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(54) **PACKAGE WITH A DISPENSER**

VERPACKUNG MIT EINEM SPENDER

EMBALLAGE MUNI D'UN DISTRIBUTEUR

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Description

[0001] The present invention relates to packaging for flowable products which are dispensed by a dispenser.

[0002] Packaging incorporating dispensers are known. For example laundry packaging may incorporate a dispenser or 'shuttle' for dispensing the flowable laundry composition into the wash liquor. It is known to locate the 'shuttle' on an upper portion e.g. over the package closure cap.

[0003] Despite the prior art there remains a need for improved packaging which incorporates dispensers.

[0004] DE 88 13 057 U discloses a reservoir provided with a square recess next to an edge of the reservoir in which a dispenser is located.

[0005] Accordingly, in a first aspect the present invention provides a package comprising a reservoir containing a flowable composition in combination with a dispenser for dispensing the flowable composition, the reservoir comprising a reservoir recess which provides a handle and the dispenser comprises a filling/dispensing recess, the dispenser being releasably retained in the reservoir recess such that the recesses are in a nested configuration, characterised in that the recess is circular in cross section (when viewed laterally, i.e. when the package is viewed laterally) in that the recess reservoir is located centrally within the reservoir, and in that the recesses of the reservoir and of the dispenser are nested such that the handle function of the reservoir recess is replicated by that of the dispenser recess.

[0006] With this arrangement, the dispenser is contained within the reservoir portion of the package in such a way that the recess of the dispenser is nested within the recess of the reservoir, and so the handle function of the reservoir recess is replicated by that of the dispenser recess when this is in the storage position.

[0007] As used herein, the term "recess" is intended to include a through-hole or a blind recess.

[0008] Preferably the recess is a through hole, as this provides two possible points of entry for nesting the dispenser, which means the consumer does not need to reposition the package or hold it in a awkward position in order to access a handle which is one side of the package e.g. the front, whilst attempting to read the instructions which may be rear of the package.

[0009] The package preferably comprises walls, and may comprise a front wall, a rear wall and side walls connecting the front and rear walls. One or more of the walls is preferably rigid. The package may be a bottle, carton, tube etc. Preferably recesses are located in one or more walls, and preferably through-hole recess are in the front wall and the rear face walls.

[0010] Preferably the one or more recesses are in at least the front wall. This draws the user's attention to the recess - drawing their attention to proper dosing which is very important with laundry compositions of increased concentration.

[0011] Preferably the walls of the package which contain the recess are wider than the walls without recesses. This is especially important with front-wall and rear-wall containing recesses.

[0012] The package reservoir is tubular in shape having at least one entrance portion. The reservoir aperture may have a constant diameter or it may vary along its length for example it may increase e.g. by tapering at the or each entrance portion.

[0013] Preferably the package comprises rigid portions such that the reservoir aperture is self supporting. Preferably the rigid portions include at least a portion of the aperture and may contain walls or wall portions such that the reservoir aperture is supported to allow insertion and removal of the dispenser. Most preferably the package or is wholly rigid. Rigidity may arise from the material (by selecting a stiff plastic) and/or by structure. The package may comprise flexible and/or resilient portions to allow squeeze-actuated egress of product.

[0014] Preferably the dispenser comprises at least one flexible portion. More preferably the dispenser is wholly flexible and excludes rigid parts.

[0015] A flexible dispenser is advantageous in that it allows for a more pleasing tactile experience in handling, and is more easily squeezed into a recess. The great advantage of the combination of the flexible dispenser and the containment of the this flexible dispenser within a reservoir is that the flexibility does not need to be part of the loading equation: the dispenser is shielded from bearing any load by its location within the reservoir recess as it does not directly bear any load when packages are stacked one about another. The combination is especially advantageous with packages having rigidity such that the reservoir aperture is self supporting and non-collapsing.

[0016] In this regard the invention provides, in a further aspect, a method of storing and transporting a package comprising a dispensing device using the package as defined herein.

[0017] Preferably the dispenser is resilient in whole or in part. Dispenser resilience improves retainment in the reservoir aperture, by allowing it to be pushed/squeezed into the recess, and thus obtaining, by resilience, an interference fit. Resilience also means that any flexing which results in mis-shaping e.g. collapsing of the dispenser during a wash process, is not permanent - the dispenser resilience flexes back into the proper e.g. uncollapsed shape.

[0018] Preferably the dispenser is, in at least one dimension (height/ width/depth or more generally x/y/z in cartesian co-ordinate system), equal or greater than the diameter of the reservoir aperture, wherein the reservoir aperture diameter is measured at least one transverse plane of the reservoir aperture. This provides the advantage that the dispenser inserts securely by means of size alone.

[0019] The aperture is circular in cross section (when viewed laterally, i.e. when the package is viewed laterally). This provides an aperture of constant diameter and this does not require specific positioning of a dispenser to obtain a good secure fit.

[0020] Preferably the aperture is located within the reservoir such that it is central at least laterally. The aperture may be central lengthwise, or it may be located in an upper part.

[0021] Preferably the dispenser comprises a chamber for containing a dose of the composition. The dose may be measured e.g. by a measured dosing device in the bottle or by the user filling the chamber to a predetermined and indicated level.

[0022] The dispenser may be truncated, such as a truncated sphere and the recess may be defined by an edge, which is, when the bottle is viewed from the front, smaller in diameter than that reservoir aperture. This together with the flexibility of the dispenser has the advantageous effect of providing an improved handle.

[0023] The flowable composition may be a flowable fabric or hard surface washing or treatment composition. The dispenser can be used to dispense the flowable composition into a washing machine or washing receptacle, and re-stored in the reservoir aperture after use. In the case of certain compositions e.g. liquid compositions, the dispenser may advantageously be rinsed e.g. by leaving the dispenser in the wash so that the rinse part of the cycle rinses the dispenser.

[0024] In a further aspect the invention provides a method of washing or treating fabrics or hard-surfaced products, such as dishes, using the package of the first aspect of the invention, wherein the flowable composition comprises a fabric or hard surface washing or treatment composition, the method comprising the steps of

- i. removing the retained dispenser from the reservoir aperture
- ii. filling the dispenser with the flowable composition
- iii. dispensing the flowable composition in a washing machine or washing /treatment receptacle
- iv. replacing the dispenser in the reservoir aperture.

[0025] As used herein, the term "laundry" is intended to include, without limitation, fabric cleaning, care, and conditioning compositions.

[0026] Preferably the package comprises a front face comprising the reservoir aperture entrance portion. The package may comprise an opposing rear face and a second entrance portion may be in the rear face.

Exemplary Formulations

Non-Limiting Examples of Laundry Treatment (washing and conditioning) Compositions usable with the Invention As Described below.

[0027] Unless stated otherwise, all proportions are given in weight percent by weight of the total composition.

Exemplary Liquid Fabric Treatment (Conditioner) Compositions 1, 2 and 3

[0028]

Composition	1	2	3
Softener			
Soft TEA Quat*	16.5	10	16.5
Fatty alcohol**	-	0.5	
Other components			
Electrolyte (CaCl ₂)	0.015	0.015	0.015
Perfume	1.00	1.00	1.00
Water	to 100	to 100	to 100
* Soft TEA quat is a cationic softener based on triethanolamine with tallow and 15% IPA as solvent. Compositions 1 and 2: (VT-90 ex Stepan) Composition 3: Soft DEEDMAC (Armosoft DEQ ex Akzo) ** C16C18 fatty alcohol (Hydrenol D ex Cognis)			

Exemplary Liquid Fabric Treatment (Washing) Composition

[0029]

Ingredient as 100% active	Wt%
Neodol 25-9*	6-8
Alcohol ethoxy sulfate	12-15
Linear alkylbenzene sulfonate	6-9
Sodium citrate, dihydrate	3-6
Propylene glycol	4-8
Sorbitol	3-6
Sodium tetraborate pentahydrate	2-4
Minor additives and water	to 100%
*C ₁₂ -C ₁₅ alkoxyated (9EO) chain group	

[0030] A non-limiting embodiment of the invention will now be more particularly described with reference to the following figure:

Figure 1 is a perspective view of a package according to one embodiment of the present invention.

[0031] Package 1 comprises a bottle 1 comprising a reservoir containing 1 litre of flowable laundry composition (indicated by the reference numeral 5 and which can be any of the exemplary formulations above) in combination with a dispenser 7 for dispensing the flowable composition 5. The reservoir 3 comprises a reservoir recess 9 which defines and provides a handle. The dispenser 7 comprises a filling/dispensing recess 8 and the dispenser 7 is retained in the reservoir recess such that the recesses are in a nested configuration. The dispenser 7 is a truncated sphere in shape, and the recess 8 is defined by an edge 8a, which is, when the bottle 1 is viewed from the front, smaller in diameter than that reservoir aperture 9. This together with the flexibility of the dispenser 7 has the advantageous effect of providing an improved handle.

[0032] With this arrangement, the dispenser is contained within the reservoir portion of the package in such a way that the recess of the dispenser is nested within the recess of the reservoir, and so the handle function of the reservoir recess is replicated by that of the dispenser recess when this is in the storage position.

[0033] In this case the reservoir recess 9 is a through-hole so providing two entrance portions.

[0034] The package 1 comprises a bottle having a front wall 11, an opposing rear wall (not shown) and side walls 15, 17 connecting and contiguous with the front wall 11 and rear wall base 19, top 21 with closure cap 23.

[0035] The reservoir aperture 9 defines a tubular storage space, having two opposing and aligned (with longitudinal axis of the tubular space) entrance portions: front entrance 9a in the front wall, rear entrance (not shown) in the rear wall. The reservoir aperture 9 tapers outward in the direction of each entrance portion 9a, (rear not shown). This facilitates insertion of the dispenser 7 into the reservoir aperture 9.

[0036] The bottle 1 is rigid in that it is self standing with rigid walls and base and top portion, and the reservoir aperture 9 is self supporting and not collapsible. The package front and rear walls by virtue of increased surface area versus thickness, do have a degree of flexibility to allow squeeze-actuated egress of product into the dispenser 7. Resilience allows the front and rear walls to snap back into position after squeezing.

[0037] The dispenser 7 is flexible and excludes rigid parts and so creates little noise in the wash cycle. The combination of the flexible portion and the containment of the flexible dispenser within a reservoir is advantageous as it means the flexible dispenser is not directly loaded when packages are stacked one about another. This is especially advantageous with packages having rigidity such that the reservoir aperture is self supporting and non-collapsing. With the dispenser retained in the reservoir aperture 9, it effectively removes the aperture from loading calculations, allowing high flexibility.

[0038] The dispenser 7 is resilient and allows an interference fit in the reservoir aperture 9. Resilience also means that any flexing which results in mis-shaping e.g. collapsing of the dispenser 7 in a washing machine is not permanent - the dispenser 7 resilience flexes back into the proper e.g. uncollapsed shape.

[0039] The dispenser 7 width X is slightly greater than the diameter Y of the reservoir aperture 9, and this together with the flexible resilience ensures the dispenser 7 is retained securely.

[0040] The reservoir aperture 9 is circular in cross section (when viewed laterally, i.e: when the package is viewed

laterally). This provides an aperture 9 of constant diameter and this does not require specific positioning in order to obtain a good secure fit.

[0041] Dispenser 7 comprises generally spherical shell, comprising a chamber (not shown) for containing a dose of the composition. The dose may be measured e.g. by a measured dosing device in the bottle 1 or by the user filling the chamber to a predetermined and indicated level.

[0042] The flowable composition is a flowable fabric washing or treatment composition. The dispenser 7 can be used to dispense the flowable composition into a washing machine or washing receptacle, and re-stored in the reservoir aperture 9 after use. In the case of certain compositions e.g. liquid compositions, the dispenser may advantageously be rinsed e.g. by leaving the dispenser in the wash so that the rinse part of the cycle rinses the dispenser.

[0043] In use, the user first removes the retained dispenser from the reservoir aperture and fills the dispenser with the flowable composition e.g. by pouring into the dispenser.

[0044] The flowable composition is then dispensed by placing the dispenser into the drum of a washing machine and beginning the cycle. At the end of the cycle, the dispenser 7 is removed from the drum and replaced in the reservoir aperture.

[0045] It is of course to be understood that the invention is not intended to be restricted to the details of the above embodiment which are described by way of example only.

Claims

1. A package (1) comprising a reservoir containing a flowable composition (5) in combination with a dispenser (7) for dispensing the flowable composition, wherein the reservoir comprises a reservoir recess (9) which provides a handle and the dispenser comprises a filling/dispensing recess (8), the dispenser being releasably retained in the reservoir recess such that the recesses are in a nested configuration, **characterised in that** the recess is circular in cross section when viewed laterally, i.e. when the package is viewed laterally, **in that** the reservoir recess is located centrally within the reservoir and **in that** the recesses of the reservoir and of the dispenser are nested such that the handle function of the reservoir recess is replicated by that of the dispenser recess.
2. A package according to claim 1 **characterised in that** the reservoir is tubular in shape having at least one entrance portion.
3. A package according to any preceding claim **characterised in that** the package comprises rigid portions such that the reservoir aperture is self supporting and does not collapse.
4. A package according to any preceding claim **characterised in that** the dispenser comprises at least one flexible portion.
5. A package according to any preceding claim **characterised in that** the dispenser is wholly flexible and excludes rigid parts.
6. A package according to any preceding claim **characterised in that** the dispenser is resilient in whole or in part.
7. A package according to any preceding claim **characterised in that** the dispenser is, in at least one dimension being either height/width/depth or more generally x/y/z in cartesian co-ordinate system, equal or greater than the diameter of the reservoir recess, wherein the reservoir recess diameter is measured at least one transverse plane of the reservoir recess.
8. A package according to any preceding claim **characterised in that** the flowable composition is allowable fabric or hard surface washing or treatment composition.
9. A method of washing or treating fabrics or hard-surfaced products, such as dishes, using the package of any preceding claim, wherein the flowable composition comprises a fabric or hard surface washing or treatment composition, the method comprising the steps of
 - i. removing the retained dispenser from the reservoir aperture
 - ii. filling the dispenser with the flowable composition
 - iii. dispensing the flowable composition in a washing machine or washing /treatment receptacle
 - iv. replacing the dispenser in the reservoir aperture.

10. A method of storing and transporting a package comprising a dispensing device using the package of any of claims 1-7.

Patentansprüche

1. Verpackung (1), die einen Vorratsbehälter, der eine fließfähige Zusammensetzung (5) enthält, in Kombination mit einem Spender (7), um die fließfähige Zusammensetzung zu spenden, umfasst, wobei der Vorratsbehälter eine Vorratsbehälterausparung (9) aufweist, die einen Griff bereitstellt, und der Spender eine Befüllungs-/Spenderausparung (8) aufweist, wobei der Spender in der Vorratsbehälterausparung lösbar gehalten wird, derart, dass die Ausparungen in einer ineinander verschachtelten Konfiguration sind, **dadurch gekennzeichnet, dass** die Ausparung einen kreisförmigen Querschnitt besitzt, wenn sie von der Seite betrachtet wird, d. h., wenn die Verpackung von der Seite betrachtet wird, dass sich die Vorratsbehälterausparung mittig in dem Vorratsbehälter befindet und dass die Ausparungen des Vorratsbehälters und des Spenders ineinander verschachtelt sind, derart, dass die Griff funktion der Vorratsbehälterausparung durch jene der Spenderausparung verdoppelt wird.
2. Verpackung nach Anspruch 1, **dadurch gekennzeichnet, dass** der Vorratsbehälter rohrförmig ist und wenigstens einen Eintrittsabschnitt besitzt.
3. Verpackung nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Verpackung starre Abschnitte umfasst, derart, dass die Vorratsbehälteröffnung selbsttragend ist und nicht zusammensinkt.
4. Verpackung nach einem vorhergehenden Anspruch, **dadurch gekennzeichnet, dass** der Spender wenigstens einen biegsamen Abschnitt umfasst.
5. Verpackung nach einem vorhergehenden Anspruch, **dadurch gekennzeichnet, dass** der Spender als Ganzes biegsam ist und keine starren Teile aufweist.
6. Verpackung nach einem vorhergehenden Anspruch, **dadurch gekennzeichnet, dass** der Spender als Ganzes oder teilweise elastisch ist.
7. Verpackung nach einem vorhergehenden Anspruch, **dadurch gekennzeichnet, dass** der Spender in wenigstens einer Dimension, die entweder die Höhe oder die Breite oder die Tiefe ist oder allgemeiner in einem kartesischen Koordinatensystem entweder die x-Richtung oder die y-Richtung oder die z-Richtung ist, gleich oder größer als der Durchmesser der Vorratsbehälterausparung ist, wobei der Durchmesser der Vorratsbehälterausparung wenigstens in einer transversalen Ebene der Vorratsbehälterausparung gemessen wird.
8. Verpackung nach einem vorhergehenden Anspruch, **dadurch gekennzeichnet, dass** die fließfähige Zusammensetzung eine fließfähige Wasch- oder Behandlungszusammensetzung für Gewebe oder harte Oberflächen ist.
9. Verfahren zum Waschen oder Behandeln von Geweben oder Produkten mit harter Oberfläche wie etwa Geschirr unter Verwendung der Verpackung nach einem vorhergehenden Anspruch, wobei die fließfähige Zusammensetzung eine Wasch- oder Behandlungszusammensetzung für Gewebe oder harte Oberflächen enthält, wobei das Verfahren die folgenden Schritte umfasst:
 - i. Entfernen des festgehaltenen Spenders aus der Vorratsbehälteröffnung,
 - ii. Befüllen des Spenders mit der fließfähigen Zusammensetzung,
 - iii. Spenden der fließfähigen Zusammensetzung in eine Waschmaschine oder einen Wasch-/Behandlungsaufnahmebehälter,
 - iv. erneutes Einsetzen des Spenders in die Vorratsbehälteröffnung.
10. Verfahren zum Aufbewahren und Transportieren einer Verpackung, die eine Spendervorrichtung umfasst, unter Verwendung der Verpackung nach einem der Ansprüche 1-7.

Revendications

1. Emballage (1) comprenant un réservoir contenant une composition fluide (5) en combinaison avec un distributeur

(7) pour distribuer la composition fluide, le réservoir comprend un creux de réservoir (9) qui fournit une poignée et le distributeur comprend un creux de remplissage/distribution (8), le distributeur étant retenu de manière détachable dans le creux de réservoir de sorte que les creux sont dans une configuration imbriquée, **caractérisé en ce que** le creux est circulaire en section transversale lorsqu'il est vu latéralement, c'est-à-dire lorsque l'emballage est vu latéralement, et **en ce que** le creux de réservoir est disposé de manière centrale dans le réservoir, et **en ce que** les creux du réservoir et du distributeur sont imbriqués de sorte que la fonction de poignée du creux de réservoir est répliquée par celle du creux de distributeur.

2. Emballage selon la revendication 1, **caractérisé en ce que** le réservoir est de forme tubulaire présentant au moins une portion d'entrée.

3. Emballage selon l'une quelconque des revendications précédentes, **caractérisé en ce que** l'emballage comprend des portions rigides de sorte que l'ouverture de réservoir est autoportante et ne s'affaisse pas.

4. Emballage selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le distributeur comprend au moins une portion flexible.

5. Emballage selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le distributeur est totalement flexible et exclut des parties rigides.

6. Emballage selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le distributeur est résilient en totalité ou en partie.

7. Emballage selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le distributeur est, dans au moins une dimension étant soit hauteur/largeur/profondeur soit plus généralement x/y/z dans un système cartésien de coordonnées, supérieur ou égal au diamètre du réservoir, dans lequel le diamètre de creux de réservoir est mesuré au moins dans un plan transversal du creux du réservoir.

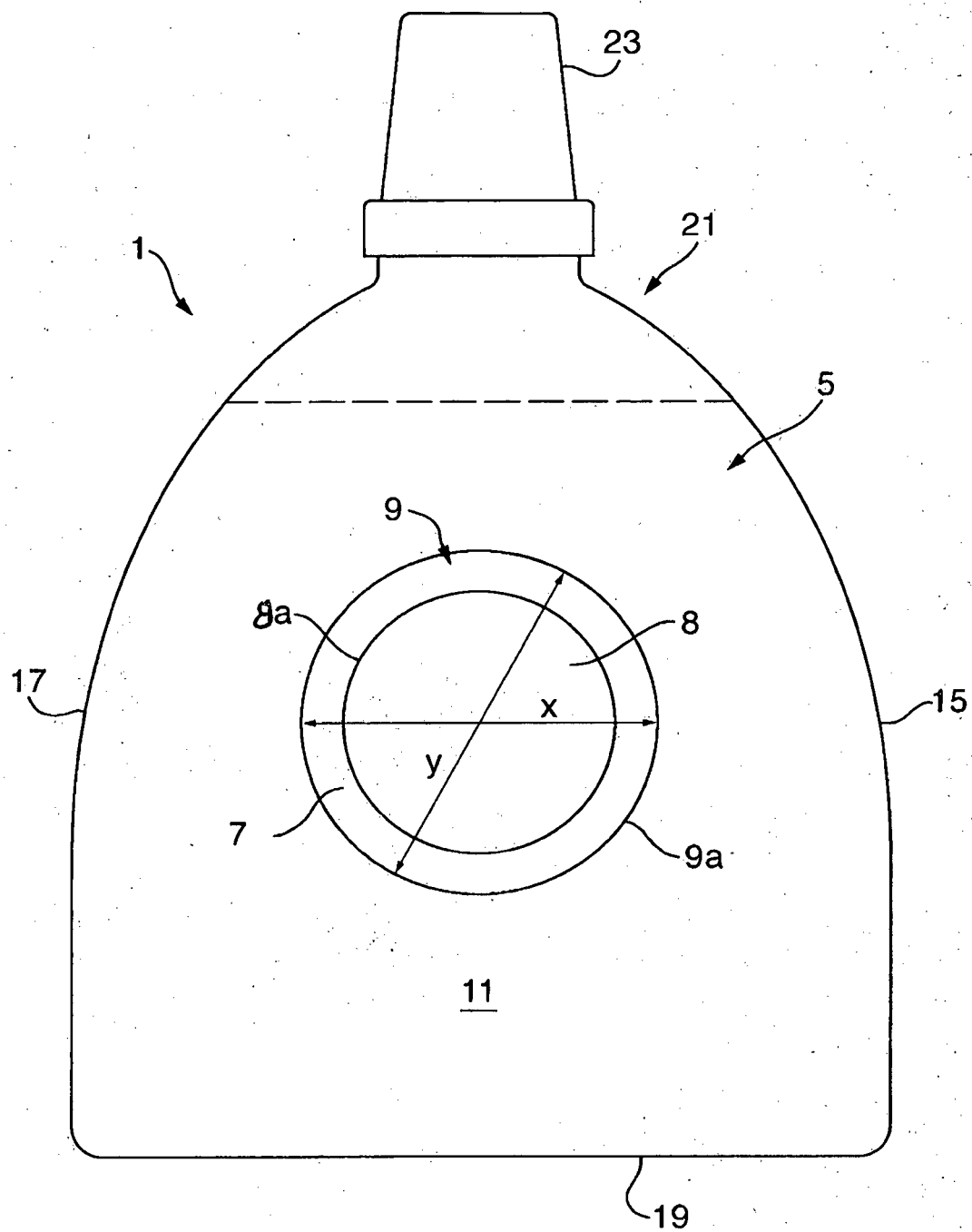
8. Emballage selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la composition fluide est une composition fluide de lavage ou de traitement de textile ou de surface dure.

9. Procédé de lavage ou de traitement de textiles ou de produits à surface dure, tels que des assiettes, utilisant l'emballage selon l'une quelconque des revendications précédentes, dans lequel la composition fluide comprend une composition de lavage ou de traitement de textile ou de surface dure, le procédé comprenant les étapes de

- i. prélèvement du distributeur retenu de l'ouverture de réservoir
- ii. remplissage du distributeur avec la composition fluide
- iii. distribution de la composition fluide dans une machine à laver ou un réceptacle de lavage/traitement
- iv. repositionnement du distributeur dans l'ouverture de réservoir.

10. Procédé de stockage et de transport d'un emballage comprenant un dispositif de distributeur utilisant l'emballage selon l'une quelconque des revendications 1-7.

Fig. 1



REFERENCES CITED IN THE DESCRIPTION

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