an actuation device for liquid pouring valves that is easy to use, highly reliable and inexpensive to manufacture.

[0010] This aim and these and other objects that will become better apparent hereinafter are achieved by a device for actuating a valve for dispensing liquids from a container, according to claim 1 or 10, and a dispensing valve assembly according to claim 12.

[0011] Further characteristics and advantages of the present invention will better become apparent from the following detailed description of some preferred embodiments thereof, given only by way of non-limitative example with reference to the accompanying drawings,

Figure 1 is a side view of the actuation device of a lift-open valve for dispensing liquid from a container arranged on a seating base;

Figure 2 is a perspective view of a detail of Figure 1, illustrating a part of the seating and supporting base of the container to which the actuation device according to the invention can be anchored;

Figure 3 is a sectional view, taken along the line III-III of Figure 2;

Figure 4 is side view of the first lever of the actuation device;

Figure 5 is a top view of the lever of Figure 4;

Figure 6 is a sectional view, taken along the line VI-VI of Figure 4;

Figure 7 is a side elevation view of the second lever of the actuation device;

Figure 8 is a top view of the lever of Figure 7;

Figure 9 is a side view of the lever of Figure 7;

Figures 10, 11 and 13 are three side views of another embodiment of the actuation device according to the invention in three steps of operation for actuating a press-open valve;

Figure 12 is a front view of the device shown in Figure 13;

Figures 14, 15 and 17 are views of the steps of the operation of another embodiment of the actuation device according to the invention, applied to a press-open valve;

Figure 16 is a front view of the device shown in Figure 17;

Figures 18 and 20 are two side views of the device used on press-open valves;

Figure 19 is a front view of the device in the configuration shown in Figure 20;

Figures 21 and 23 illustrate another embodiment of actuation devices according to the invention, comprising three levers for application to a lift-open valve;

Figure 22 is a side view of the actuation device of Figure 23;

Figures 24 and 26 are side views of another embodiment of the actuation device applied to a lift-open valve in two successive steps of use;

Figure 25 is a front view of the actuation device of Figure 26;

Figure 27 is a partial perspective view of part of the seating base and of the articulated lever system in the open position;

Figure 28 is a perspective view, similar to Figure 27, but with the articulated lever system in the closure step;

Figure 29 is a front view of the perspective view shown in Figure 27;

Figure 30 is a sectional view, taken along the line XXX of Figure 1, of the perspective view of Figure 27;

Figure 31 is a front view of the perspective view of Figure 28; and

Figure 32 is a sectional view, similar to the one shown in Figure 30, but with the lever system in the closure position.

[0012] Initially with reference to Figures 1 to 9, a device 27 according to the invention for actuating a valve 12 for pouring and dispensing liquids from a container or bag-in-box B is constituted by two levers, respectively designated by the reference numerals 3 and 7.

[0013] The actuation device 27 can be anchored to a seating and supporting base, designated by the letter C in Figure 1, for the container B, which is provided with a pouring or dispensing valve 12 that protrudes in a cantilever fashion from the container or bag-in-box B and from the support C. A locking element 1 allows to detachably engage the dispensing valve 12, and accordingly said container B, with the seating and supporting base C. For this purpose, the locking element 1 is pivoted at one of its ends about a pivot and has, at its other end, a handle 1a for its snap closure over the cylindrical body of a plug 100 and a supply duct for the dispensing valve 12.

[0014] The device 27 is constituted by the levers 3 and 7, which are articulated one another. More particularly, the lever 3 has, at its ends, a respective recess 4 and 5 for snap articulation engagement on one side to a pivot 2 that is monolithic with, or fixed to, the locking element 1 and, on the other side, to a pivot 10 that is monolithic with, or fixed to, an intermediate portion of the lever 7. The lever 3 preferably has a protrusion or pawl 6 in an intermediate portion. Advantageously, the lever 3 is produced by molding a suitable plastic material, such as PVC, and as shown more clearly in Figure 6, its lateral surfaces are lightened in its central part, so as to obtain a structure that is lightweight yet ensuring sufficient rigidity and stability.

[0015] The lever 7 has a curved handling end 9, which is preferably ergonomically shaped so that the user can comfortably apply a finger to it. At its other end, the lever is shaped like a fork with two prongs 8, while in an intermediate position said lever has a U-shaped transverse cross-section with lateral wings that are connected and stiffened by the transverse pivot 10 for articulation to the lever 3.

[0016] During use, the protrusion 6 is arranged so as to rest on the top 22 of the dispensing valve 12 and acts as a compression fulcrum for opening the press-open valve 12, while in the case of a lift-open valve the protrusion 6 acts as an abutment fulcrum in order to move the prongs 8 so that they engage against the abutments 13, which are monolithic with, or fixed to, the valve element 26 of the valve 12.

[0017] More particularly, starting from the condition shown in Figure 1, i.e., the condition in which the protrusion 6 of the lever 3 rests on the rigid top 22 of the lift-open valve and the two prongs 8 of the fork of the

lever 7 are engaged against the lower face of the abutments 13, the operator, by lowering the end 9 of the lever 7, as shown with the arrow 11, applies to the two prongs 8 an upward force that lifts that abutments 13 and consequently opens the valve 12. By releasing the end 9, since the valve element 26 is loaded elastically, the abutments 13 are automatically returned to the closure position of the valve 12.

[0018] Figures 10 to 13 are views of another embodiment according to which the actuation device can be adopted both with lift-open valves 12, like the device of Figure 1, and with press-open valves.

[0019] According to this embodiment, the lever 3 in fact has two lateral shoulders 14, which are arranged at the rotational path of the two prongs 8. The shoulders 14 are designed to abut and act as stroke limiters for the rotation of the prongs 8 of the lever 7 about the pivot 10. Therefore, by acting on the end 9 of the lever 7, one obtains first of all the rotation of the lever 7 about the pivot 10 and, once the prongs 8 have abutted against the shoulders 14, the lever 3 is turned about the pivot 2, discharging the force applied to the protrusion 6, which compresses the top 22 of the valve 12, consequently opening said valve.

[0020] Figures 14 to 17 illustrate a press-open valve 12 provided with two cantilevered transverse pivots that are rigidly coupled to the shell of the valve and are designated by the reference numeral 17. In this case, the pivots 17, by being fixed with respect to the valve element, act as an abutment for the prongs 8 of the lever 7 and allow, during use, to discharge through the pivot 10 and the lever 3 the force applied to the curved actuation end 9 onto the elastically flexible top 22 of the valve.

[0021] The embodiment shown in Figures 18 to 20 allows to use the actuation device both with a press-open valve 12 and, once arranged upside down, with a lift-open valve. When used with a press-open valve, as shown in the drawings, the lever 9, which is L-shaped with the prongs 8 substantially at right angles to the handling end 9 (which can be straight), abuts in its rotation about the pivot 10 against two retainers 23 that protrude from the lever 3. The lever 7 therefore continues its descent practically rigidly with the lever 3, with which it rotates about the pivot 2 in order to press the top 22 of the valve. Preferably, the lever 3 has, in a position that lies opposite its protrusion 6, a lug 16 for a more effective lowering of the top 22.

[0022] Figures 21 to 23 illustrate a further embodiment with three levers of the actuation device, which allows use on lift-open valves. The device has a third lever 24, which is articulated, at its ends, to two pivots 18 and 19 which are monolithic or inserted in an intermediate portion of the levers 3 and 7 respectively.

[0023] The lever 24 can further have a protrusion 20 that can engage, during use, the top 22 of the valve 12. The lever 3 has a through recess 21, through which the end 9 of the lever 7 protrudes with an engagement that

allows free sliding, said end being in this case straight.

[0024] The user applies pressure to the free end 25 of the lever 3, thus lifting the abutments 13 due to the action of the prongs 8 by way of the rotary motion of the lever 7 about the pivot 19 for articulation with the lever 24 and by way of the simultaneous sliding of the end 26 the lever 7 within the recess 21.

[0025] Finally, Figures 24 to 26 illustrate still another embodiment with two levers, which allows to use the device on lift-open valves 12. In this case, the lever 3 does not have a protrusion 6 and rests, during use, on the top of the valve.

[0026] The actuation device described above is susceptible of modifications and variations within the scope of protection defined by the appended claims.

[0027] For example, as shown in Figures 27 to 32, the device according to the invention can be provided with a lever system that is articulated at a first end 1a to the seating base, so that it can be moved angularly between an open position and a closed position (shown in Figures 28, 30 and 32).

[0028] Said lever system has, at the second end 1b, engagement means 101 which are designed, in the closed position, to engage at least one locator or abutment 102 arranged at the seating base.

[0029] The engagement means are constituted by an engagement tooth 101a that is pivoted to the lever system and by means 101b for the rotation of the engagement tooth.

[0030] The engagement tooth 101a is elastically flexible about an axis that is substantially parallel to the angular movement axis of said lever system, so as to allow, even if the lever system is not fully closed, to engage the abutment 102 so as to ensure a perfect seal of the entire device.

[0031] The materials and the dimensions may be various according to requirements.

[0032] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A device for actuating a dispensing valve (12) of the press-open type that has a pressing-down top (22) and one or two abutments (13), or of the lift-open type that has a top (22) and one or two lifting-up abutments (13), to dispense liquids from a container (B) supported on a seating and supporting base (C), the valve actuation device (27) comprising a first lever (3) that can be pivoted at a first end (5) thereof about a pivot (2) of said seating and supporting base (C) and has an intermediate part (6) that can

engage, during use, the top (22) of said dispensing valve (12), **characterized in that** it comprises a second lever (7), which is articulated at an intermediate part thereof to the second end (4) of said first lever (3), said second lever (7) having an end (9) that is adapted to act as a handling portion and another end (8) that is adapted to abut against said one or two abutments (13) for the opening actuation of said dispensing valve (12).

2. The device according to claim 1, **characterized in that** said other end (8) of said second lever (7) is fork-shaped so as to engage the two abutments (13) for opening or closing said dispensing valve (12).
3. The device according to claim 1 or 2, **characterized in that** said first lever (3) has, on its lateral profile, at least one shoulder (14) for the abutment, against said at least one shoulder (14) of said other end (8) of said second lever (7) in order to act as stroke limiter for the rotation of said second lever (7) for the actuation of a press-open type dispensing valve (12).
4. The device for actuating valves according to claim 3, **characterized in that** said intermediate part (6) of said first lever (3) is a protrusion that is adapted to abut, during use, against said top (22) of said valve (12).
5. The device according to claim 1 or 2 **characterized in that** said first lever (3) comprises, at its ends (4,5), a recess for snap articulation engagement with said seating and supporting base (C) and with the intermediate part of said second lever (7).
6. The device according to claim 1 or 2, **characterized in that** said handling end (9) of said second lever (7) is constituted by an ergonomically curved surface.
7. The device according to claim 2 or 5 or 6, **characterized in that** said second end (4) of said first lever (3) has at least one retainer (23) for said second lever (7) so as to act as a retainer when said handling end (9) of said second lever (7) is pushed in a first direction of rotation (11), so as to allow the rotation of said first lever (3) about the pivot (2) of said seating and supporting base (C) and its consequent abutment against said top (22) of a press-open valve (12), while when said first lever (3) articulated to said second lever (7) is rigidly coupled to said seating and supporting base (C) in an inverted configuration and is therefore actuated in reverse with respect to said first direction of rotation (11), said other end (8) of said second lever (7) is suitable to engage said one or two abutments (13) while said

intermediate part (6) of said first lever (3) abuts against said top (22) of said valve (12).

8. The device according to claim 7, **characterized in that** said first lever (3) has a lug (16) which, during use in said first direction of rotation (11), is adapted to abut against the top (22) of said press-open valve (12). 5
9. The device according to any one of the claims 1-8, **characterized in that** said intermediate part of said second lever (7) comprises a pivot (10) for articulation to said first lever (3) which is fixed or rigidly coupled to said fork (8). 10
10. A device (27) for actuating a dispensing valve (12) of the press-open type that has a pressing-down top (22) and one or two abutments (13), or of the lift-open type that has a top (22) and one or two lifting-up abutments (13), to dispense liquids from a container (B) supported on a seating and supporting base (C), the valve actuation device (27) comprising a first lever (3) that can be pivoted at a first end (5) thereof about a pivot (2) of said seating and supporting base (C) and that has a second end (25) shaped like a handling end, **characterized in that** it comprises a second lever (7) and a third lever (24), the third lever (24) being articulated at its first end to an intermediate part of the first lever (24) and at its second end to an intermediate part of the second lever (7), the third lever (24) comprising a protrusion (20) that can engage, during use, the top (22) of said dispensing valve (12), the second lever (7) having an end (8) that is adapted to abut against said one or two lifting abutments (13) and another end (9) which is slidingly engaged by said first lever (3). 20 25 30 35
11. The device according to claim 10, **characterized in that** said first lever (3) has a recess (21) through which the handling end (9) of the second lever (7) protrudes for the sliding engagement thereof. 40
12. A dispensing valve assembly for dispensing liquids from a container (B), the assembly comprising a seating and supporting base (C) for supporting the container (B), a dispensing valve (12) of the press-open type that has a pressing-down top (22) and one or two abutments (13), or of the lift-open type that has a top (22) and one or two lifting-up abutments (13), and a device for actuating the dispensing valve (12), the device being according to one or more of the preceding claims, **characterized in that** said dispensing valve is detachably engaged with said seating and supporting base (C) through a lever system comprising a locking element (1) which is articulated, at a first end (1a), to said seating base (C) in order to be angularly movable be- 45 50 55

tween an open position and a closed position and comprising, at the second end (1b), engagement means (101) which are adapted, in the closure position, to engage at least one abutment (102) arranged at said seating base, said engagement means (101) having an engagement tooth (101a) that is pivoted to said locking element (1) and means (101b) for the rotation of said engagement tooth (101a).

13. The assembly according to claim 12, **characterized in that** said engagement tooth (101a) is elastically flexible about an axis that is substantially parallel to the angular movement axis of said lever system.

Patentansprüche

1. Vorrichtung zum Betätigen eines Dosierventils (12) des durch Drücken öffnenden Typs, das ein Oberteil (22) zum Niederdrücken und einen ,Anschlag oder zwei Anschläge (13) aufweist, oder des durch Anheben öffnenden Typs, das ein Oberteil (22) und einen Anschlag oder zwei Anschläge (13) zum Anheben aufweist, zum Dosieren von Flüssigkeiten aus einem auf einem Sitz- und Tragsockel (C) gehaltenen Behälter (B), wobei die Ventilbetätigungsvorrichtung (27) einen ersten Hebel (3) aufweist, der an einem ersten Ende (5) um eine Schwenkachse (2) des besagten Sitzund Tragsockels (C) schwenken kann und ein Zwischenteil (6) aufweist, das in Benutzung auf das Oberteil (22) des besagten Dosierventils (12) wirken kann, **dadurch gekennzeichnet, dass** sie einen zweiten Hebel (7) aufweist, der an einem Zwischenteil schwenkbar zum zweiten Ende (4) des besagten ersten Hebels (3) angelenkt ist, wobei der besagte zweite Hebel (7) ein Ende (9), das so ausgebildet ist, dass es als Handhabungsteil wirkt, und ein weiteres Ende (8) aufweist, das so ausgebildet ist, dass es zur Öffnungsbetätigung des besagten Dosierventils (12) an dem besagten einen Anschlag oder den besagten zwei Anschlägen (13) anliegt.
2. Vorrichtung nach Anspruch 1, **dadurch gekennzeichnet, dass** das besagte weitere Ende (8) des besagten zweiten Hebels (7) gabelförmig ist, um auf die beiden Anschläge (13) zum Öffnen oder Schließen des besagten Dosierventils (12) zu wirken.
3. Vorrichtung nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** der besagte erste Hebel (3) auf seiner Seitenfläche wenigstens eine Schulter (14) zur Anlage des besagten weiteren Endes (8) des besagten zweiten Hebels (7) an der besagten wenigstens einen Schulter (14) aufweist, um als Bewegungsbegrenzung für die Drehung des besagten

zweiten Hebels (7) bei der Betätigung eines Dosierventils (12) des durch Drücken öffnenden Typs zu wirken.

4. Vorrichtung zum Betätigen von Ventilen nach Anspruch 3, **dadurch gekennzeichnet, dass** das besagte Zwischenteil (6) des besagten ersten Hebels (3) ein Vorsprung ist, der so ausgebildet ist, dass er in Benutzung an dem besagten Oberteil (22) des besagten Ventils (12) anliegt. 5
5. Vorrichtung nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** der besagte erste Hebel (3) an seinen Enden (4, 5) eine Ausnehmung zum Einschnappen an dem besagten Sitz- und Tragsockel (C) und an dem Zwischenteil des besagten zweiten Hebels (7) aufweist. 10
6. Vorrichtung nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** das besagte Handhabungsende (9) des besagten zweiten Hebels (7) durch eine ergonomisch gekrümmte Oberfläche gebildet wird. 15
7. Vorrichtung nach Anspruch 2 oder 5 oder 6, **dadurch gekennzeichnet, dass** das besagte zweite Ende (4) des besagten ersten Hebels (3) wenigstens ein Widerlager (23) für den besagten zweiten Hebel (7) aufweist, um als Widerlager zu wirken, wenn das besagte Handhabungsende (9) des besagten zweiten Hebels (7) in einer ersten Drehrichtung (11) gedrückt wird, um die Drehung des besagten ersten Hebels (3) um die Schwenkachse (2) des besagten Sitz- und Haltesockels (C) und seine darauffolgende Anlage gegen das Oberteil (22) eines durch Drücken öffnenden Ventils (12) zu erlauben, während in einer umgekehrten Konfiguration, wenn der besagte erste, an dem besagten zweiten Hebel (7) angelenkte Hebel (3) fest mit dem besagten Sitz- und Tragsockel (C) gekoppelt ist und daher umgekehrt zu der besagten ersten Drehrichtung (11) betätigt wird, das besagte weitere Ende (8) des besagten zweiten Hebels (7) geeignet ist, auf den besagten einen Anschlag oder die besagten zwei Anschläge (13) zu wirken, wenn das besagte Zwischenteil (6) des besagten ersten Hebels (3) an dem besagten Oberteil (22) des besagten Ventils (12) anliegt. 20
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8. Vorrichtung nach Anspruch 7, **dadurch gekennzeichnet, dass** der besagte erste Hebel (3) eine Nase (16) aufweist, welche in Benutzung in der besagten ersten Drehrichtung (11) so ausgebildet ist, dass sie an dem Oberteil (22) des besagten, durch Drücken öffnenden Ventils (12) anliegt. 50
9. Vorrichtung nach einem der Ansprüche 1 bis 8, **dadurch gekennzeichnet, dass** das besagte Zwi-

schenteil des besagten zweiten Hebels (7) eine Schwenkachse (10) zur Drehung um den besagten ersten Hebel (3) aufweist, der an der besagten Gabel (8) befestigt oder damit fest gekoppelt ist.

10. Vorrichtung (27) zum Betätigen eines Dosierventils (12) des durch Drücken öffnenden Typs, das ein Oberteil (22) zum Niederdrücken und einen Anschlag oder zwei Anschläge (13) aufweist, oder des durch Anheben öffnenden Typs, das ein Oberteil (22) und einen Anschlag oder zwei Anschläge (13) zum Anheben aufweist, zum Dosieren von Flüssigkeiten aus einem auf einem Sitz- und Tragsockel (C) gehaltenen Behälter (B), wobei die Ventilbetätigungsvorrichtung (27) einen ersten Hebel (3) aufweist, der an einem ersten Ende (5) um eine Schwenkachse (2) des besagten Sitz- und Tragsockels (C) schwenken kann und ein zweites, wie ein Handhabungsende geformtes Ende (25) aufweist, **dadurch gekennzeichnet, dass** sie einen zweiten Hebel (7) und einen dritten Hebel (24) aufweist, der an seinem ersten Ende schwenkbar zu einem Zwischenteil des ersten Hebels (24) und an seinem zweiten Ende schwenkbar zu einem Zwischenteil des zweiten Hebels (7) angelenkt ist, wobei der dritte Hebel (24) einen Vorsprung (20) aufweist, der in Benutzung auf das Oberteil (22) des besagten Dosierventils (12) wirkt, wobei der zweite Hebel (7) ein Ende (8), das so ausgebildet ist, dass es an dem besagten einen Anschlag oder den besagten zwei Anschlägen (13) zum Anheben anliegt, und ein weiteres Ende (9) aufweist, das durch Gleiteingriff mit dem besagten ersten Hebel (3) zusammenwirkt.
11. Vorrichtung nach Anspruch 10, **dadurch gekennzeichnet, dass** der besagte erste Hebel (3) eine Ausnehmung (21) aufweist, durch die das Handhabungsende (9) des zweiten Hebels (7) zwecks Gleiteingriff vorsteht.
12. Dosierventilanordnung zum Dosieren von Flüssigkeiten aus einem Behälter (B), wobei die Anordnung einen Sitz- und Tragsockel (C) zum Tragen des Behälters (B), ein Dosierventil (12) des durch Drücken öffnenden Typs, das ein Oberteil (22) zum Niederdrücken und einen Anschlag oder zwei Anschläge (13) aufweist, oder des durch Anheben öffnenden Typs, das ein Oberteil (22) und einen Anschlag oder zwei Anschläge (13) zum Anheben aufweist, und eine Vorrichtung zum Betätigen des Dosierventils (12) aufweist, wobei die Vorrichtung nach einem oder mehreren der vorhergehenden Ansprüche ausgebildet ist, **dadurch gekennzeichnet, dass** das besagte Dosierventil abnehmbar mit dem besagten Sitz- und Tragsockel (C) durch ein Hebelsystem gekoppelt ist, das ein Verriegelungselement (1) aufweist, das an einem ersten Ende (1a) schwenkbar an dem besagten Sitzsockel (C)

angelenkt ist, um in Winkelrichtung zwischen einer offenen Stellung und einer geschlossenen Stellung bewegbar zu sein, und das an dem zweiten Ende (1b) Eingriffsmittel (101) aufweist, die so ausgebildet sind, dass sie in der geschlossenen Stellung zu-

mindest mit einem an dem besagten Sitzsockel vorgesehenen Anschlag (102) in Eingriff kommen, wobei die besagten Eingriffsmittel (101) einen Eingriffszahn (101a), der schwenkbar zu dem besagten Verriegelungselement (1) angeordnet ist, und Mittel (101b) zum Drehen des besagten Eingriffszahns (101a) aufweisen.

13. Anordnung nach Anspruch 12, **dadurch gekennzeichnet, dass** der besagte Eingriffszahn (101a) elastisch flexibel um eine Achse ausgebildet ist, die im wesentlichen parallel zur Winkelbewegungsachse des besagten Hebelsystems angeordnet ist.

Revendications

1. Dispositif d'actionnement d'une soupape de distribution (12) du type à ouverture par pression qui a une partie supérieure exerçant une pression descendante (22) et une ou deux butées (13), ou du type à ouverture par levage qui a une partie supérieure (22) et une ou deux butées à soulever (13), pour distribuer des liquides depuis un conteneur (B) supporté sur une base d'assise et de support (C), ledit dispositif d'actionnement de soupape (27) comprenant un premier levier (3) qui peut être pivoté à une première extrémité (5) de celui-ci autour d'un pivot (2) de ladite base d'assise et de support (C) et a une partie intermédiaire (6) qui peut venir en prise, pendant l'utilisation, avec la partie supérieure (22) de ladite soupape de distribution (12), **caractérisé en ce qu'il** comprend un deuxième levier (7), qui est articulé au niveau d'une partie intermédiaire de celui-ci sur la seconde extrémité (4) dudit premier levier (3), ledit deuxième levier (7) ayant une extrémité (9) qui est adaptée pour agir comme une partie de manipulation et une autre extrémité (8) qui est adaptée pour buter contre lesdites une ou deux butées (13) pour l'actionnement en ouverture de ladite soupape de distribution (12).
2. Dispositif selon la revendication 1, **caractérisé en ce que** ladite autre extrémité (8) dudit deuxième levier (7) a une forme de fourche afin de venir en prise avec les deux butées (13) pour ouvrir ou fermer ladite soupape de distribution (12).
3. Dispositif selon la revendication 1 ou 2, **caractérisé en ce que** ledit premier levier (3) a, sur son profil latéral, au moins un épaulement (14) pour la butée contre ledit au moins un épaulement (14) de ladite autre extrémité (8) dudit deuxième levier (7) afin

d'agir comme limiteur de course pour la rotation dudit deuxième levier (7) pour l'actionnement d'une soupape de distribution du type à ouverture par pression (12).

4. Dispositif d'actionnement de soupapes selon la revendication 3, **caractérisé en ce que** ladite partie intermédiaire (6) dudit premier levier (3) est une saillie qui est adaptée pour buter, pendant l'utilisation, contre ladite partie supérieure (22) de ladite soupape (12).
5. Dispositif selon la revendication 1 ou 2, **caractérisé en ce que** ledit premier levier (3) comprend, à ses extrémités (4, 5), un retrait pour une prise à articulation encliquetable avec ladite base d'assise et de support (C) et avec la partie intermédiaire dudit deuxième levier (7).
6. Dispositif selon la revendication 1 ou 2, **caractérisé en ce que** ladite extrémité de manipulation (9) dudit deuxième levier (7) est constituée par une surface courbée de manière ergonomique.
7. Dispositif selon la revendication 2, 5 ou 6, **caractérisé en ce que** ladite seconde extrémité (4) dudit premier levier (3) a au moins un dispositif de retenue (23) pour ledit deuxième levier (7) afin d'agir comme un dispositif de retenue lorsque ladite extrémité de manipulation (9) dudit deuxième levier (7) est poussée dans une première direction de rotation (11), afin de permettre la rotation dudit premier levier (3) autour du pivot (2) de ladite base d'assise et de support (C) et sa butée consécutive contre ladite partie supérieure (22) d'une soupape à ouverture par pression (12), alors que lorsque ledit premier levier (3) articulé sur ledit deuxième levier (7) est rigidement couplé à ladite base d'assise et de support (C) dans une configuration inversée et est en conséquence actionné à l'envers par rapport à ladite première direction de rotation (11), ladite autre extrémité (8) dudit deuxième levier (7) est appropriée pour venir en prise avec lesdites une ou deux butées (13) alors que ladite partie intermédiaire (6) dudit premier levier (3) bute contre ladite partie supérieure (22) de ladite soupape (12).
8. Dispositif selon la revendication 7, **caractérisé en ce que** ledit premier levier (3) a un ergot (16) qui, pendant l'utilisation dans ladite première direction de rotation (11), est adapté pour buter contre la partie supérieure (22) de ladite soupape à ouverture par pression (12).
9. Dispositif selon l'une quelconque des revendications 1 à 8, **caractérisé en ce que** ladite partie intermédiaire dudit deuxième levier (7) comprend un pivot (10) pour une articulation sur ledit premier le-

vier (3) qui est couplé fixement ou rigidement à ladite fourche (8).

10. Dispositif (27) d'actionnement d'une soupape de distribution (12) du type à ouverture par pression qui a une partie supérieure exerçant une pression descendante (22) et une ou deux butées (13), ou du type à ouverture par levage qui a une partie supérieure (22) et une ou deux butées à soulever (13), pour distribuer des liquides depuis un conteneur (B) supporté sur une base d'assise et de support (C), ledit dispositif d'actionnement de soupape (27) comprenant un premier levier (3) qui peut être pivoté à une première extrémité (5) de celui-ci autour d'un pivot (2) de ladite base d'assise et de support (C) et qui a une seconde extrémité (25) formée comme une extrémité de manipulation, **caractérisé en ce qu'il** comprend un deuxième levier (7) et un troisième levier (24), le troisième levier (24) étant articulé au niveau de sa première extrémité sur une partie intermédiaire du premier levier (24) et au niveau de sa seconde extrémité sur une partie intermédiaire du second levier (7), le troisième levier (24) comprenant une saillie (20) qui peut venir en prise, en utilisation, avec la partie supérieure (22) de ladite soupape de distribution (12), le deuxième levier (7) ayant une extrémité (8) qui est adaptée pour buter contre lesdites une ou deux butées (13) et une autre extrémité (9) qui vient en prise de manière coulissante avec ledit premier levier (3).
11. Dispositif selon la revendication 10, **caractérisé en ce que** ledit premier levier (3) a un retrait (21) à travers lequel l'extrémité de manipulation (9) du deuxième levier (7) fait saillie pour une prise coulissante avec celui-ci.
12. Ensemble formant soupape de distribution pour distribuer des liquides depuis un conteneur (B), l'ensemble comprenant une base d'assise et de support (C) pour supporter le conteneur (B), une soupape de distribution (12) du type à ouverture par pression qui a une partie supérieure exerçant une pression descendante (22) et une ou deux butées (13), ou du type à ouverture par levage qui a une partie supérieure (22) et une ou deux butées à soulever (13), et un dispositif d'actionnement de la soupape de distribution (12), le dispositif étant selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ladite soupape de distribution vient en prise de manière détachable avec ladite base d'assise et de support (C) à travers un système de levier comprenant un élément de verrouillage (1) qui est articulé, au niveau d'une première extrémité (1a), sur ladite base d'assise (C) afin d'être déplaçable de manière angulaire entre une position ouverte et une position fermée et comprenant au niveau de la deuxième extrémité (1b)

des moyens de mise en prise (101) qui sont adaptés, dans la position de fermeture, pour venir en prise avec au moins une butée (102) agencée au niveau de ladite base d'assise, lesdits moyens de mise en prise (101) ayant une dent de mise en prise (101a) qui est pivotée autour dudit élément de verrouillage (1) et des moyens (101b) pour la rotation de ladite dent de mise en prise (101a).

13. Ensemble selon la revendication 12, **caractérisé en ce que** ladite dent de mise en prise (101a) est élastiquement flexible autour d'un axe qui est sensiblement parallèle à l'axe de mouvement angulaire dudit système de levier.

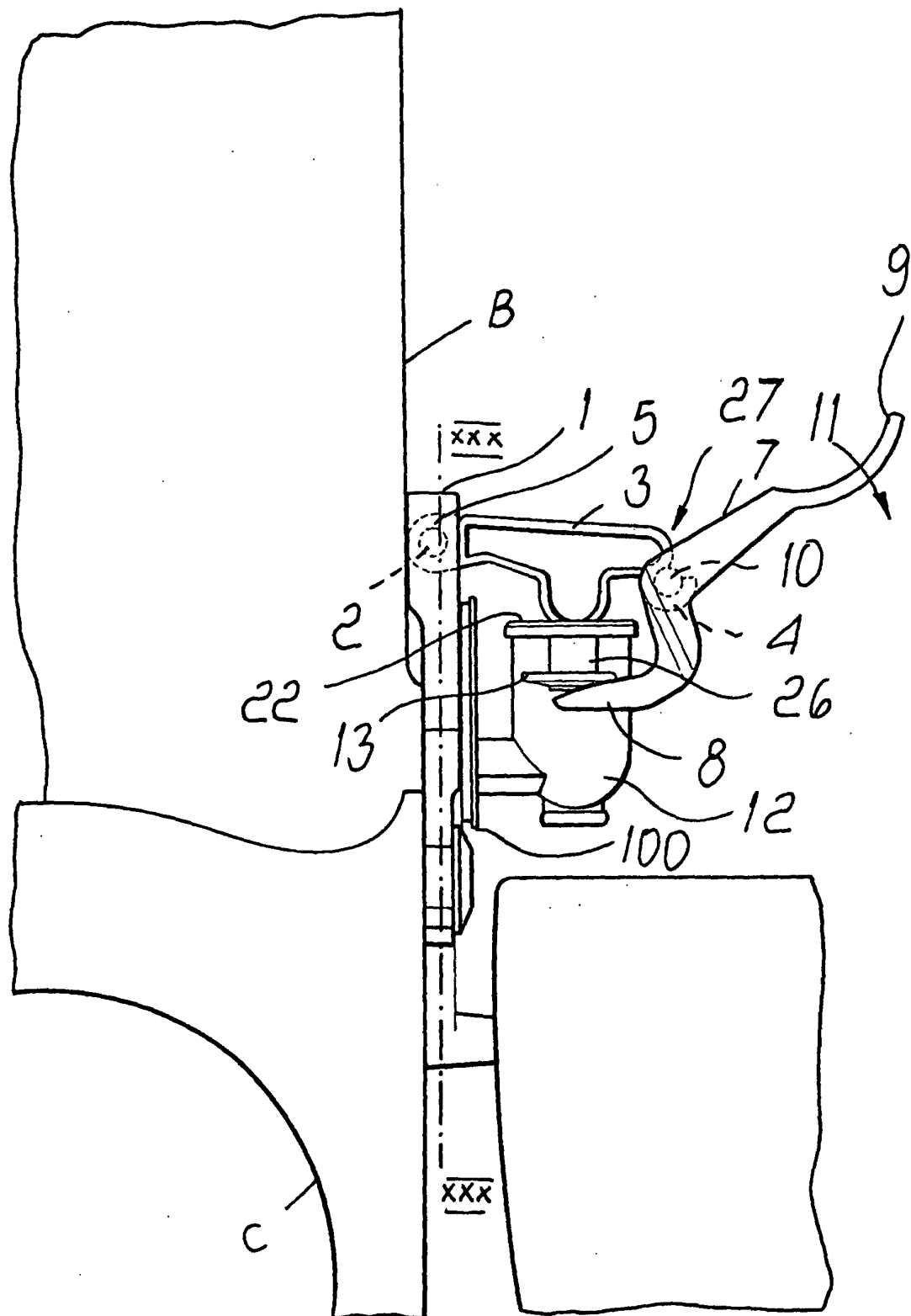


Fig. 1

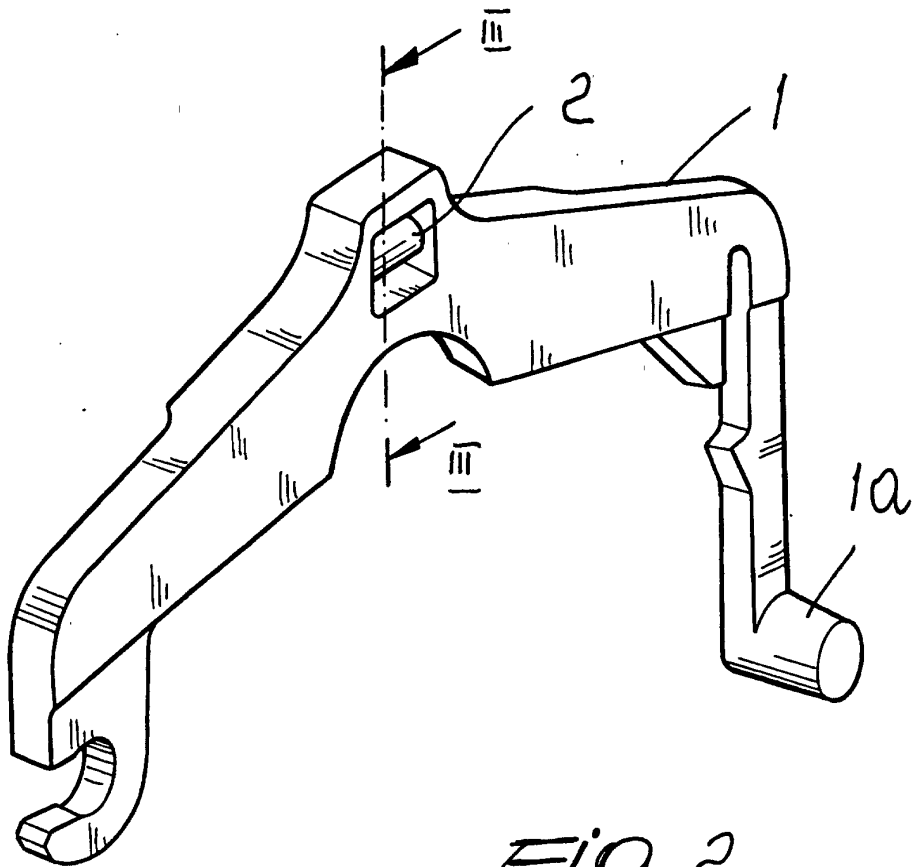


Fig. 2

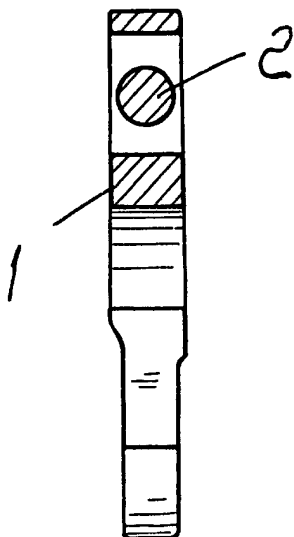


Fig. 3

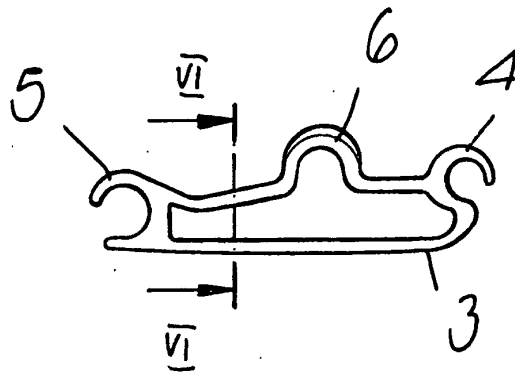


Fig. 4

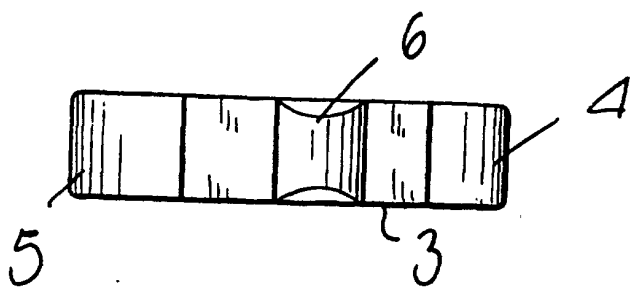


Fig. 5

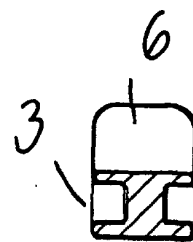


Fig. 6

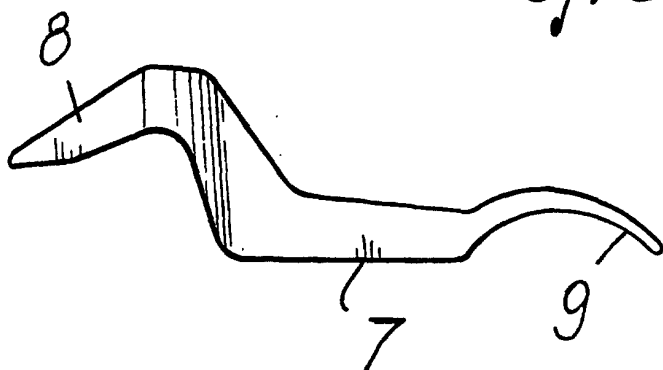


Fig. 7

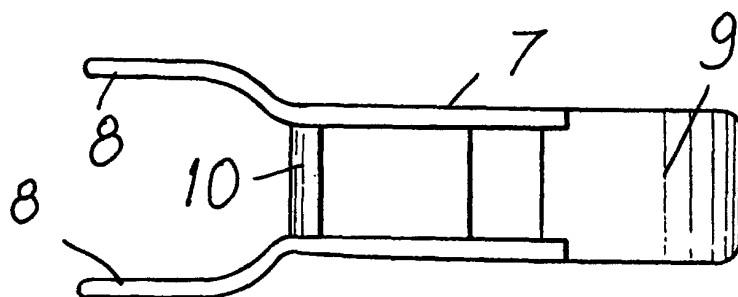


Fig. 8

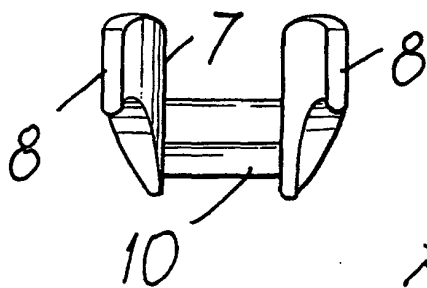


Fig. 9

Fig. 10

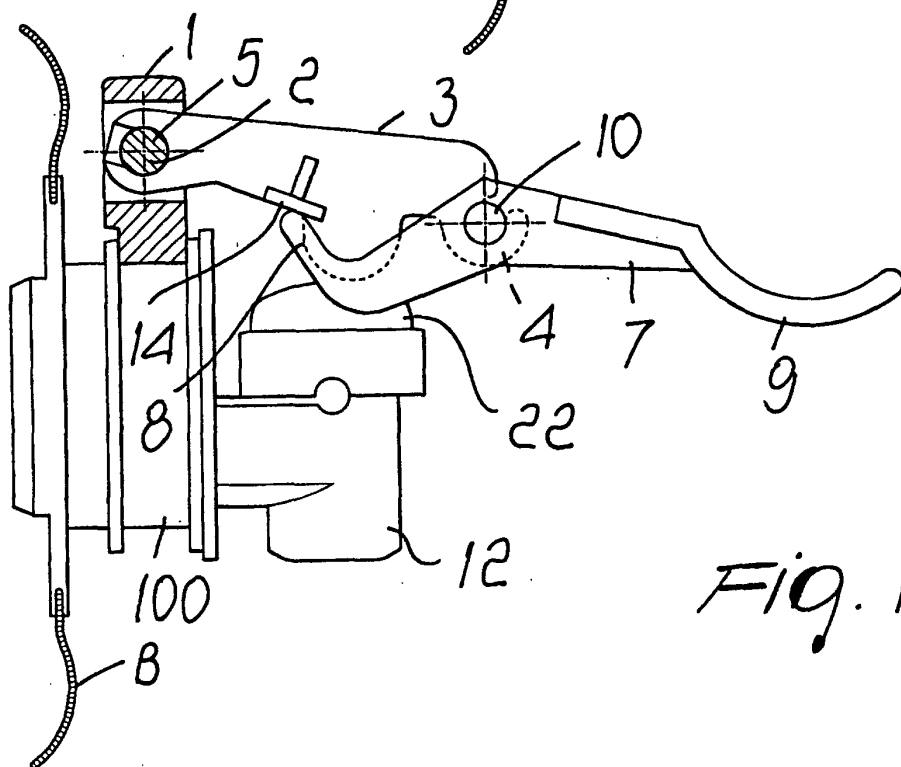
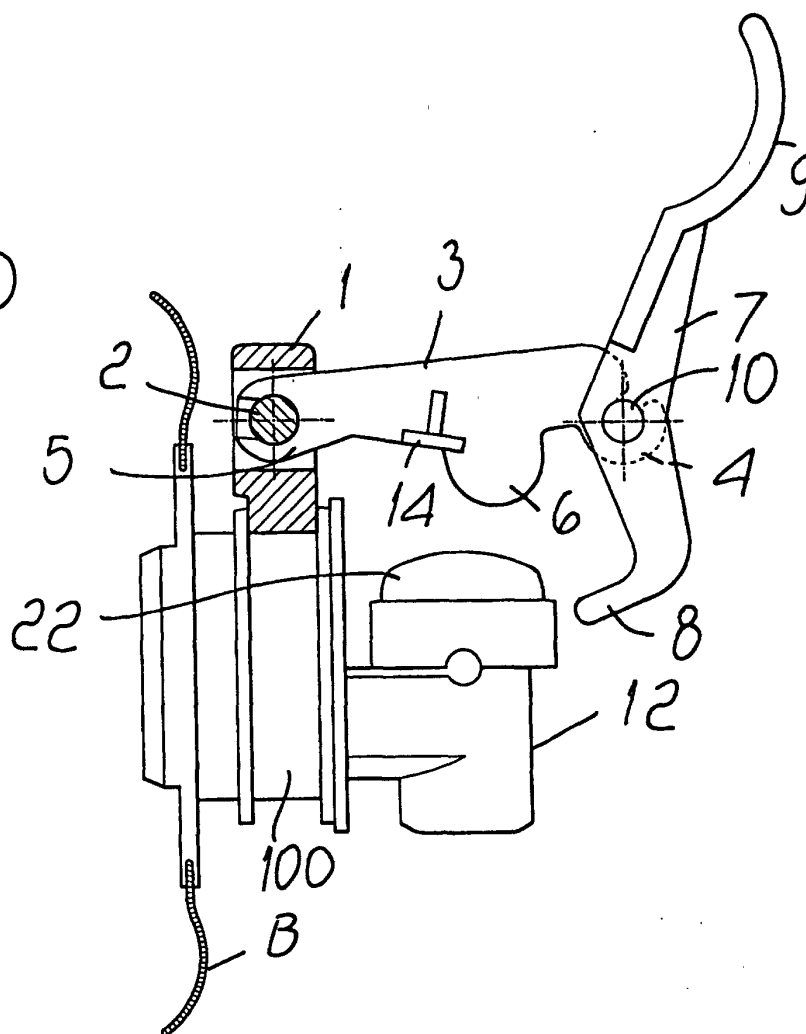


Fig. 11

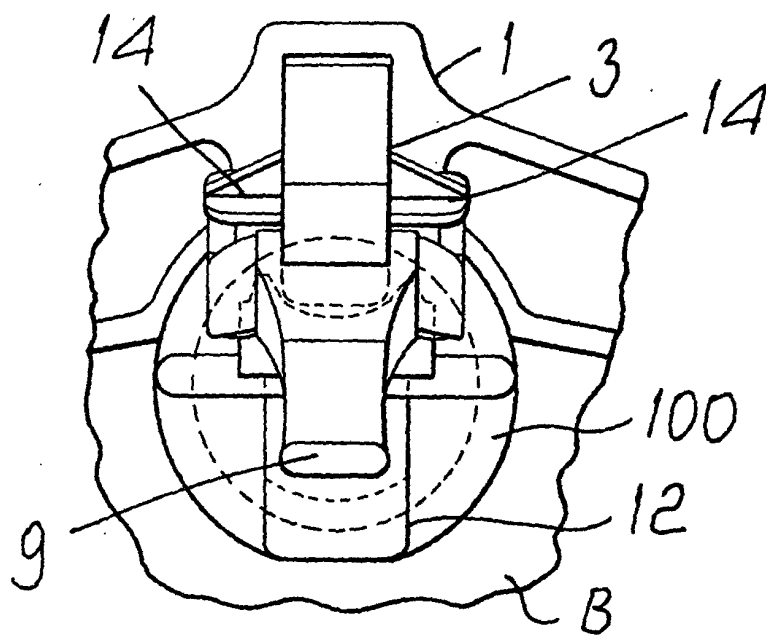


Fig. 12

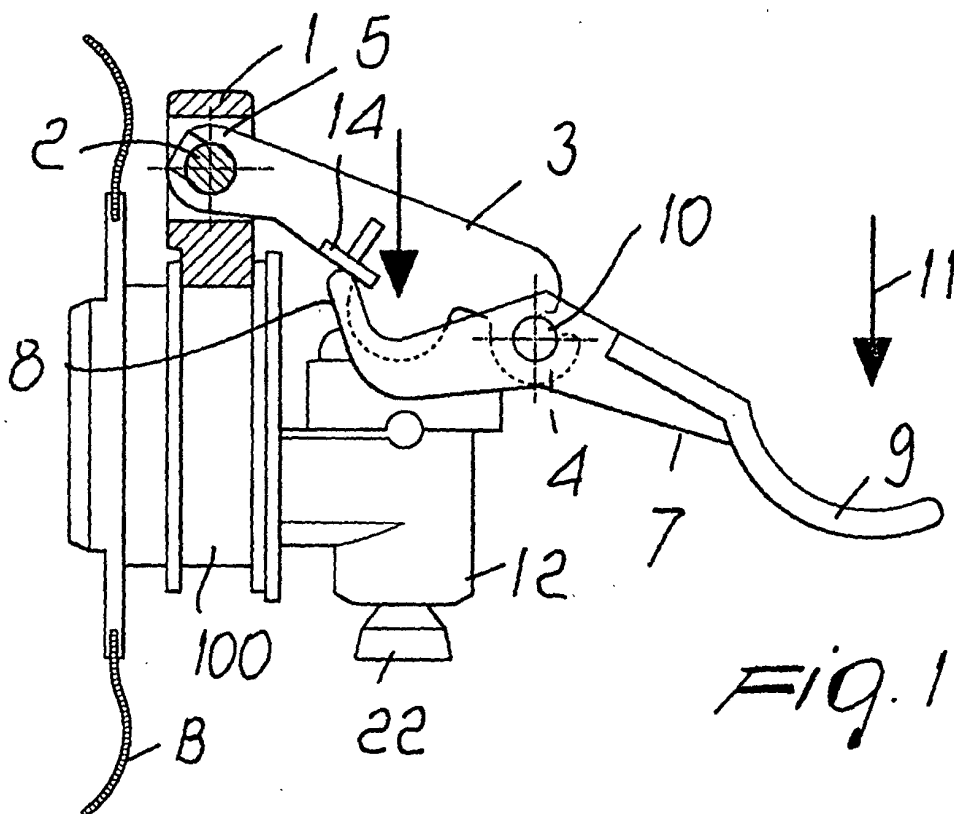
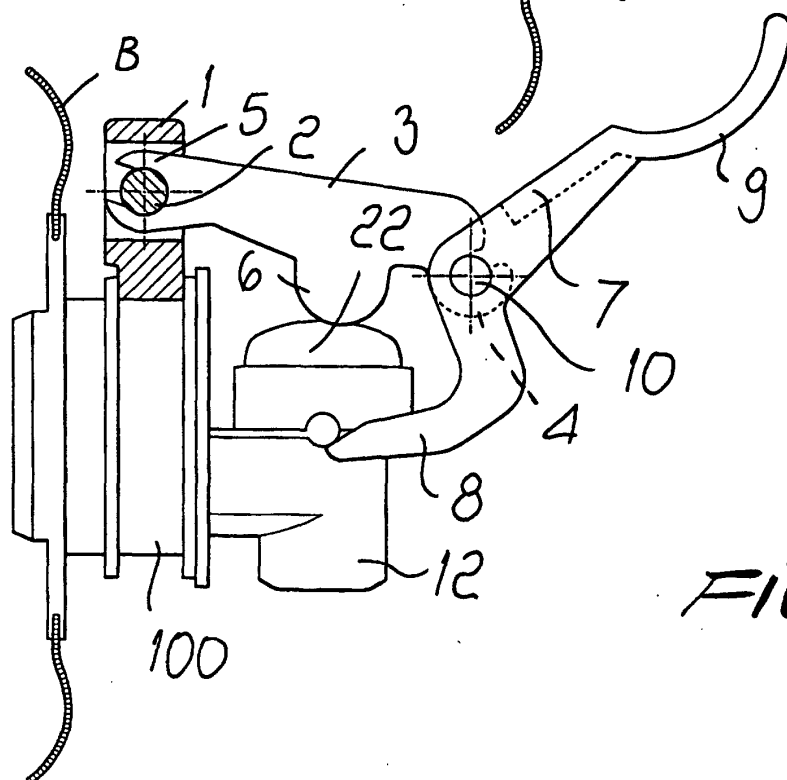
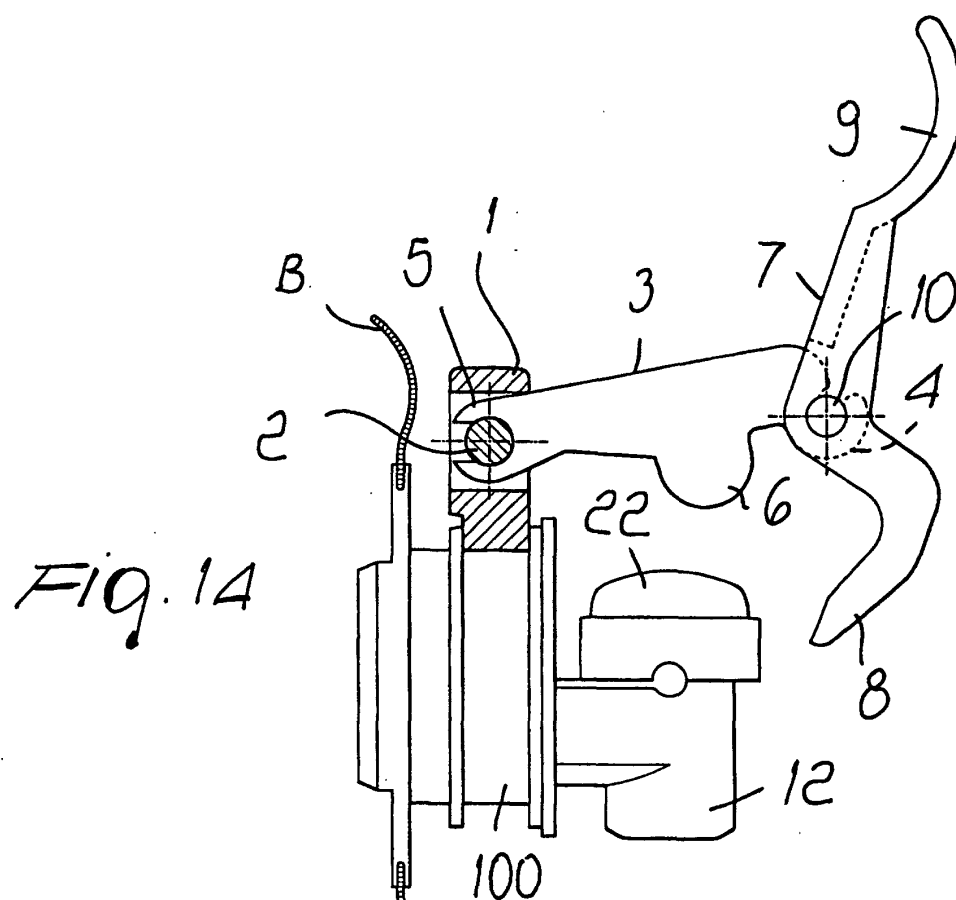


Fig. 13



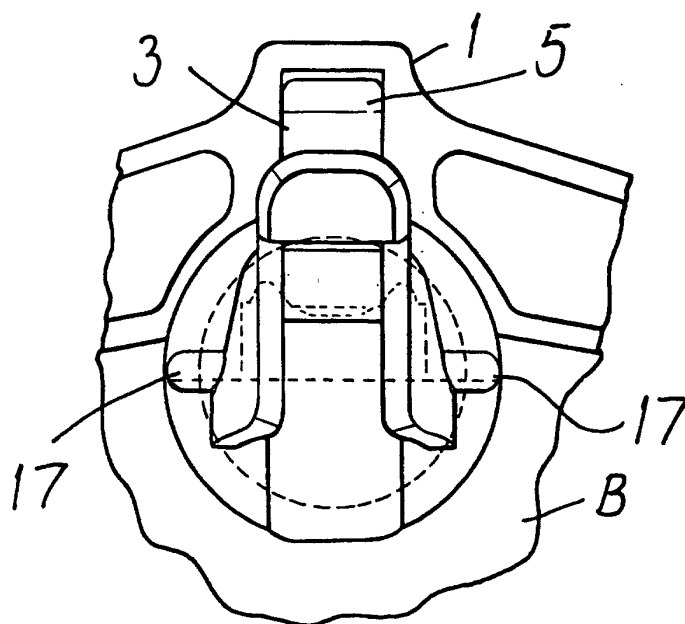


Fig. 16

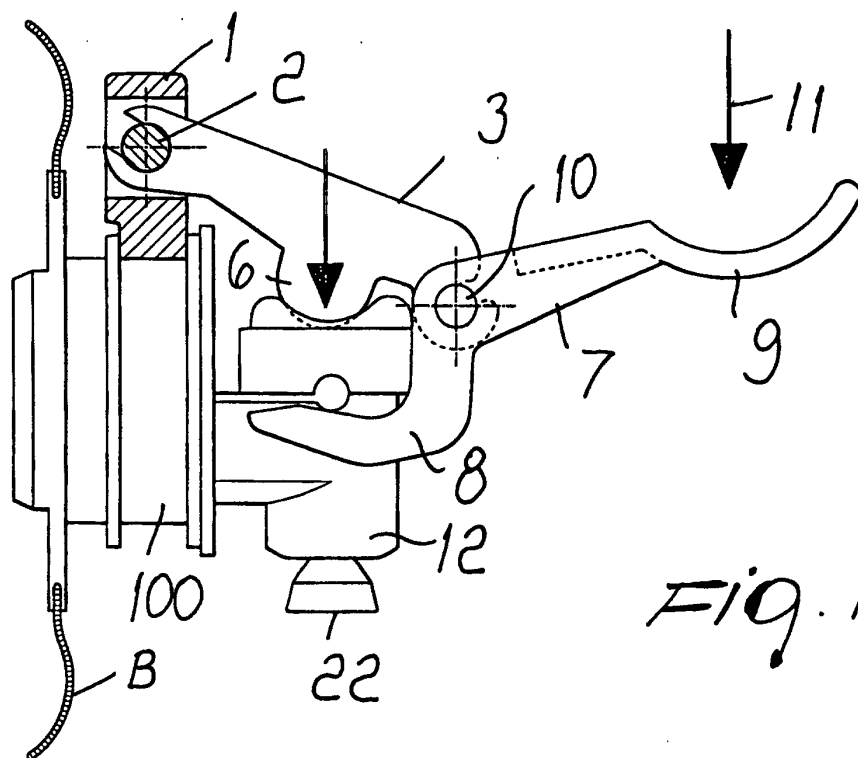
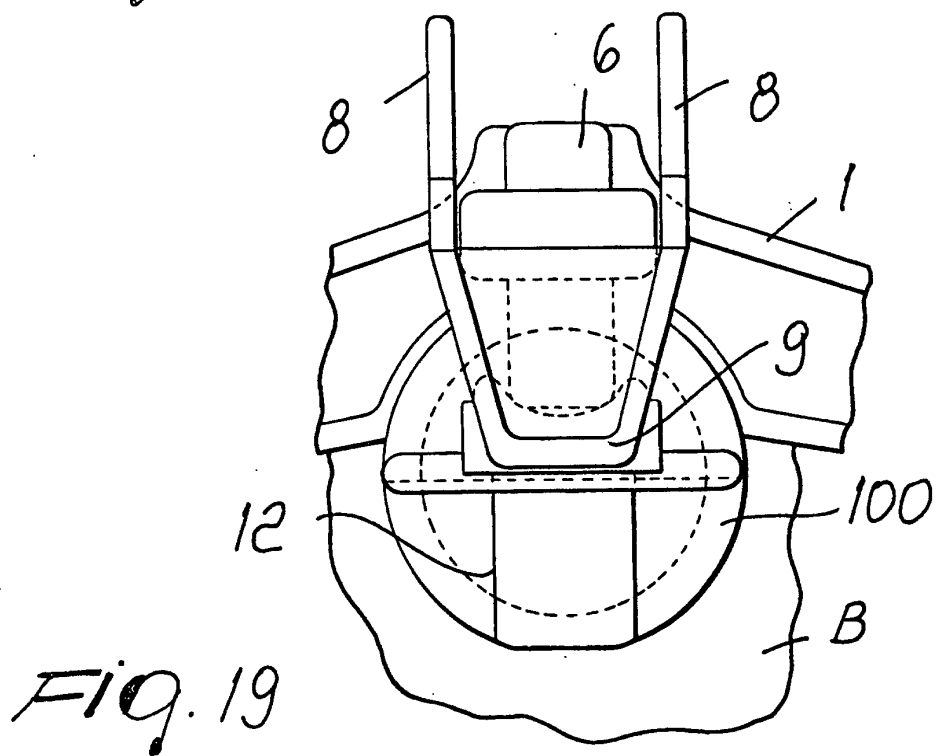
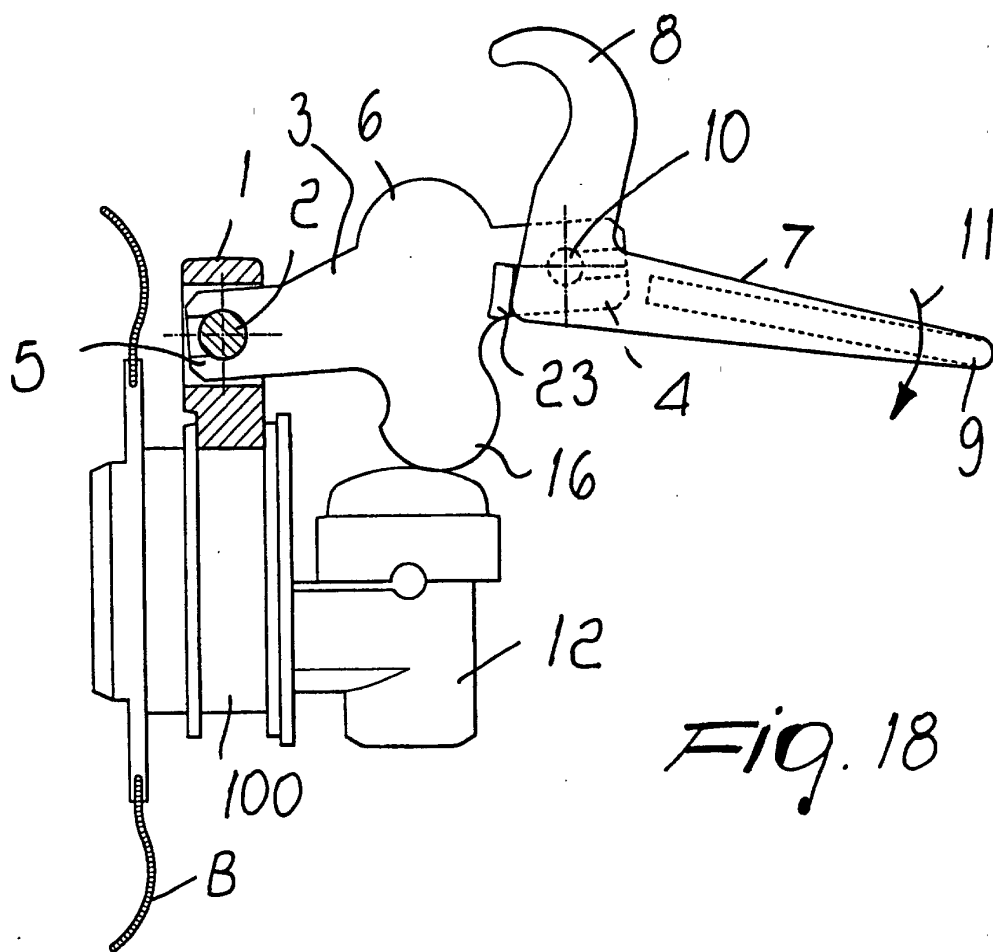
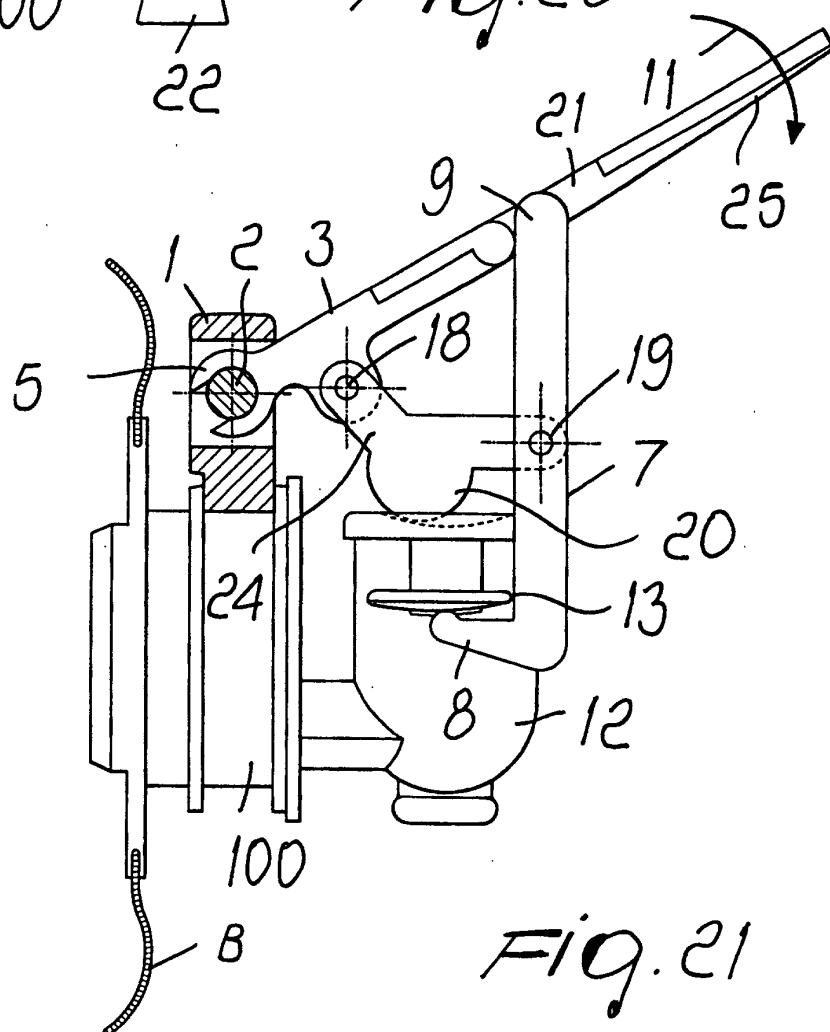
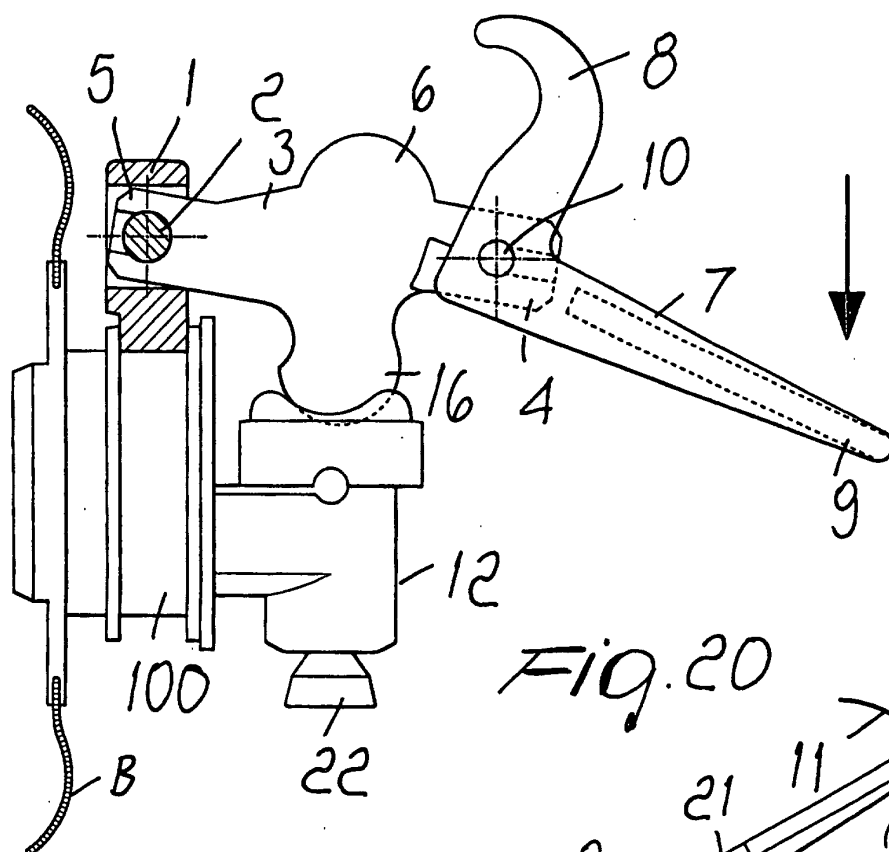


Fig. 17





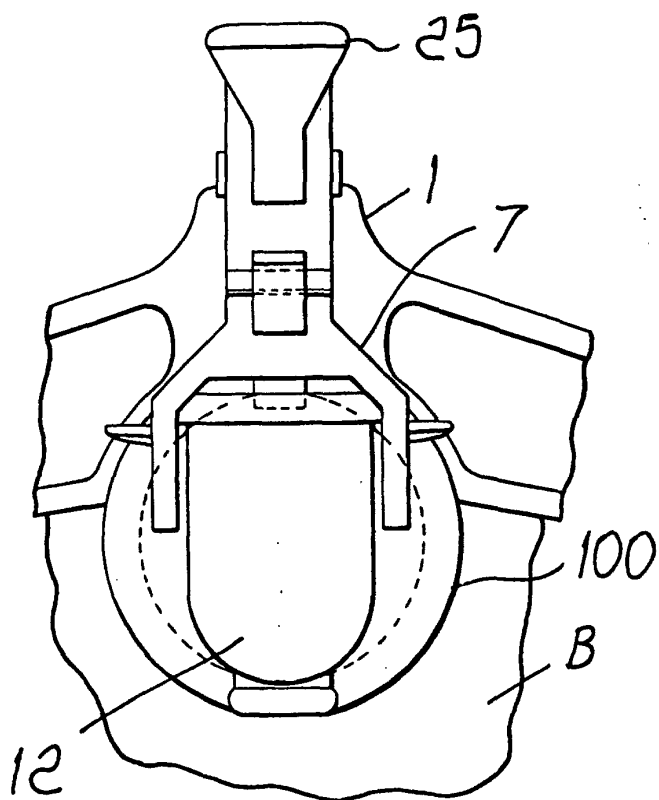


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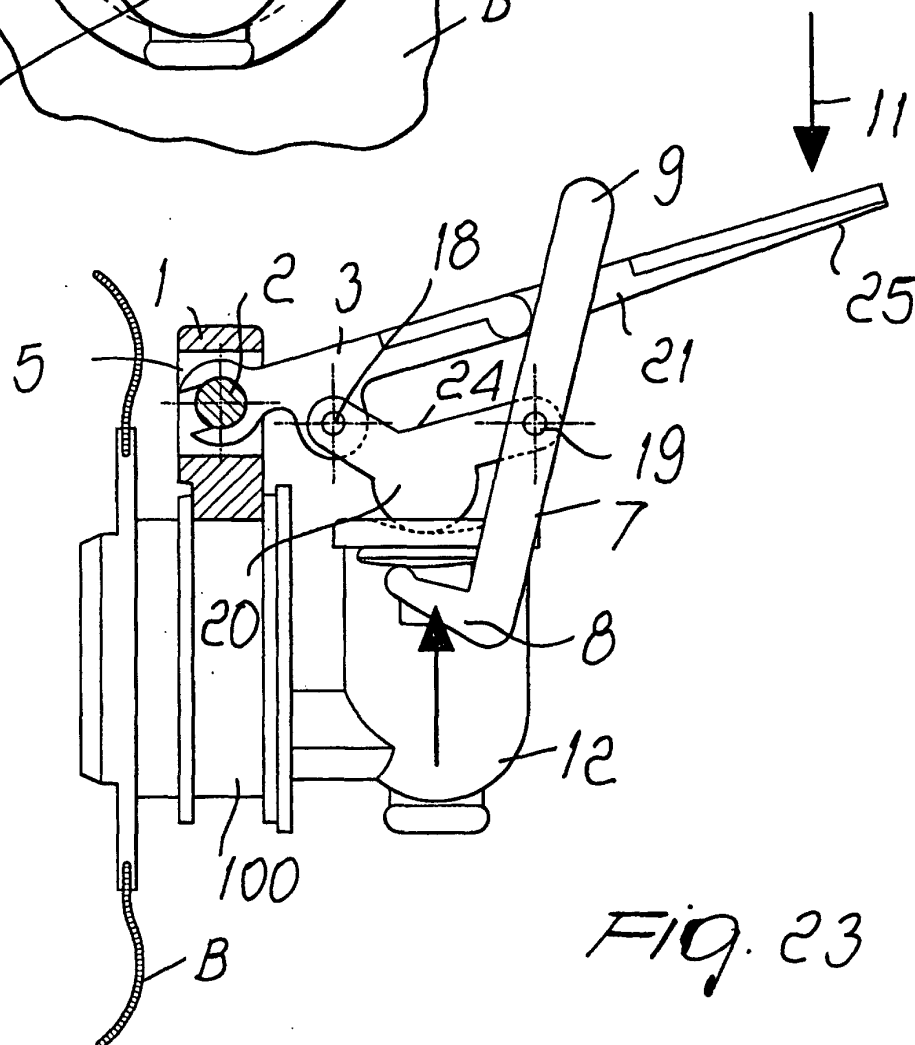
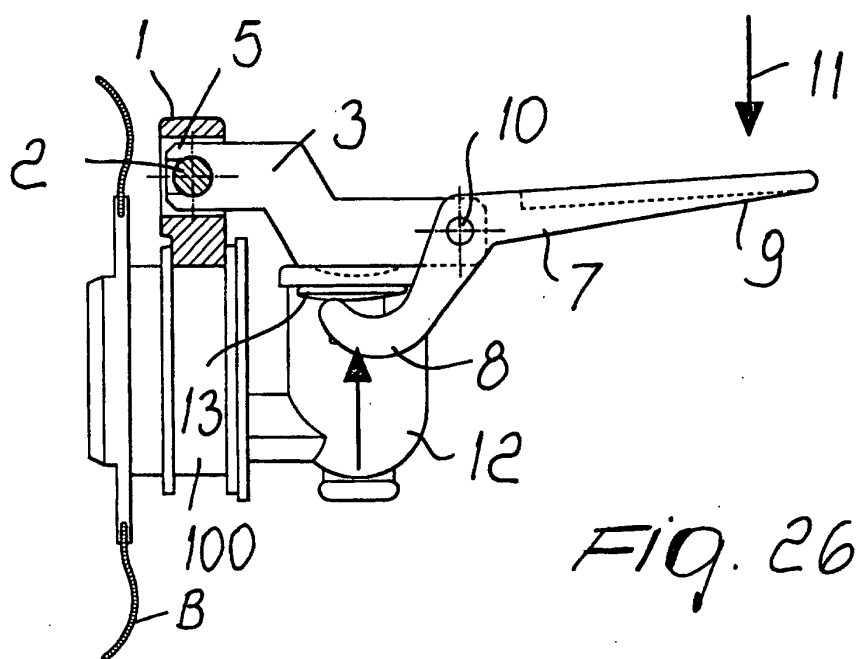
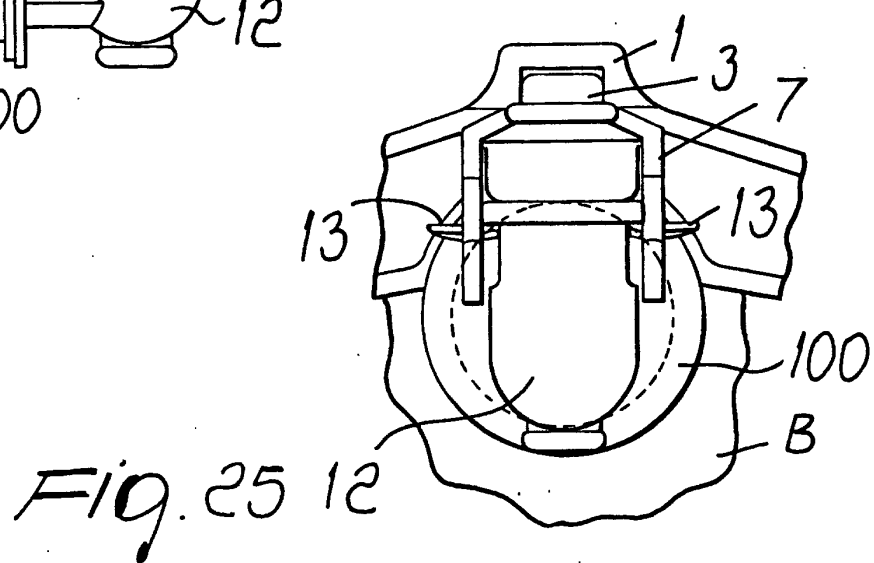
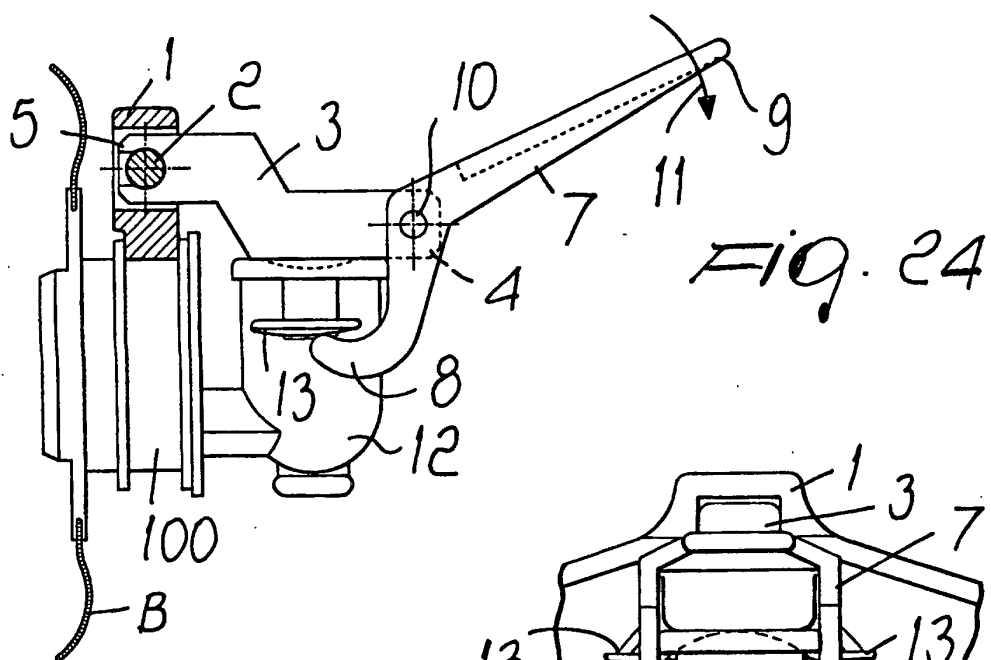
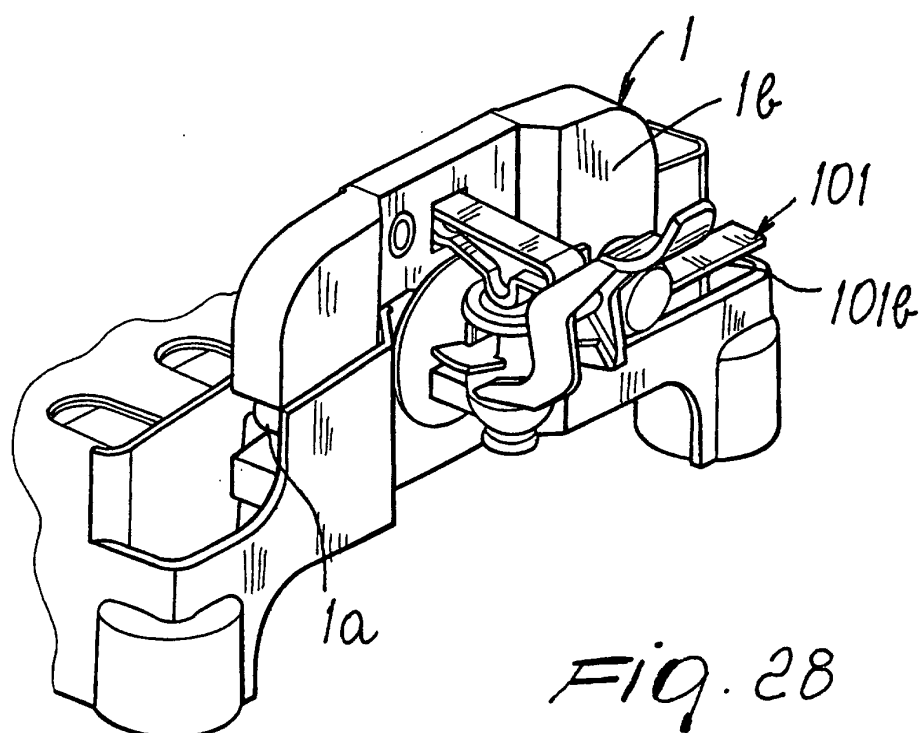
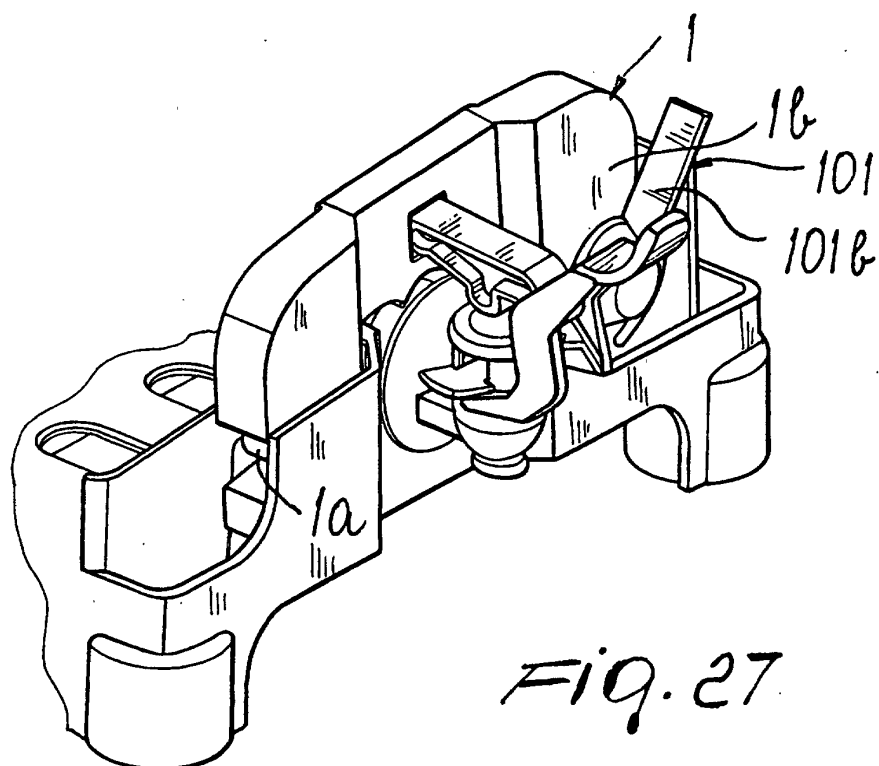


Fig. 23





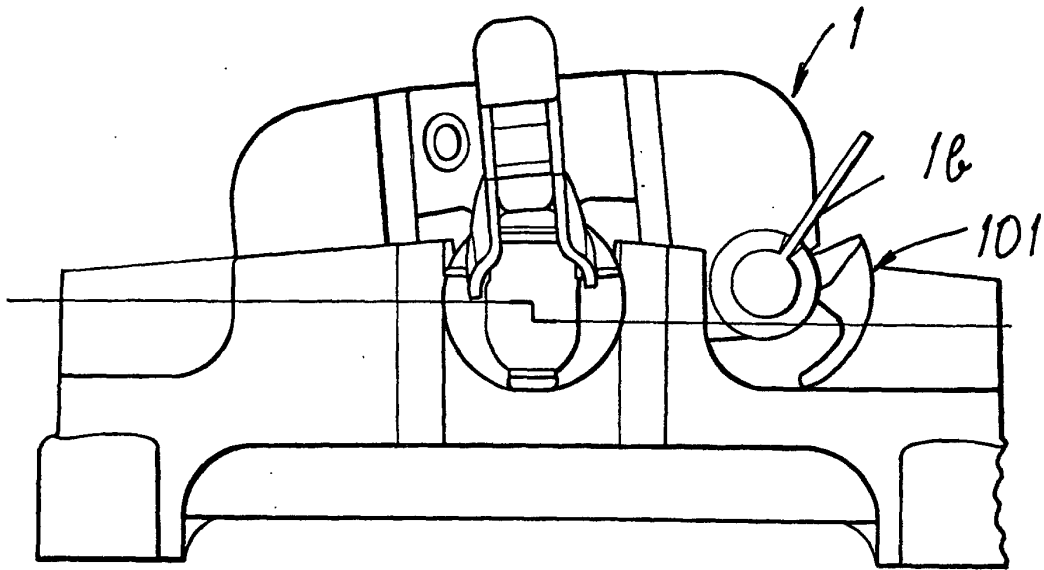


Fig. 29

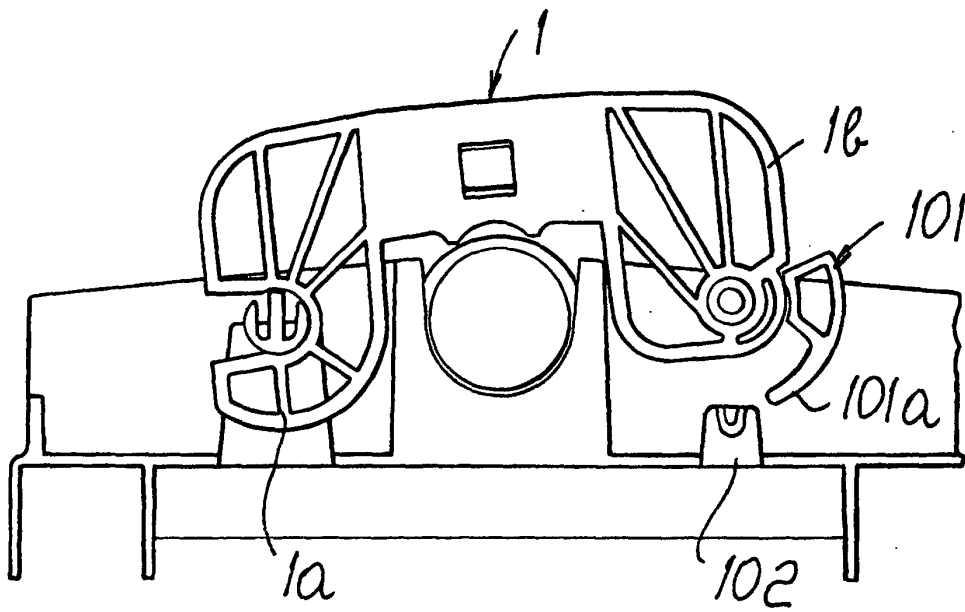


Fig. 30

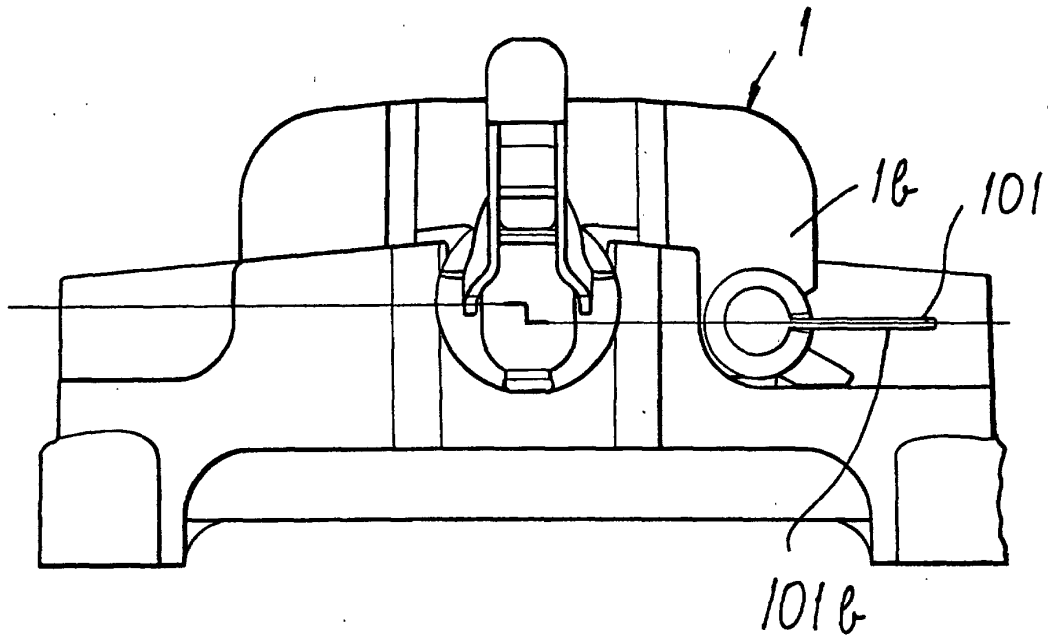


Fig. 31

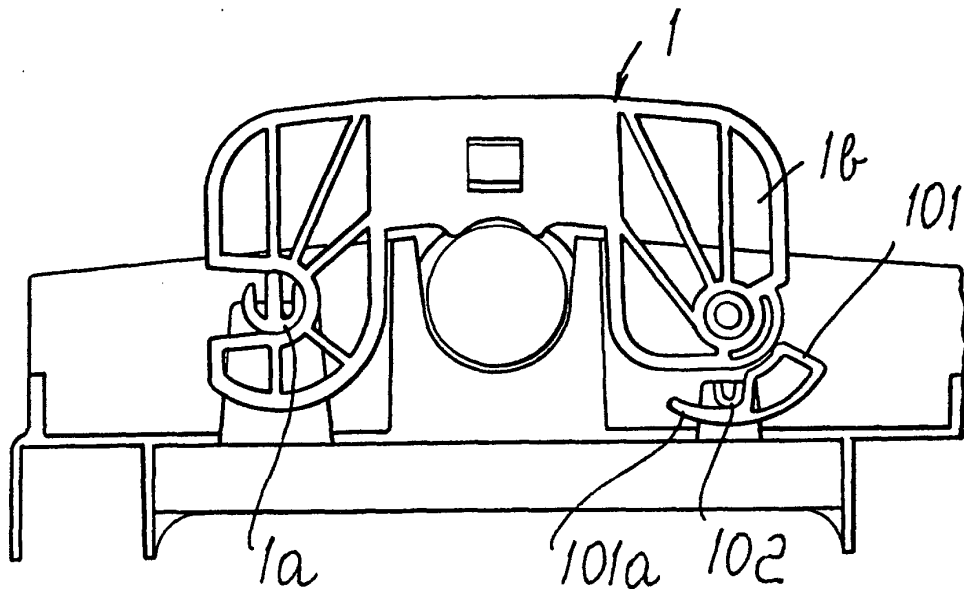


Fig. 32