

(19)



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11)

**EP 1 000 577 B1**

(12)

## EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention  
of the grant of the patent:  
**29.03.2006 Bulletin 2006/13**

(51) Int Cl.:  
**A47K 10/42<sup>(2006.01)</sup> B65D 43/16<sup>(2006.01)</sup>**

(21) Application number: **98870244.5**

(22) Date of filing: **09.11.1998**

(54) **A container**

Dose

Boîte

(84) Designated Contracting States:  
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL  
PT SE**

(43) Date of publication of application:  
**17.05.2000 Bulletin 2000/20**

(60) Divisional application:  
**06000598.0**

(73) Proprietor: **THE PROCTER & GAMBLE COMPANY**  
**Cincinnati, Ohio 45202 (US)**

(72) Inventors:  
• **Tack, Joris Josef Gustaaf**  
**I-00124 Rome (IT)**  
• **Ratti, Michela (NMN)**  
**I-00153 Trastevere**  
**Rome (IT)**

(74) Representative: **Kremer, Véronique Marie**  
**Joséphine et al**  
**Procter & Gamble Service GmbH**  
**Sulzbacher Strasse 40-50**  
**65823 Schwalbach/Ts. (DE)**

(56) References cited:  
**EP-A1- 0 952 088 WO-A1-98/19933**  
**DE-A1- 4 241 964 US-A- 2 033 295**  
**US-A- 3 967 756 US-A- 3 986 479**  
**US-A- 4 513 877 US-A- 5 040 680**  
**US-A- 5 459 206 US-A- 5 785 179**

Remarks:

The file contains technical information submitted after  
the application was filed and not included in this  
specification

**EP 1 000 577 B1**

Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

## Description

**For the following Contracting State(s): FR, GB, NL, SE**

**[0001]** The present invention relates to a container with an automatic opening, in particular to a container for wetted wipes.

**[0002]** Containers for wetted wipes are representative of the various containers for consumer products to which the present invention can apply; such containers typically comprise, a body of the container constructed so that it can contain a stack or a roll of wetted wipes, and a closing device adapted to fit on the body to cover its opening. Such a closing device comprises a stationary cover directly fitting on the upper opening of the body and a movable lid having its base end movably attached to one side end of an opening formed in a central zone of the stationary cover, and through which the wetted wipes will be picked out one by one. Usually, the dispensing opening is located in the central part of the stationary cover. A spring means is further provided as a link between the stationary cover and the movable lid, which is charged with an elastic energy when the lid is in the closed position. Finally, a releasable locking mechanism allows to releasably secure the movable lid in the closed position together with the stationary cover. When the lock is released, the elastic energy contained in the spring element forces the lid in the open position automatically.

**[0003]** The following references are directed to containers for wetted wipes including such a closing/dispensing device: European Patent Application EP-O-748 748 A 1, Unicharm Corp., published 18.12.1996: teaches a container for wetted wipes comprising a container body, a movable lid which is hinged to a stationary cover. A rubber-like strip is provided, combined to a releasable lock for automatic opening of the package; European patent application EP-0-832823 A1, to Beiersdorf. It discloses a container which comprises a base onto which a stationary cover is fitted. The stationary cover comprises an opening which is opposite to the bottom side of the tub. The opening is open/closed by a hinged lid, which is automatically opened by action of a spring element located between the movable lid and the stationary cover. Cover and lid are secured in closed position by means of a lock. The lock comprises a protrusion of the movable lid which fits into a recess of the stationary cover. The lock is released by pushing on a recessed portion of the cover. US-A-3986479 discloses a further container for wetted wipes.

**[0004]** A main problem with the above mentioned inventions is that in some cases, the container is to be filled with wetted wipes which are moistened with a lotion, for example a disinfectant lotion, comprising volatile chemicals and/or organic solvents, such as alcohols. Then, there is a risk that these chemicals be released in the atmosphere, and thus, that the wipes dry out after a short period of storage, thus losing their specific properties, for

example their disinfectant properties.

**[0005]** It is therefore one main object of the present invention to provide the user with a container for wetted wipes which is easy to handle, especially when only one hand is available to manipulate the package and its contents, and which has gas-tight properties which prevent evaporation of the lotion impregnated in the wipes during storage.

**[0006]** It is another optional object of the present invention to provide a container which does not contain overhang nor sharp edges near the dispensing portion of the container.

**[0007]** It is further optional object of the present invention to provide a container in which the spring open mechanism is not accessible from the outside of the container, especially at the time the container is being refilled.

**[0008]** The present invention is directed to a container for wetted wipes and which is defined in claim 1.

**[0009]** Preferably, a spring element is located between said stationary cover and said movable lid, and is charged with an elastic energy when the movable lid is in closed position and releasable locking mechanism is located between the stationary cover and the movable lid for releasably securing the movable lid in the closed position onto the stationary cover. Furthermore and preferably, the spring element is a metallic single or multiple winding coil spring with two elongated ends, and the gas-tight means is an annular rubber-based, or flow-in silicon elastomer gasket seal which is located along the periphery of the stationary cover's dispensing opening.

**[0010]** The invention will now be explained in detail with reference to the accompanying drawings, in which:

- Figure 1 is a perspective view of the container with movable lid in the open position, showing the dispensing opening surrounded by the gasket seal.
- Figure 2 is an enlarged perspective view showing a preferred embodiment of the hinge linking the movable lid and the stationary cover with integrated spring element.
- Figure 3 is a profile view of the tub in open position showing how the movable lid is hinged to the stationary cover.
- Figure 4 is an enlarged profile view showing the hinge connecting the movable lid and the stationary cover.
- Figure 5 is an enlarged profile view of the front portions of the stationary cover and movable lid showing the locking mechanism in its closed position and the gasket seal.

**[0011]** Referring to figures 1 and 3, a container (1) is made of a closing device (10) which fits onto a container body (11), or is a part of the container body (11). The container body (11) can have any shape suitable for containing a stack or a roll of wipes, preferably wetted wipes, and more preferably wipes wetted with a disinfectant lotion. Said shape can be either cylindrical, polygonal, but

is preferably parallelepipedic. The closing device (10) comprises a stationary cover (12) and a movable lid (13) both made of a suitable synthetic resin material. The container (1) further comprises a releasable locking mechanism (14) which holds said container in the closed position, and a spring element (15) which allows automatic opening of the movable lid (13) relatively to the rest of the container, thus giving access to the container contents. The container (1) also comprises a gas-tight means (16) which prevents drying out of the wipes during storage.

**[0012]** Preferably, the wipes are contained inside a flexible pouch which is placed into the container body (11). In this way, the container (1) is made re-usable, and the refill operation is merely achieved by placing new pouches of wipes into the same container (1). The pouch is preferably made out of a laminate material with good gas-tight properties, so as to prevent drying out of the wipes contained inside. The pouch shall also be of a material which is chemically resistant to organic solvents or oils, especially solvents which are used for cleaning purposes, either separately or in a combination.

**[0013]** The contents of the container can be any kind of wetted wipe which comprises a volatile component, but is preferably an at least partially paper based product, more preferably wetted wipes for body care purposes, or for household cleaning purposes. Such wipes are for example made of a base out of wood-pulp (i.e. cellulose) together with a synthetic additive, for example a polyester resin. Alternatively, the wipes are made out of a synthetic resin exclusively, such as for example polypropylene or polyester non-woven fabric. An adhesive can also be provided to link the different components of the wipe, for example in case a cellulose base is mixed with a synthetic material.

**[0014]** Such wipes can be used in any form, for example they can be dry, or wet, and can be directed to body care or household purposes. In a preferred embodiment of the present embodiment of the present invention, the container contains wipes moistened with a disinfectant and/or cleaning lotion, which is to be used for household cleaning purposes. While any composition suitable for achieving cleaning purposes may be used, the disinfectant lotion is preferably an alcohol-based liquid, which further contains ingredients such as surfactants, perfumes, colorants. More preferably, the lotion contains water, hydrogen peroxide, C12-14 amine oxide, ethanol, thymol, citric acid, di-ethylen glycol mono-butyl ether, propylene glycol butyl ether, polypropylene glycol mono-butyl ether, butylated hydroxyl toluene, salicylic acid, geraniol, and at least one perfume component. Such disinfectant wipes are to be used for hard-surface cleaning usage, for example for cleaning furniture or appliances. Other examples of lotions which can be used for wetting the wipes are also disclosed in the following applications: WO 9725404, or WO 9725106 both filed 8 January 1997 by Procter & Gamble.

**[0015]** In a first and preferred embodiment of the

present invention, the container body (11) comprises a bottom wall (17), back (18), front (19), right (20) and left (21) side walls defining a substantially parallelepipedic hollow receptacle, the container body's top side being wide open so as to define an upper opening. A flange extends along an outer peripheral edge of said opening onto which the closing device (10) is fitted. The container body (11) is made from any suitable thermoplastic material such as for example polyethylene or polypropylene resins.

**[0016]** The stationary cover (12) is integrally molded with said container body (11), such as to form its top wall, and the bottom wall of said container is open, preferably wide open, so as to constitute a refill opening. A removable, and preferably flexible cover is fitted onto said refill opening.

**[0017]** Optionally but preferably the base surface of the container is greater than its top surface, so as to increase the stability of said container (1). Moreover, the bottom side of the container body (11) or the removable cover comprises at least one non-skid portion which is made out of a material whose flexibility and Young modulus are such as to prevent sliding of the container when it is standing on a support such as table or a shelf, and being manipulated by the user. In the first of the two preceding embodiments of the present invention, the non-skid portion is preferably achieved by at least four suction naps or rubber-like plots. More preferably, these naps or plots are not separate elements inserted nor glued at the surface of the container body (11), but they are integrally molded with the bottom side of the container body (11) so that they cannot be separated from the rest of the container. The reason for this is to prevent that young children could accidentally detach them and try to ingest them, thus risking suffocation. Any known process shall be used to manufacture the container body (11), such as for example injection molding process. In the case non-skid suction naps or rubber-like plugs are present at the bottom side of the container body (11), a multi-injection molding process is preferred.

**[0018]** As shown in figures 1 to 4, the stationary cover (12) is a plate-like element which is integrally molded with the container body (11). Said stationary cover (12) comprises firstly, a top side (22) with at least one dispensing opening (23). Said stationary cover (12) further comprises peripheral walls (24) which are integrally molded with said top side, and extend downwardly. In a preferred embodiment of the present invention, the container is substantially parallelepipedic, and thus, the stationary cover (12) comprises four peripheral walls, namely front, back, left and right peripheral walls. These peripheral walls are constructed to fit with the peripheral flange of the container body (11) in such a way that the assembly features excellent gas-tight properties. An additional gas-tight means is provided between the closing device (10) and the container body (11) which is a rubber-like seal which is formed of silicone elastomer and is located along the periphery of the tub between these

two parts.

**[0019]** At least one of the walls of the stationary cover (12), preferably at least its front wall, comprises a protruding portion (25), for example a catch, which cooperates with a recess or another protrusion (26) of the movable lid (13), so as to form a releasable locking mechanism (14) when the movable lid (13) is mounted onto the stationary cover (12).

**[0020]** The stationary cover (12) comprises one or more, preferably one, dispensing opening (23) at its top part. Said dispensing opening (23) can be a separate part which is added to the stationary cover (12), but is preferably an integral portion of the stationary cover (12).

**[0021]** In a first and preferred embodiment of the present invention, said dispensing opening (23) is a wide open portion of the stationary cover (12). Its surface is comprised within the range of 5 to 95% of the surface of the stationary cover's top side, preferably within the range of 20 to 75% of the surface of the stationary cover's top side. This type of opening is particularly efficient when the contents is wetted wipes, which are not interleaved, and thus are removed one by one without interaction between them.

**[0022]** In a second embodiment of the present invention, the dispensing opening (23) is a restricted opening of the stationary cover's top side. This type of opening is particularly efficient for one by one removal of sheet-like material, for example wetted wipes, which are packed under the form of a stack in an interfolded zigzag manner, so referred to in the art as pop-up dispensing. As a wipe is dispensed, the leading edge of said wipe furls onto the edges of one portion of the opening, then as the next wipe is dispensed, its leading edge furls onto the edges of the opposite portion of the opening, and this continues in an alternating manner as first one and then a next wipe is dispensed. This arises because the wipes are folded in an alternating zigzag pattern whereby the wipes are pulled up from first the front of the tub and then the rear, alternately.

**[0023]** In both of the two preceding embodiments of the dispensing opening (23), especially in case the contents is sheet-like material such as wipes, an alternative manner of packing is to make a continuous roll of wipes. Preferably, the roll comprises transverse precuts at intervals along its length, such as to facilitate tearing and dispensing of the wipes one by one from the roll. In this case, one edge portion of the dispensing opening (23) preferably comprises a means, for example, a series of teeth or conic-shaped sharp profiles which is to be used to facilitate the blocking of the wipe in its desired length and to cut the dispensed wipe from the roll.

**[0024]** The stationary cover (12) further features at least one elastically deformable portion which is to be used as a push-button means (27) in cooperation with the releasable locking mechanism (14), as will be described later in the present description. Said push-button (27) is located near to the protrusion (25) of the stationary cover (12), preferably between the front edge of the sta-

tionary cover (12) and the front part of the dispensing opening (23).

**[0025]** in a first and preferred embodiment of this invention, said elastically deformable portion (27) is an integral portion of the stationary cover (12). For example, it can be a portion of the stationary cover (12) whose thickness is reduced, so as to improve its flexibility. Preferably, it is located in a recessed portion of the stationary cover (12).

**[0026]** In a second embodiment, the deformable portion (27) is a separate element which is fitted, for example clipped, onto the stationary cover (12), in such a way that it can be elastically displaced. For example, it can be a bascule push-button (27), onto which the protrusion of the stationary cover (12) is connected.

**[0027]** At least one attaching means is also provided onto the stationary cover (12), preferably at its rear end, more preferably near to one of the hinge elements. Said attaching means is for attaching one portion of the spring element (15). Preferably, said attaching means is a locating seat with the shape of a recess provided with a hook-like element or a small groove (30) which catches one end of the spring element (15). More preferably, said locating seat is covered so that access to the middle part of the spring element (15) is not possible.

**[0028]** Optionally but preferably, the stationary cover (12) features a groove (30) which is located all along the periphery of the dispensing opening (23). The gas-tight means (16) is to be located into this groove (30), and the peripheral walls (31) of the movable lid are fitted inside this groove (30) when said movable lid (13) is in the closed position, as shown in figure 5.

**[0029]** As shown in figures 1 and 2, the movable lid (13) is a plate-like element, with a polygonal or rounded shape, preferably rectangular. It comprises a top side with peripheral walls (31), namely, front, back, left and right walls extending downwardly from said top side. Its dimensions are such that it completely overlaps the dispensing opening (23) of the stationary cover (12) when the container is in the closed position.

**[0030]** in a first embodiment of the present invention, the movable lid (13) is an integral part of the stationary cover (12), and is movably connected to said stationary cover (12) through a living hinge. Said living hinge is preferably located at the rear side of said stationary cover (12) and movable lid (13).

**[0031]** In a second and preferred embodiment of the present invention, the movable lid (13) is a separate element from the stationary cover (12). At least two hinge elements (28) of the stationary cover are located in said stationary cover's top side, preferably in its rear portion, which cooperate with corresponding hinge elements (29) of the movable lid, so that said movable lid (13) can be movably attached to the stationary cover (12). Preferably, said hinge elements (28) of the stationary cover take the form of two circular recesses into which pin elements of the movable lid (13) are fitted, as is shown in figures 2 and 4.

**[0032]** At least one of the movable lids outside peripheral walls, preferably at least its front-wall, comprises a portion which fits with the protrusion (25) of the stationary cover (12) so as to create a releasable locking mechanism (14) when the lid is mounted onto said stationary cover (12). Said portion of the movable lid (13) can be a recess or a protrusion (26). In case it is a recess, the protrusion of the stationary cover (12) is designed to releasably fit into it, so as to releasably secure the movable lid (13) in the closed position. In case said portion of the movable lid is a protrusion (26) it is located below the protrusion of the stationary cover (12) when said movable lid (13) is in the closed position relatively to the stationary cover (12), as shown in figure 5.

**[0033]** Optionally but preferably, the movable lid (13) features a protruding secondary wall which is located inside the peripheral walls and cooperates with the groove (30) of the stationary cover (12) located along the periphery of the dispensing opening.

**[0034]** As shown in figure 2, one or more spring element(s) (15), preferably one, is attached in at least one point to the stationary cover (12) and in at least one other point to the movable lid (13), so that when the container is in the closed position, said spring element (15) is charged with a sufficient elastic energy to automatically open the movable lid (13) under the elasticity of said spring element (15), as soon as the locking mechanism (14) is released by the user. Said elastic energy can either be of the compression, torsion, or stretching type, but is preferably of the compression type. The spring element (15) is made of a material with excellent elastic properties, such as to allow efficient opening of the lid when the locking mechanism (14) is released, on a long period of use. The material must be such that it does not react with the lotion which impregnates the wipes, and specifically with the volatile ingredients which are released when the container (1) is opened during use. Such reactions, even minor would lead to loss of the material's spring properties, and the automatic opening feature of the container would be reduced or even stopped.

**[0035]** In one embodiment of the present invention, the spring element (15) is made out of a rubber-like elastic material, which can be either based on natural or synthetic rubber. In another embodiment of the invention, the spring element (15) is made out of a metal-based material. In both of the preceding embodiments, the shape of the spring element (15) is any shape suitable for achieving excellent spring properties, while being easy and cheap to manufacture. For example, the spring element (15) can have the shape of a flat blade which is located between the movable lid (13) and the stationary cover (12), and which is bent between these two parts when the movable lid (13) is in the closed position and thus charged with elastic energy.

**[0036]** In a second and preferred embodiment of the present invention, and as shown in figure 2, the spring element (15) is a high grade stainless steel single or multiple winding coil spring with two elongated ends. The

high grade stainless steel resists corrosion, it ensures a long-term constant efficiency of the spring, while being cheaper than synthetic rubber springs to manufacture. It is fixed at its one end to the attaching means of the stationary cover (12), while its other end is fixed to the attaching means of the movable lid (13), such that once fixed between these two parts, it is charged with an elastic energy when the lid is in the closed position. More preferably, in the case the spring element (15) is a metallic spring, it is placed in a locating seat which separates it from the contents especially during the dispensing operation. Preferably, the locating seat is not only a recess into which the spring element (15) is located, but it is also covered by a part, such that the spring's ends are free to move, but the center part of the spring element (15) is not accessible. The reasons for this are: firstly when dispensing a wipe, one part of the spring element may damage or tear the wipe, and secondly the locating seat prevents access to the spring element (15), especially by children, and thus accidental removal.

**[0037]** In any of the two preceding embodiments of the present invention, the spring element (15) is integrated to at least the movable lid (13) or the stationary cover (12). In the case the spring element (15) is a rubber-like material it is preferably co-molded, via a multi-injection molding process or the like, together with the movable lid (13) and/or the stationary cover (12). In the case the spring element (15) is made of a metallic material, it is bonded to the stationary cover (12) and/or the movable lid (13) by a heat stacking process, an ultrasonic welding process or any other similar and suitable process.

**[0038]** Optionally but preferably in any of the preceding embodiments, the spring element (15) can be colored to match the color of the stationary cover (12) and the movable lid (13).

**[0039]** As shown in figures 1 and 5, a releasable locking mechanism (14) is achieved by at least one protrusion (25), for example a catch of the stationary cover (12) which fits with one or more, preferably one corresponding protrusion (26) or recess of the movable lid (13).

**[0040]** In one embodiment of this invention, the releasable locking mechanism (14) is directly released by displacing a separate movable element of the stationary cover (12), for example a bascule push-button (27), onto which said protrusion of the stationary cover (25) is connected, thus disengaging said protrusion (25) of the stationary cover from said recess or protrusion (26) of the movable lid. In another and preferred embodiment of the invention, and as shown in figure 5, the releasable locking mechanism (14) is indirectly released when the user applies an elastic deformation onto an area of the stationary cover (12) which is located close enough to said releasable locking mechanism (14), thus disengaging said protrusion (25) of the stationary cover (12) from said recess or protrusion (26) of the movable lid (13). Said deformable area constitutes a push-button (27) means which has preferably the form of a recessed portion of the stationary cover (12), located between the front edge of said sta-

tionary cover (12), and the front edge of the dispensing opening (as shown in figures 1 and 5). Said elastic deformation should be achievable with only a limited applied strength such as to allow to use a single finger to release the releasable locking mechanism (14).

**[0041]** As previously described, the container contents is preferably wipes wetted with a disinfectant lotion, said lotion comprising volatile components in its composition, such as alcohol. Thus, to prevent that the wipes dry out once the flexible pouch has been opened, the container (1) is provided with a gas-tight means (16) which is positioned between the stationary cover (12) and the movable lid (13).

**[0042]** A structural gas-tightness is achieved between the stationary cover (12) and the container body (11) by the special construction of the connecting surfaces between these two parts. More specifically, the design of the container body's flange, and the design of the stationary cover's peripheral walls are such that these two parts are fitted to each other in a very tight manner and interconnected. In that way, once the container body (11) is closed by the stationary cover (12), the vapor transmission between the two is decreased to a value sufficiently low to prevent evaporation of the lotion volatile components, and to prevent that the lotion overall composition be substantially modified over the normal period of storage and use of the wipes. Such a construction is not possible for the surfaces between the stationary cover (12) and the movable lid (13) because the lid must be automatically opened by the elastic energy contained in the spring element (15), when the releasable locking mechanism (14) is released. Said elastic energy is sufficient to carry the weight of the movable lid (13) from an horizontal (i.e. closed) position to a wide open position (i.e. opening angle comprised within the range of 35 to 180°, preferably between 90 and 135°). However it is not sufficient to exert a force to extract the lid from the cover if the contact surfaces between the two are interconnected and tightly maintained to each other.

**[0043]** In order to allow excellent gas-tight properties of the container - compatible with the highly volatile nature of the lotion contained inside - while keeping the benefit of the automatic opening, a gasket seal (16) is positioned all around the dispensing opening (23) of the stationary cover (12), preferably into a groove (30). The gasket seal (16) can have any cross-section shape, for example it can be annular, but it is preferably shaped like a meniscus such that its top part comprises a central groove-like portion, as shown in the cross sectional view in figure 5. Said gasket seal is formed of silicon elastomer.

**[0044]** In a preferred embodiment of this invention, the gasket seal (16) is obtained by mixing one or more liquid component(s) into the groove (30) of the stationary cover, and then cure them in place. More preferably, the gasket is obtained by mixing a curable liquid form organopolysiloxane and a liquid form silicon based cross-linker curing agent. Such technique is usually so-called as "flow-in" cure in place. The cure chemistry of the silicon gasket is

a condensation reaction of OH-terminated poly-alkyl-siloxanes with functional poly-alkoxy-silanes. Most preferably a catalyst is used to facilitate the reactions. The basic reaction during the formation of the elastomer is between the terminate OH-group and the alkoxy-group. The desired gasket properties are achieved by a selective selection of the alkenyl or alkyl groups bonded to the Si atoms.

**[0045]** Application of the liquid components is preferably achieved by using a nozzle which moves above the groove (30) of the stationary cover, all around the periphery of the dispensing opening (23) and applies the liquid components of the gasket seal. When such a technique is used, no element of the stationary cover can be designed which would be protruding above the groove (30) because the passage for the liquid applying nozzle must be free all along said groove (30). For example, the releasable locking mechanism cannot comprise a protrusion of the stationary cover which fits into a recess of the movable lid: such a construction would require that said protrusion of the stationary cover would extend above the groove (30) which is not acceptable for the flow-in process.

**[0046]** In our preferred embodiment of the present invention, the gasket seal (16) is applied by flow-in, as previously described. This is the reason why the releasable locking mechanism (14) comprises a protrusion of the movable lid which is engaged under a corresponding protrusion of the stationary cover, when the tub is in the closed position. Such a construction is achieved by a protrusion of the stationary cover whose length is limited, such that it does not protrude over the groove (30). In this way, the nozzle which applies the liquid components of the gasket is free to move all along the groove's length.

**[0047]** Alternatively, the gasket seal (16) is applied as a preformed, solid, component which is fitted into the groove (30). When the movable lid (13) is locked in the closed-position, the gasket-seal (16) is compressed between the stationary cover (12) and said movable lid (13), as shown in figure 5, and all along its periphery. In this way, no volatile compounds can migrate from the inside of the container to the outside, and the wipes remain moistened with the lotion. More importantly, it is believed that such a system will allow to keep the proportions of lotion components substantially equal over the normal period of storage and use of a stack of wipes, thus keeping the cleaning and disinfectant properties of the wipes substantially the same all along the period of use of one stack of wipes.

**[0048]** The stationary cover (12), the movable lid (13), and the container body (11), are molded from a polypropylene material or any other suitable thermoplastic materials such as polyethylene, polystyrene, acrylonitril butadiene styrene (ABS), polyester, polyvinyl chloride, polycarbonate or elastomer, or a blend of these compounds. Preferably, the stationary cover (12) and the container body (11) are made out of a polypropylene, and the movable lid (13) is made out of an acryloni-

trile-butadiene-styrene resin (or ABS). ABS resin provides the movable lid (13) with high solidity and resistance to flexion, as well as excellent resistance to solvents, especially volatile solvents which could be comprised within the composition of a lotion for impregnating cleaning wipes.

**[0049]** Optionally, in any of the preceding versions of the present invention, in which the closing device (10) is a separate element that fits onto the container body (11), said container body (11) comprises an upper opening, with an external peripheral upper edge and a flange which shall extend therefrom; the internal surfaces of this upper opening comprise ribs and/or grooves that extend along the periphery of the container body (11). Said ribs and/or grooves fit into corresponding ribs and/or grooves of the stationary cover (12) in such a way that no step nor overlap results from the assembling, and the surface of the package especially on its top part is regular and does not include sharp edges.

**For the following Contracting State(s): AT, BE, CH, DE, DK, ES, FI, GR, IE, IT, LI, LU, PT**

**[0050]** The present invention relates to a container with an automatic opening, in particular to a container for wetted wipes.

**[0051]** Containers for wetted wipes are representative of the various containers for consumer products to which the present invention can apply; such containers typically comprise, a body of the container constructed so that it can contain a stack or a roll of wetted wipes, and a closing device adapted to fit on the body to cover its opening. Such a closing device comprises a stationary cover directly fitting on the upper opening of the body and a movable lid having its base end movably attached to one side end of an opening formed in a central zone of the stationary cover, and through which the wetted wipes will be picked out one by one. Usually, the dispensing opening is located in the central part of the stationary cover. A spring means is further provided as a link between the stationary cover and the movable lid, which is charged with an elastic energy when the lid is in the closed position. Finally, a releasable locking mechanism allows to releasably secure the movable lid in the closed position together with the stationary cover. When the lock is released, the elastic energy contained in the spring element forces the lid in the open position automatically.

**[0052]** The following references are directed to containers for wetted wipes including such a closing/dispensing device: European Patent Application EP-O-748 748 A 1, Unicharm Corp., published 18.12.1996: teaches a container for wetted wipes comprising a container body, a movable lid which is hinged to a stationary cover. A rubber-like strip is provided, combined to a releasable lock for automatic opening of the package; European patent application EP-0-832823 A1, to Beiersdorf. It discloses a container which comprises a base onto which a stationary cover is fitted. The stationary cover comprises an

opening which is opposite to the bottom side of the tub. The opening is open/closed by a hinged lid, which is automatically opened by action of a spring element located between the movable lid and the stationary cover. Cover and lid are secured in closed position by means of a lock. The lock comprises a protrusion of the movable lid which fits into a recess of the stationary cover. The lock is released by pushing on a recessed portion of the cover.

**[0053]** US-A-3986479 discloses a further container for wetted wipes.

**[0054]** A main problem with the above mentioned inventions is that in some cases, the container is to be filled with wetted wipes which are moistened with a lotion, for example a disinfectant lotion, comprising volatile chemicals and/or organic solvents, such as alcohols. Then, there is a risk that these chemicals be released in the atmosphere, and thus, that the wipes dry out after a short period of storage, thus losing their specific properties, for example their disinfectant properties.

**[0055]** It is therefore one main object of the present invention to provide the user with a container for wetted wipes which is easy to handle, especially when only one hand is available to manipulate the package and its contents, and which has gas-tight properties which prevent evaporation of the lotion impregnated in the wipes during storage.

**[0056]** It is another optional object of the present invention to provide a container which does not contain overhang nor sharp edges near the dispensing portion of the container.

**[0057]** It is further optional object of the present invention to provide a container in which the spring open mechanism is not accessible from the outside of the container, especially at the time the container is being refilled.

**[0058]** The present invention is directed to a container for wetted wipes and which is defined in claim 1.

**[0059]** Preferably, a spring element is located between said stationary cover and said movable lid, and is charged with an elastic energy when the movable lid is in closed position and releasable locking mechanism is located between the stationary cover and the movable lid for releasably securing the movable lid in the closed position onto the stationary cover. Furthermore and preferably, the spring element is a metallic single or multiple winding coil spring with two elongated ends, and the gas-tight means is an annular rubber based, or preferably fow-in silicon elastomer gasket seal which is located along the periphery of the stationary cover's dispensing opening.

**[0060]** The invention will now be explained in detail with reference to the accompanying drawings, in which:

- Figure 1 is a perspective view of the container with movable lid in the open position, showing the dispensing opening surrounded by the gasket seal.
- Figure 2 is an enlarged perspective view showing a preferred embodiment of the hinge linking the movable lid and the stationary cover with integrated spring element

- Figure 3 is a profile view of the tub in open position showing how the movable lid is hinged to the stationary cover.
- Figure 4 is an enlarged profile view showing the hinge connecting the movable lid and the stationary cover.
- Figure 5 is an enlarged profile view of the front portions of the stationary cover and movable lid showing the locking mechanism in its closed position and the gasket seal.

**[0061]** Referring to figures 1 and 3, a container (1) is made of a closing device (10) which fits onto a container body (11), or is a part of the container body (11). The container body (11) can have any shape suitable for containing a stack or a roll of wipes, preferably wetted wipes, and more preferably wipes wetted with a disinfectant lotion. Said shape can be either cylindrical, polygonal, but is preferably parallelepipedic. The closing device (10) comprises a stationary cover (12) and a movable lid (13) both made of a suitable synthetic resin material. The container (1) further comprises a releasable locking mechanism (14) which holds said container in the closed position, and a spring element (15) which allows automatic opening of the movable lid (13) relatively to the rest of the container, thus giving access to the container contents. The container (1) also comprises a gas-tight means (16) which prevents drying out of the wipes during storage.

**[0062]** Preferably, the wipes are contained inside a flexible pouch which is placed into the container body (11). In this way, the container (1) is made re-usable, and the refill operation is merely achieved by placing new pouches of wipes into the same container (1). The pouch is preferably made out of a laminate material with good gas-tight properties, so as to prevent drying out of the wipes contained inside. The pouch shall also be of a material which is chemically resistant to organic solvents or oils, especially solvents which are used for cleaning purposes, either separately or in a combination.

**[0063]** The contents of the container can be any kind of wetted wipe which comprises a volatile component, but is preferably an at least partially paper based product, more preferably wetted wipes for body care purposes, or for household cleaning purposes. Such wipes are for example made of a base out of wood-pulp (i.e. cellulose) together with a synthetic additive, for example a polyester resin. Alternatively, the wipes are made out of a synthetic resin exclusively, such as for example polypropylene or polyester non-woven fabric. An adhesive can also be provided to link the different components of the wipe, for example in case a cellulose base is mixed with a synthetic material.

**[0064]** Such wipes can be used in any form, for example they can be dry, or wet, and can be directed to body care or household purposes. In a preferred embodiment of the present embodiment of the present invention, the container contains wipes moistened with a disinfectant

and/or cleaning lotion, which is to be used for household cleaning purposes. While any composition suitable for achieving cleaning purposes may be used, the disinfectant lotion is preferably an alcohol-based liquid, which further contains ingredients such as surfactants, perfumes, colorants. More preferably, the lotion contains water, hydrogen peroxide, C12-14 amine oxide, ethanol, thymol, citric acid, di-ethylen glycol mono-butyl ether, propylene glycol butyl ether, polypropylene glycol mono-butyl ether, butylated hydroxyl toluene, salicylic acid, geraniol, and at least one perfume component. Such disinfectant wipes are to be used for hard-surface cleaning usage, for example for cleaning furniture or appliances. Other examples of lotions which can be used for wetting the wipes are also disclosed in the following applications: WO 9725404, or WO 9725106 both filed 8 January 1997 by Procter & Gamble.

**[0065]** In a first and preferred embodiment of the present invention, the container body (11) comprises a bottom wall (17), back (18), front (19), right (20) and left (21) side walls defining a substantially parallelepipedic hollow receptacle, the container body's top side being wide open so as to define an upper opening. A flange extends along an outer peripheral edge of said opening onto which the closing device (10) is fitted. The container body (11) is made from any suitable thermoplastic material such as for example polyethylene or polypropylene resins.

**[0066]** The stationary cover (12) is integrally molded with said container body (11), such as to form its top wall, and the bottom wall of said container is open, preferably wide open, so as to constitute a refill opening. A removable, and preferably flexible cover is fitted onto said refill opening.

**[0067]** Optionally but preferably the base surface of the container is greater than its top surface, so as to increase the stability of said container (1). Moreover, the bottom side of the container body (11) or the removable cover comprises at least one non-skid portion which is made out of a material whose flexibility and Young modulus are such as to prevent sliding of the container when it is standing on a support such as table or a shelf, and being manipulated by the user. In the first of the two preceding embodiments of the present invention, the non-skid portion is preferably achieved by at least four suction naps or rubber-like plots. More preferably, these naps or plots are not separate elements inserted nor glued at the surface of the container body (11), but they are integrally molded with the bottom side of the container body (11) so that they cannot be separated from the rest of the container. The reason for this is to prevent that young children could accidentally detach them and try to ingest them, thus risking suffocation. Any known process shall be used to manufacture the container body (11), such as for example injection molding process. In the case non-skid suction naps or rubber-like plugs are present at the bottom side of the container body (11), a multi-injection molding process is preferred.

**[0068]** As shown in figures 1 to 4, the stationary cover (12) is a plate-like element which is integrally molded with the container body (11). Said stationary cover (12) comprises firstly, a top side (22) with at least one dispensing opening (23). Said stationary cover (12) further comprises peripheral walls (24) which are integrally molded with said top side, and extend downwardly. In a preferred embodiment of the present invention, the container is substantially parallelepipedic, and thus, the stationary cover (12) comprises four peripheral walls, namely front, back, left and right peripheral walls. These peripheral walls are constructed to fit with the peripheral flange of the container body (11) in such a way that the assembly features excellent gas-tight properties. An additional gas-tight means is provided between the closing device (10) and the container body (11) which is a rubber-like seal which is preferably formed of silicone elastomer and is located along the periphery of the tub between these two parts.

**[0069]** At least one of the walls of the stationary cover (12), preferably at least its front wall, comprises a protruding portion (25), for example a catch, which cooperates with a recess or another protrusion (26) of the movable lid (13), so as to form a releasable locking mechanism (14) when the movable lid (13) is mounted onto the stationary cover (12).

**[0070]** The stationary cover (12) comprises one or more, preferably one, dispensing opening (23) at its top part. Said dispensing opening (23) can be a separate part which is added to the stationary cover (12), but is preferably an integral portion of the stationary cover (12).

**[0071]** In a first and preferred embodiment of the present invention, said dispensing opening (23) is a wide open portion of the stationary cover (12). Its surface is comprised within the range of 5 to 95% of the surface of the stationary cover's top side, preferably within the range of 20 to 75% of the surface of the stationary cover's top side. This type of opening is particularly efficient when the contents is wetted wipes, which are not interleaved, and thus are removed one by one without interaction between them.

**[0072]** In a second embodiment of the present invention, the dispensing opening (23) is a restricted opening of the stationary cover's top side. This type of opening is particularly efficient for one by one removal of sheet-like material, for example wetted wipes, which are packed under the form of a stack in an interfolded zigzag manner, so referred to in the art as pop-up dispensing. As a wipe is dispensed, the leading edge of said wipe furls onto the edges of one portion of the opening, then as the next wipe is dispensed, its leading edge furls onto the edges of the opposite portion of the opening, and this continues in an alternating manner as first one and then a next wipe is dispensed. This arises because the wipes are folded in an alternating zigzag pattern whereby the wipes are pulled up from first the front of the tub and then the rear, alternately.

**[0073]** In both of the two preceding embodiments of

the dispensing opening (23), especially in case the contents is sheet-like material such as wipes, an alternative manner of packing is to make a continuous roll of wipes. Preferably, the roll comprises transverse precuts at intervals along its length, such as to facilitate tearing and dispensing of the wipes one by one from the roll. In this case, one edge portion of the dispensing opening (23) preferably comprises a means, for example, a series of teeth or conic-shaped sharp profiles which is to be used to facilitate the blocking of the wipe in its desired length and to cut the dispensed wipe from the roll.

**[0074]** The stationary cover (12) further features at least one elastically deformable portion which is to be used as a push-button means (27) in cooperation with the releasable locking mechanism (14), as will be described later in the present description. Said push-button (27) is located near to the protrusion (25) of the stationary cover (12), preferably between the front edge of the stationary cover (12) and the front part of the dispensing opening (23).

**[0075]** In a first and preferred embodiment of this invention, said elastically deformable portion (27) is an integral portion of the stationary cover (12). For example, it can be a portion of the stationary cover (12) whose thickness is reduced, so as to improve its flexibility. Preferably, it is located in a recessed portion of the stationary cover (12).

**[0076]** In a second embodiment, the deformable portion (27) is a separate element which is fitted, for example clipped, onto the stationary cover (12), in such a way that it can be elastically displaced. For example, it can be a bascule push-button (27), onto which the protrusion of the stationary cover (12) is connected.

**[0077]** At least one attaching means is also provided onto the stationary cover (12), preferably at its rear end, more preferably near to one of the hinge elements. Said attaching means is for attaching one portion of the spring element (15). Preferably, said attaching means is a locating seat with the shape of a recess provided with a hook-like element or a small groove (30) which catches one end of the spring element (15). More preferably, said locating seat is covered so that access to the middle part of the spring element (15) is not possible.

**[0078]** Optionally but preferably, the stationary cover (12) features a groove (30) which is located all along the periphery of the dispensing opening (23). The gas-tight means (16) is to be located into this groove (30), and the peripheral walls (31) of the movable lid are fitted inside this groove (30) when said movable lid (13) is in the closed position, as shown in figure 5.

**[0079]** As shown in figures 1 and 2, the movable lid (13) is a plate-like element, with a polygonal or rounded shape, preferably rectangular. It comprises a top side with peripheral walls (31), namely, front, back, left and right walls extending downwardly from said top side. Its dimensions are such that it completely overlaps the dispensing opening (23) of the stationary cover (12) when the container is in the closed position.

**[0080]** In a first embodiment of the present invention, the movable lid (13) is an integral part of the stationary cover (12), and is movably connected to said stationary cover (12) through a living hinge. Said living hinge is preferably located at the rear side of said stationary cover (12) and movable lid (13).

**[0081]** In a second and preferred embodiment of the present invention, the movable lid (13) is a separate element from the stationary cover (12). At least two hinge elements (28) of the stationary cover are located in said stationary cover's top side, preferably in its rear portion, which cooperate with corresponding hinge elements (29) of the movable lid, so that said movable lid (13) can be movably attached to the stationary cover (12). Preferably, said hinge elements (28) of the stationary cover take the form of two circular recesses into which pin elements of the movable lid (13) are fitted, as is shown in figures 2 and 4.

**[0082]** At least one of the movable lids outside peripheral walls, preferably at least its front-wall, comprises a portion which fits with the protrusion (25) of the stationary cover (12) so as to create a releasable locking mechanism (14) when the lid is mounted onto said stationary cover (12). Said portion of the movable lid (13) can be a recess or a protrusion (26). In case it is a recess, the protrusion of the stationary cover (12) is designed to releasably fit into it, so as to releasably secure the movable lid (13) in the closed position. In case said portion of the movable lid is a protrusion (26) it is located below the protrusion of the stationary cover (12) when said movable lid (13) is in the closed position relatively to the stationary cover (12), as shown in figure 5.

**[0083]** Optionally but preferably, the movable lid (13) features a protruding secondary wall which is located inside the peripheral walls and cooperates with the groove (30) of the stationary cover (12) located along the periphery of the dispensing opening.

**[0084]** As shown in figure 2, one or more spring element(s) (15), preferably one, is attached in at least one point to the stationary cover (12) and in at least one other point to the movable lid (13), so that when the container is in the closed position, said spring element (15) is charged with a sufficient elastic energy to automatically open the movable lid (13) under the elasticity of said spring element (15), as soon as the locking mechanism (14) is released by the user. Said elastic energy can either be of the compression, torsion, or stretching type, but is preferably of the compression type. The spring element (15) is made of a material with excellent elastic properties, such as to allow efficient opening of the lid when the locking mechanism (14) is released, on a long period of use. The material must be such that it does not react with the lotion which impregnates the wipes, and specifically with the volatile ingredients which are released when the container (1) is opened during use. Such reactions, even minor would lead to loss of the material's spring properties, and the automatic opening feature of the container would be reduced or even stopped.

**[0085]** In one embodiment of the present invention, the spring element (15) is made out of a rubber-like elastic material, which can be either based on natural or synthetic rubber. In another embodiment of the invention, the spring element (15) is made out of a metal-based material. In both of the preceding embodiments, the shape of the spring element (15) is any shape suitable for achieving excellent spring properties, while being easy and cheap to manufacture. For example, the spring element (15) can have the shape of a flat blade which is located between the movable lid (13) and the stationary cover (12), and which is bent between these two parts when the movable lid (13) is in the closed position and thus charged with elastic energy.

**[0086]** In a second and preferred embodiment of the present invention, and as shown in figure 2, the spring element (15) is a high grade stainless steel single or multiple winding coil spring with two elongated ends. The high grade stainless steel resists corrosion, it ensures a long-term constant efficiency of the spring, while being cheaper than synthetic rubber springs to manufacture. It is fixed at its one end to the attaching means of the stationary cover (12), while its other end is fixed to the attaching means of the movable lid (13), such that once fixed between these two parts, it is charged with an elastic energy when the lid is in the closed position. More preferably, in the case the spring element (15) is a metallic spring, it is placed in a locating seat which separates it from the contents especially during the dispensing operation. Preferably, the locating seat is not only a recess into which the spring element (15) is located, but it is also covered by a part, such that the spring's ends are free to move, but the center part of the spring element (15) is not accessible. The reasons for this are: firstly when dispensing a wipe, one part of the spring element may damage or tear the wipe, and secondly the locating seat prevents access to the spring element (15), especially by children, and thus accidental removal.

**[0087]** In any of the two preceding embodiments of the present invention, the spring element (15) is integrated to at least the movable lid (13) or the stationary cover (12). In the case the spring element (15) is a rubber-like material it is preferably co-molded, via a multi-injection molding process or the like, together with the movable lid (13) and/or the stationary cover (12). In the case the spring element (15) is made of a metallic material, it is bonded to the stationary cover (12) and/or the movable lid (13) by a heat stacking process, an ultrasonic welding process or any other similar and suitable process.

**[0088]** Optionally but preferably in any of the preceding embodiments, the spring element (15) can be colored to match the color of the stationary cover (12) and the movable lid (13).

**[0089]** As shown in figures 1 and 5, a releasable locking mechanism (14) is achieved by at least one protrusion (25), for example a catch of the stationary cover (12) which fits with one or more, preferably one corresponding protrusion (26) or recess of the movable lid (13).

**[0090]** In one embodiment of this invention, the releasable locking mechanism (14) is directly released by displacing a separate movable element of the stationary cover (12), for example a bascule push-button (27), onto which said protrusion of the stationary cover (25) is connected, thus disengaging said protrusion (25) of the stationary cover from said recess or protrusion (26) of the movable lid. In another and preferred embodiment of the invention, and as shown in figure 5, the releasable locking mechanism (14) is indirectly released when the user applies an elastic deformation onto an area of the stationary cover (12) which is located close enough to said releasable locking mechanism (14), thus disengaging said protrusion (25) of the stationary cover (12) from said recess or protrusion (26) of the movable lid (13). Said deformable area constitutes a push-button (27) means which has preferably the form of a recessed portion of the stationary cover (12), located between the front edge of said stationary cover (12), and the front edge of the dispensing opening (as shown in figures 1 and 5). Said elastic deformation should be achievable with only a limited applied strength such as to allow to use a single finger to release the releasable locking mechanism (14).

**[0091]** As previously described, the container contents is preferably wipes wetted with a disinfectant lotion, said lotion comprising volatile components in its composition, such as alcohol. Thus, to prevent that the wipes dry out once the flexible pouch has been opened, the container (1) is provided with a gas-tight means (16) which is positioned between the stationary cover (12) and the movable lid (13).

**[0092]** A structural gas-tightness is achieved between the stationary cover (12) and the container body (11) by the special construction of the connecting surfaces between these two parts. More specifically, the design of the container body's flange, and the design of the stationary cover's peripheral walls are such that these two parts are fitted to each other in a very tight manner and interconnected. In that way, once the container body (11) is closed by the stationary cover (12), the vapor transmission between the two is decreased to a value sufficiently low to prevent evaporation of the lotion volatile components, and to prevent that the lotion overall composition be substantially modified over the normal period of storage and use of the wipes. Such a construction is not possible for the surfaces between the stationary cover (12) and the movable lid (13) because the lid must be automatically opened by the elastic energy contained in the spring element (15), when the releasable locking mechanism (14) is released. Said elastic energy is sufficient to carry the weight of the movable lid (13) from an horizontal (i.e. closed) position to a wide open position (i.e. opening angle comprised within the range of 35 to 180°, preferably between 90 and 135°). However it is not sufficient to exert a force to extract the lid from the cover if the contact surfaces between the two are interconnectedly and tightly maintained to each other.

**[0093]** In order to allow excellent gas-tight properties

of the container - compatible with the highly volatile nature of the lotion contained inside - while keeping the benefit of the automatic opening, a gasket seal (16) is positioned all around the dispensing opening (23) of the stationary cover (12), preferably into a groove (30). The gasket seal (16) can have any cross-section shape, for example it can be -annular, but it is preferably shaped like a meniscus such that its top part comprises a central groove-like portion, as shown in the cross sectional view in figure 5. Said gasket seal is formed of rubber-based material, preferably silicon elastomer.

**[0094]** In a preferred embodiment of this invention, the gasket seal (16) is obtained by mixing one or more liquid component(s) into the groove (30) of the stationary cover, and then cure them in place. More preferably, the gasket is obtained by mixing a curable liquid form organopolysiloxane and a liquid form silicon based cross-linker curing agent. Such technique is usually so-called as "flow-in" cure in place. The cure chemistry of the silicon gasket is a condensation reaction of OH-terminated poly-alkyl-siloxanes with functional poly-alkoxy-silanes. Most preferably a catalyst is used to facilitate the reactions. The basic reaction during the formation of the elastomer is between the terminate OH-group and the alkoxy-group. The desired gasket properties are achieved by a selective selection of the alkenyl or alkyl groups bonded to the Si atoms.

**[0095]** Application of the liquid components is preferably achieved by using a nozzle which moves above the groove (30) of the stationary cover, all around the periphery of the dispensing opening (23) and applies the liquid components of the gasket seal. When such a technique is used, no element of the stationary cover can be designed which would be protruding above the groove (30) because the passage for the liquid applying nozzle must be free all along said groove (30). For example, the releasable locking mechanism cannot comprise a protrusion of the stationary cover which fits into a recess of the movable lid: such a construction would require that said protrusion of the stationary cover would extend above the groove (30) which is not acceptable for the flow-in process.

**[0096]** In our preferred embodiment of the present invention, the gasket seal (16) is applied by flow-in, as previously described. This is the reason why the releasable locking mechanism (14) comprises a protrusion of the movable lid which is engaged under a corresponding protrusion of the stationary cover, when the tub is in the closed position. Such a construction is achieved by a protrusion of the stationary cover whose length is limited, such that it does not protrude over the groove (30). In this way, the nozzle which applies the liquid components of the gasket is free to move all along the groove's length.

**[0097]** Alternatively, the gasket seal (16) is applied as a preformed, solid, component which is fitted into the groove (30). When the movable lid (13) is locked in the closed position, the gasket seal (16) is compressed between the stationary cover (12) and said movable lid (13),

as shown in figure 5, and all along its periphery. In this way, no volatile compounds can migrate from the inside of the container to the outside, and the wipes remain moistened with the lotion. More importantly, it is believed that such a system will allow to keep the proportions of lotion components substantially equal over the normal period of storage and use of a stack of wipes, thus keeping the cleaning and disinfectant properties of the wipes substantially the same all along the period of use of one stack of wipes.

**[0098]** The stationary cover (12), the movable lid (13), and the container body (11), are molded from a polypropylene material or any other suitable thermoplastic materials such as polyethylene, polystyrene, acrylonitril butadiene styrene (ABS), polyester, polyvinyl chloride, polycarbonate or elastomer, or a blend of these compounds. Preferably, the stationary cover (12) and the container body (11) are made out of a polypropylene, and the movable lid (13) is made out of an acrylonitrile-butadiene-styrene resin (or ABS). ABS resin provides the movable lid (13) with high solidity and resistance to flexion, as well as excellent resistance to solvents, especially volatile solvents which could be comprised within the composition of a lotion for impregnating cleaning wipes.

**[0099]** Optionally, in any of the preceding versions of the present invention, in which the closing device (10) is a separate element that fits onto the container body (11), said container body (11) comprises an upper opening, with an external peripheral upper edge and a flange which shall extend therefrom; the internal surfaces of this upper opening comprise ribs and/or grooves that extend along the periphery of the container body (11). Said ribs and/or grooves fit into corresponding ribs and/or grooves of the stationary cover (12) in such a way that no step nor overlap results from the assembling, and the surface of the package especially on its top part is regular and does not include sharp edges.

## Claims

### Claims for the following Contracting State(s): AT, BE, CH, DE, DK, ES, FI, GR, IE, IT, LI, LU, PT

1. A container for wetted wipes, comprising a container body (11) having a topside and a bottom side wherein the bottom side comprises a refill opening which is closed by a removable cover, a stationary cover (12) which is integral with part of the top side of the container body (11) and which comprises at least one dispensing opening (23) through which the container contents are removable, a movable lid (13) which is movably attached to the stationary cover (12), or is an integral movable part of the stationary cover (12), so as to reversibly close the dispensing opening (23),

a locking mechanism (14) which is located between the stationary cover (12) and the movable lid (13) for releasably securing the movable lid (13) in the closed position onto the stationary cover (12), and a gasket seal (16) which is located between the stationary cover (12) and the movable lid (13) and is positioned all around the dispensing opening (23), and wherein the gasket seal (16) is formed of rubber-based material, preferably silicone elastomer and the gasket seal is compressed all along its periphery between the stationary cover (12) and the movable lid (13), when the lid (13) is in the closed position, for providing a gas-tight barrier between the inside and the outside of the container when the lid (13) is releasably secured in the closed position on the stationary cover (12).

2. A container according to claim 1, wherein a spring element (15) is located between said stationary cover (12) and said movable lid (13), and is charged with an elastic energy when the movable lid is in closed position.
3. A container according to claim 2, wherein the spring element (15) is a metallic single or multiple winding coil spring with elongated ends.
4. A container according to claim 2 or claim 3 wherein the spring element (15) is made out of a synthetic or natural rubber-like material.
5. A container according to any preceding claim, wherein the locking mechanism (14) comprises a protrusion of the stationary cover (12) which engages against a corresponding protrusion of the movable lid (13), and a push-button means (27).
6. A container according to claim 5, wherein the push-button means (27) is an elastically deformable portion of the stationary cover (12), said push-button means (27) being located near enough to the protrusions of the stationary cover and the movable lid (13), to disengage said protrusion of the movable lid (13) from said protrusion of the stationary cover (12) when said push-button (27) is pressed, thus releasing the movable lid (13) into the open position.
7. A container according to any of the preceding claims, wherein the gasket seal (16) is applied as one or several liquid components which are mixed and then cured in place.
8. A container according to claim 1 to 6, wherein the gasket seal (16) is a preformed element fitted into a groove of the stationary cover.
9. A container according to any of the preceding claims, wherein the stationary cover (12) comprises ribs and

grooves which fit into corresponding ribs and grooves of the container body (11), said stationary cover (12) being adjustably attached to said container body (11) so that the resulting assembling surfaces are edgeless.

10. A container according to any of the preceding claims and containing disinfectant wipes which are folded for removal one by one from the container through the at least one dispensing opening.
11. A container according to any of the preceding claim wherein the base surface of the container is greater than its top surface, so as to increase the stability of said container.

**Claims for the following Contracting State(s): FR, GB, NL, SE**

1. A container for wetted wipes, comprising a container body (11) having a topside and a bottom side wherein the bottom side comprises a refill opening which is closed by a removable cover, a stationary cover (12) which is integral with part of the top side of the container body (11) and which comprises at least one dispensing opening (23) through which the container contents are removable, a movable lid (13) which is movably attached to the stationary cover (12), or is an integral movable part of the stationary cover (12), so as to reversibly close the dispensing opening (23), a locking mechanism (14) which is located between the stationary cover (12) and the movable lid (13) for releasably securing the movable lid (13) in the closed position onto the stationary cover (12), and a gasket seal (16) which is located between the stationary cover (12) and the movable lid (13) and is positioned all around the dispensing opening (23), and wherein the gasket seal (16) is formed of silicone elastomer and the gasket seal is compressed all along its periphery between the stationary cover (12) and the movable lid (13), when the lid (13) is in the closed position, for providing a gas-tight barrier between the inside and the outside of the container when the lid (13) is releasably secured in the closed position on the stationary cover (12) .
2. A container according to claim 1, wherein a spring element (15) is located between said stationary cover (12) and said movable lid (13), and is charged with an elastic energy when the movable lid is in closed position.
3. A container according to claim 2, wherein the spring element (15) is a metallic single or multiple winding coil spring with elongated ends.

4. A container according to claim 2 or claim 3 wherein the spring element (15) is made out of a synthetic or natural rubber-like material.
5. A container according to any preceding claim, wherein the locking mechanism (14) comprises a protrusion of the stationary cover (12) which engages against a corresponding protrusion of the movable lid (13), and a push-button means (27) .
6. A container according to claim 5, wherein the push-button means (27) is an elastically deformable portion of the stationary cover (2), said push-button means (27) being located near enough to the protrusions of the stationary cover and the movable lid (13), to disengage said protrusion of the movable lid (13) from said protrusion of the stationary cover (12) when said push-button (27) is pressed, thus releasing the movable lid (13) into the open position.
7. A container according to any of the preceding claims, wherein the gasket seal (16) is applied as one or several liquid components which are mixed and then cured in place.
8. A container according to claim 1 to 6, wherein the gasket seal (16) is a preformed element fitted into a groove of the stationary cover.
9. A container according to any of the preceding claims, wherein the stationary cover (12) comprises ribs and grooves which fit into corresponding ribs and grooves of the container body (11), said stationary cover (12) being adjustably attached to said container body (11) so that the resulting assembling surfaces are edgeless.
10. A container according to any of the preceding claims and containing disinfectant wipes which are folded for removal one by one from the container through the at least one dispensing opening.
11. A container according to any of the preceding claim wherein the base surface of the container is greater than its top surface, so as to increase the stability of said container.

**Patentansprüche**

**Patentansprüche für folgende(n) Vertragsstaat(en): AT, BE, CH, DE, DK, ES, FI, GR, IE, IT, LI, LU, PT**

1. Behälter für feuchte Wischtücher, umfassend ein Behältergehäuse (11) mit einer Oberseite und einer Unterseite, worin die Unterseite eine Nachfüllöffnung umfasst, die durch einen entfernbarer Deckel

- verschlossen ist,  
eine stationäre Abdeckung (12), die mit einem Teil der Oberseite des Behältergehäuses (11) eine Einheit bildet und mindestens eine Abgabeöffnung (23) umfasst, durch die der Inhalt des Behälters entnommen werden kann,  
einen beweglichen Deckel (13), der beweglich an der stationären Abdeckung (12) befestigt ist oder eine bewegliche Einheit der stationären Abdeckung (12) bildet, sodass die Abgabeöffnung (23) reversibel verschlossen werden kann,  
einen Verschließmechanismus (14), der sich zwischen der stationären Abdeckung (12) und dem beweglichen Deckel (13) befindet, um den beweglichen Deckel (13) in der geschlossenen Position lösbar an der stationären Abdeckung (12) zu befestigen, und  
eine Dichtung (16), die sich zwischen der stationären Abdeckung (12) und dem beweglichen Deckel (13) befindet und um die gesamte Abgabeöffnung (23) angeordnet ist,  
und worin die Dichtung (16) aus einem auf Gummi basierendem Material besteht, vorzugsweise Silikonelastomer und die Dichtung entlang ihres Umfangs zwischen der stationären Abdeckung (12) und dem beweglichen Deckel (13) zusammengepresst wird, wenn sich der bewegliche Deckel (13) in der geschlossenen Position befindet, um eine luftdichte Abgrenzung zwischen der Innenseite und der Außenseite des Behälters zu schaffen, wenn der Deckel (13) in der geschlossenen Position lösbar an der stationären Abdeckung (12) befestigt ist.
2. Behälter nach Anspruch 1, worin sich ein Federelement (15) zwischen der stationären Abdeckung (12) und dem beweglichen Deckel (13) befindet und mit elastischer Energie belastet wird, wenn sich der bewegliche Deckel in der geschlossenen Position befindet.
  3. Behälter nach Anspruch 2, worin das Federelement (15) eine metallische Spiralfeder mit einer oder mehreren Windungen und verlängerten Enden ist.
  4. Behälter nach Anspruch 2 oder 3, worin das Federelement (15) aus einem synthetischem oder natürlichem gummiähnlichen Material besteht.
  5. Behälter nach einem der vorstehenden Ansprüche, worin der Verschließmechanismus (14) einen Vorsprung der stationären Abdeckung (12), die mit einem entsprechenden Vorsprung des beweglichen Deckels (13) in Eingriff ist, und eine Druckknopfvorrichtung (27) umfasst.
  6. Behälter nach Anspruch 5, worin die Druckknopfvorrichtung (27) ein elastisch verformbarer Abschnitt der stationären Abdeckung (2) ist, wobei sich die Druckknopfvorrichtung (27) so nah an den Vorsprüngen der stationären Abdeckung und des beweglichen Deckels (13) befindet, dass der Vorsprung des beweglichen Deckels (13) von dem Vorsprung der stationären Abdeckung (12) gelöst wird, wenn der Druckknopf (27) gedrückt wird, sodass der bewegliche Deckel (13) in die geöffnete Position übergeht.
  7. Behälter nach einem der vorstehenden Ansprüche, worin die Dichtung (16) als eine oder mehrere flüssige Komponenten angewendet wird, die gemischt und vor Ort ausgehärtet wird.
  8. Behälter nach einem der Ansprüche 1 bis 6, worin die Dichtung (16) ein vorgeformtes Element ist, das in eine Vertiefung der stationären Abdeckung eingepasst ist.
  9. Behälter nach einem der vorstehenden Ansprüche, worin die stationäre Abdeckung (12) Rippen und Vertiefungen umfasst, die in entsprechende Rippen und Vertiefungen des Behältergehäuses (11) eingepasst sind, wobei die stationäre Abdeckung (12) verstellbar an dem Behältergehäuse (11) befestigt ist, sodass die daraus resultierenden Oberflächen stumpf sind.
  10. Behälter nach einem der vorstehenden Ansprüche, der desinfizierende Wischtücher enthält, die gefaltet sind und durch mindestens eine Abgabeöffnung einzeln entfernt werden können.
  11. Behälter nach einem der vorstehenden Ansprüche, worin die Basisfläche des Behälters größer als die obere Oberfläche ist, um die Stabilität des Behälters zu erhöhen.
- Patentansprüche für folgende(n) Vertragsstaat(en):  
FR, GB, NL, SE**
1. Behälter für feuchte Wischtücher, umfassend ein Behältergehäuse (11) mit einer Oberseite und einer Unterseite, worin die Unterseite eine Nachfüllöffnung umfasst die durch einen entfernbarer Deckel verschlossen ist,  
eine stationäre Abdeckung (12), die mit einem Teil der Oberseite des Behältergehäuses (11) eine Einheit bildet und mindestens eine Abgabeöffnung (23) umfasst, durch die der Inhalt des Behälters entnommen werden kann,  
einen beweglichen Deckel (13), der beweglich an der stationären Abdeckung (12) befestigt ist oder eine bewegliche Einheit der stationären Abdeckung (12) bildet, sodass die Abgabeöffnung (23) reversibel verschlossen werden kann,  
einen Verschließmechanismus (14), der sich zwischen der stationären Abdeckung (12) und dem be-

- weglichen Deckel (13) befindet, um den beweglichen Deckel (13) in der geschlossenen Position lösbar an der stationären Abdeckung (12) zu befestigen, und eine Dichtung (16), die sich zwischen der stationären Abdeckung (12) und dem beweglichen Deckel (13) befindet und um die gesamte Abgabeöffnung (23) angeordnet ist, und worin die Dichtung (16) aus Silikonelastomer besteht und die Dichtung entlang ihres Umfangs zwischen der stationären Abdeckung (12) und dem beweglichen Deckel (13) zusammengepresst wird, wenn sich der bewegliche Deckel (13) in der geschlossenen Position befindet, um eine luftdichte Abgrenzung zwischen der Innenseite und der Außenseite des Behälters zu schaffen, wenn der Deckel (13) in der geschlossenen Position lösbar an der stationären Abdeckung (12) befestigt ist.
2. Behälter nach Anspruch 1, worin sich ein Federelement (15) zwischen der stationären Abdeckung (12) und dem beweglichen Deckel (13) befindet und mit elastischer Energie belastet wird, wenn sich der bewegliche Deckel in der geschlossenen Position befindet.
  3. Behälter nach Anspruch 2, worin das Federelement (15) eine metallische Spiralfeder mit einer oder mehreren Windungen und verlängerten Enden ist.
  4. Behälter nach Anspruch 2 oder 3, worin das Federelement (15) aus einem synthetischem oder natürlichem gummiähnlichen Material besteht.
  5. Behälter nach einem der vorstehenden Ansprüche, worin der Verschließmechanismus (14) einen Vorsprung der stationären Abdeckung (12), die mit einem entsprechenden Vorsprung des beweglichen Deckels (13) in Eingriff ist, und eine Druckknopfvorrichtung (27) umfasst.
  6. Behälter nach Anspruch 5, worin die Druckknopfvorrichtung (27) ein elastisch verformbarer Abschnitt der stationären Abdeckung (2) ist, wobei sich die Druckknopfvorrichtung (27) so nah an den Vorsprüngen der stationären Abdeckung und des beweglichen Deckels (13) befindet, dass der Vorsprung des beweglichen Deckels (13) von dem Vorsprung der stationären Abdeckung (12) gelöst wird, wenn der Druckknopf (27) gedrückt wird, sodass der bewegliche Deckel (13) in die geöffnete Position übergeht.
  7. Behälter nach einem der vorstehenden Ansprüche, worin die Dichtung (16) als eine oder mehrere flüssige Komponenten angewendet wird, die gemischt und vor Ort ausgehärtet wird.
  8. Behälter nach einem der Ansprüche 1 bis 6, worin

die Dichtung (16) ein vorgeformtes Element ist, das in eine Vertiefung der stationären Abdeckung eingepasst ist.

9. Behälter nach einem der vorstehenden Ansprüche, worin die stationäre Abdeckung (12) Rippen und Vertiefungen umfasst, die in entsprechende Rippen und Vertiefungen des Behältergehäuses (11) eingepasst sind, wobei die stationäre Abdeckung (12) verstellbar an dem Behältergehäuse (11) befestigt ist, sodass die daraus resultierenden Oberflächen stumpf sind.
10. Behälter nach einem der vorstehenden Ansprüche, der desinfizierende Wischtücher enthält, die gefaltet sind und durch mindestens eine Abgabeöffnung einzeln entfernt werden können.
11. Behälter nach einem der vorstehenden Ansprüche, worin die Basisfläche des Behälters größer als die obere Oberfläche ist, um die Stabilität des Behälters zu erhöhen.

## 25 Revendications

### 30 Revendications pour l'(les) Etat(s) contractant(s) suivant(s): AT, BE, CH, DE, DK, ES, FI, GR, IE, IT, LI, LU, PT

1. Récipient pour lingettes humides, comprenant un corps formant récipient (11) ayant un côté supérieur et un côté de fond où le côté de fond comprend un orifice de rechargement qui est fermé par une protection amovible, une protection fixe (12) qui est solidaire d'une partie du côté supérieur du corps formant récipient (11) et qui comprend au moins un orifice de distribution (23) à travers lequel le contenu du récipient peut être retiré, un couvercle mobile (13) qui est fixé de manière mobile à la protection fixe (12), ou est une partie mobile solidaire de la protection fixe (12), de façon à fermer de manière réversible l'orifice de distribution (23), un mécanisme de verrouillage (14) qui est situé entre la protection fixe (12) et le couvercle mobile (13) pour fermer de façon libérable le couvercle mobile (13) dans la position fermée sur la protection fixe (12), et un joint statique (16) qui est situé entre la protection fixe (12) et le couvercle mobile (13) et est positionné tout autour de l'orifice de distribution (23), et où le joint statique (16) est formé de matériau à base de caoutchouc, de préférence d'élastomère de silicone et le joint statique est comprimé tout le long de sa périphérie entre la protection fixe (12) et le couvercle mobile (13), lorsque le couvercle (13) est dans la position fermée, pour fournir une barrière

- étanche aux gaz entre l'intérieur et l'extérieur du récipient lorsque le couvercle mobile (13) est fermé de façon libérable dans la position fermée sur la protection fixe (12).
2. Récipient selon la revendication 1, dans lequel un élément de type ressort (15) est situé entre ladite protection fixe (12) et ledit couvercle mobile (13), et est chargé avec une énergie élastique lorsque le couvercle mobile est en position fermée. 5
  3. Récipient selon la revendication 2, dans lequel l'élément de type ressort (15) est un ressort hélicoïdal métallique à bobinage simple ou multiple avec des extrémités allongées. 10
  4. Récipient selon la revendication 2 ou la revendication 3, dans lequel l'élément de type ressort (15) est fabriqué en un matériau de type caoutchouc synthétique ou naturel. 15
  5. Récipient selon l'une quelconque des revendications précédentes, dans lequel le mécanisme de verrouillage (14) comprend une partie saillante de la protection fixe (12) qui vient en prise contre une partie saillante correspondante du couvercle mobile (13), et un moyen formant un bouton poussoir (27). 20
  6. Récipient selon la revendication 5, dans lequel le moyen formant un bouton poussoir (27) est une partie élastiquement déformable de la protection fixe (2), ledit moyen formant un bouton poussoir (27) étant situé suffisamment près des parties saillantes de la protection fixe et du couvercle mobile (13), pour dégager ladite partie saillante du couvercle mobile (13) de ladite partie saillante de la protection fixe (12) lorsque ledit bouton poussoir (27) est pressé, en libérant ainsi le couvercle mobile (13) dans la position ouverte. 25
  7. Récipient selon l'une quelconque des revendications précédentes, dans lequel le joint statique (16) est appliqué en tant qu'un ou plusieurs composants liquides qui sont mélangés, puis durcis en place. 30
  8. Récipient selon les revendications 1 à 6, dans lequel le joint statique (16) est un élément préformé ajusté dans une rainure de la protection fixe. 35
  9. Récipient selon l'une quelconque des revendications précédentes, dans lequel la protection fixe (12) comprend des nervures et des rainures qui s'ajustent dans les nervures et rainures correspondantes du corps formant récipient (11), ladite protection fixe (12) étant fixée de façon ajustable audit corps formant récipient (11) de sorte que les surfaces d'assemblage résultantes sont sans bord. 40
  10. Récipient selon l'une quelconque des revendications précédentes, et contenant des lingettes désinfectantes qui sont pliées pour un retrait une par une du récipient à travers l'orifice de distribution au moins unique. 45
  11. Récipient selon l'une quelconque des revendications précédentes, où la surface de base du récipient est supérieure à sa surface supérieure, de façon à augmenter la stabilité dudit récipient. 50
- Revendications pour l'(les) Etat(s) contractant(s) suivant(s): FR, GB, NL, SE**
1. Récipient pour lingettes humides, comprenant un corps formant récipient (11) ayant un côté supérieur et un côté de fond où le côté de fond comprend un orifice de rechargement qui est fermé par une protection amovible, une protection fixe (12) qui est solidaire d'une partie du côté supérieur du corps formant récipient (11) et qui comprend au moins un orifice de distribution (23) à travers lequel le contenu du récipient peut être retiré, un couvercle mobile (13) qui est fixé de manière mobile à la protection fixe (12), ou est une partie mobile solidaire de la protection fixe (12), de façon à fermer de manière réversible l'orifice de distribution (23), un mécanisme de verrouillage (14) qui est situé entre la protection fixe (12) et le couvercle mobile (13) pour fermer de façon libérable le couvercle mobile (13) dans la position fermée sur la protection fixe (12), et un joint statique (16) qui est situé entre la protection fixe (12) et le couvercle mobile (13) et est positionné tout autour de l'orifice de distribution (23), et où le joint statique (16) est formé d'élastomère de silicone et le joint statique est comprimé tout le long de sa périphérie entre la protection fixe (12) et le couvercle mobile (13), lorsque le couvercle (13) est dans la position fermée, pour fournir une barrière étanche aux gaz entre l'intérieur et l'extérieur du récipient lorsque le couvercle mobile (13) est fermé de façon libérable dans la position fermée sur la protection fixe (12). 55
  2. Récipient selon la revendication 1, dans lequel un élément de type ressort (15) est situé entre ladite protection fixe (12) et ledit couvercle mobile (13), et est chargé avec une énergie élastique lorsque le couvercle mobile est en position fermée.
  3. Récipient selon la revendication 2, dans lequel l'élément de type ressort (15) est un ressort hélicoïdal métallique à bobinage simple ou multiple avec des extrémités allongées.
  4. Récipient selon la revendication 2 ou la revendica-

tion 3, dans lequel l'élément de type ressort (15) est fabriqué en un matériau de type caoutchouc synthétique ou naturel.

5. Récipient selon l'une quelconque des revendications précédentes, dans lequel le mécanisme de verrouillage (14) comprend une partie saillante de la protection fixe (12) qui vient en prise contre une partie saillante correspondante du couvercle mobile (13), et un moyen formant un bouton poussoir (27). 5  
10
6. Récipient selon la revendication 5, dans lequel le moyen formant un bouton poussoir (27) est une partie élastiquement déformable de la protection fixe (2), ledit moyen formant un bouton poussoir (27) étant situé suffisamment près des parties saillantes de la protection fixe et du couvercle mobile (13), pour dégager ladite partie saillante du couvercle mobile (13) de ladite partie saillante de la protection fixe (12) lorsque ledit bouton poussoir (27) est pressé, en libérant ainsi le couvercle mobile (13) dans la position ouverte. 15  
20
7. Récipient selon l'une quelconque des revendications précédentes, dans lequel le joint statique (16) est appliqué en tant qu'un ou plusieurs composants liquides qui sont mélangés, puis durcis en place. 25
8. Récipient selon les revendications 1 à 6, dans lequel le joint statique (16) est un élément préformé ajusté dans une rainure de la protection fixe. 30
9. Récipient selon l'une quelconque des revendications précédentes, dans lequel la protection fixe (12) comprend des nervures et des rainures qui s'ajustent dans les nervures et rainures correspondantes du corps formant récipient (11), ladite protection fixe (12) étant fixée de façon ajustable audit corps formant récipient (11) de sorte que les surfaces d'assemblage résultantes sont sans bord. 35  
40
10. Récipient selon l'une quelconque des revendications précédentes, et contenant des lingettes désinfectantes qui sont pliées pour un retrait une par une du récipient à travers l'orifice de distribution au moins unique. 45
11. Récipient selon l'une quelconque des revendications précédentes, où la surface de base du récipient est supérieure à sa surface supérieure, de façon à augmenter la stabilité dudit récipient. 50

55



Fig. 2

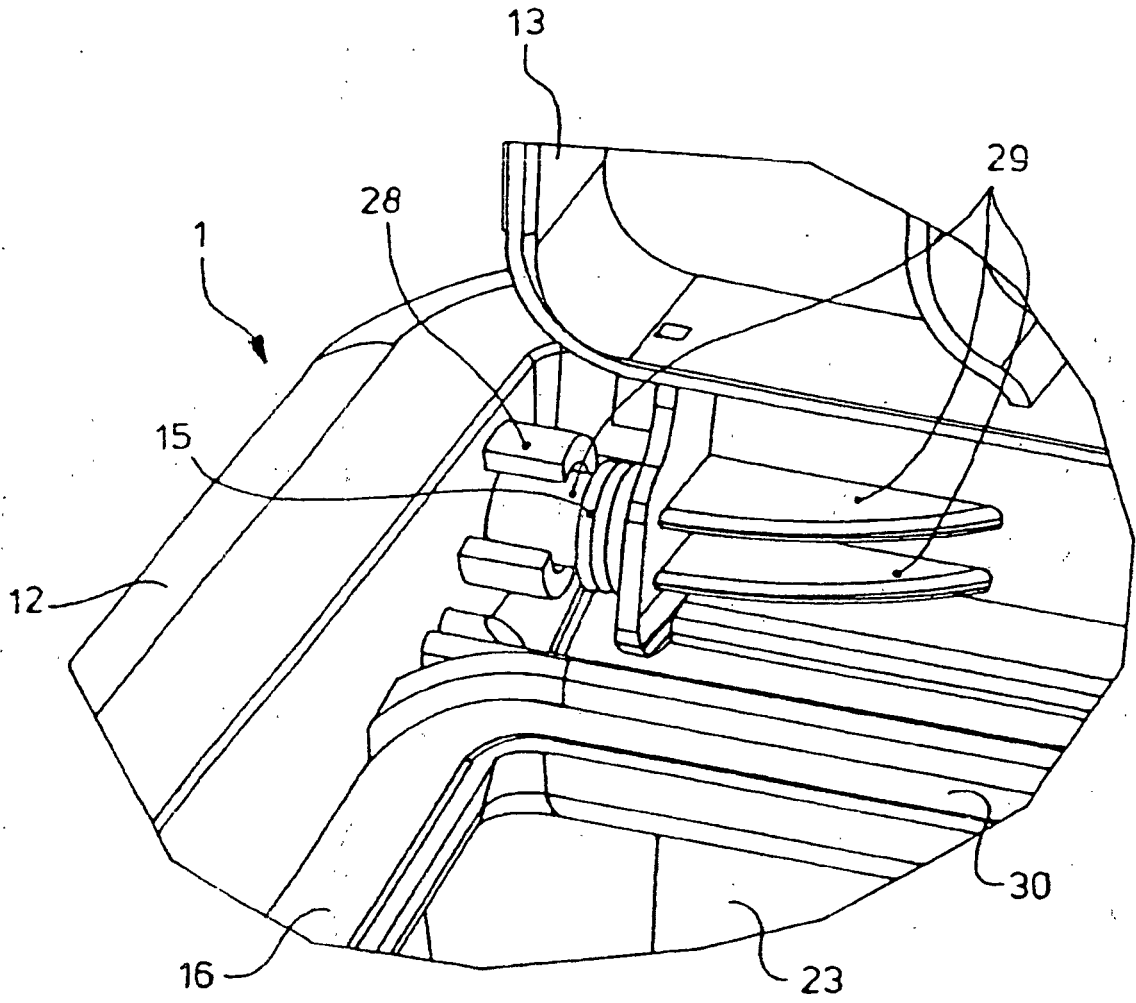




Fig.4

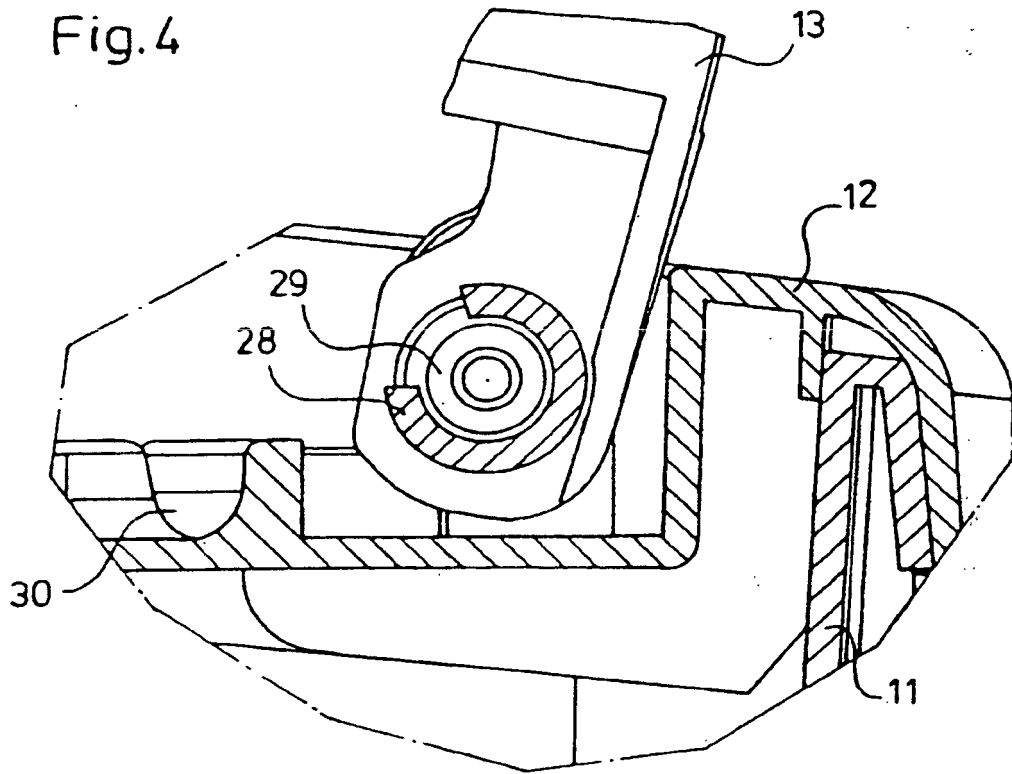


Fig.5

