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(54) **Apparatus for providing a cleaning composition**

(57) An apparatus, notably, an automatic self-service filling machine, for providing cleaning composition, pref-

erably, a liquid laundry detergent composition and a method of dispensing liquid composition using said machine.

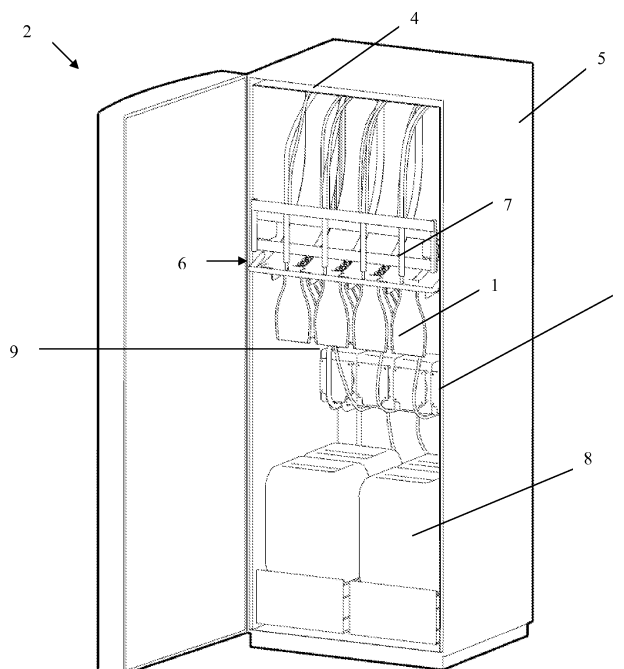


FIG.1

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Description

TECHNICAL FIELD

5 **[0001]** The present invention relates to apparatus, notably to automatic self-service filling machines, for providing cleaning compositions. The present invention also relates to methods for dispensing liquid compositions using said machine.

BACKGROUND OF THE INVENTION

10 **[0002]** Consumer products, and more especially cleaning compositions, are more and more diverse and differently adapted to the wide expectation of consumers. Each product is in itself very specific in term of target, i.e. a given composition will have a specific use and will be part of a specific market. Furthermore, each consumer has its specific needs. Hence, this combination of needs and of choice leads to a complex and wide combination of desired product options.

15 **[0003]** However, due to the lack of space, it is rather difficult for consumers to find, in store, the specific products that will be specifically adapted to their needs. Indeed, the majority of consumers' products are sold in packages such as containers, bottles, box and the likes which take lots of space on storage. For example, liquid detergent compositions are typically sold in relatively large plastic containers. Storing products have thus a relatively high cost. Moreover, this storage is not convenient toward the efficiency of the product, as the time decrease the compositions effectiveness. There is, thus, a need for the elimination of the drawback linked to the storage of consumer's products and notably, linked to the storage of cleaning compositions.

20 **[0004]** Furthermore, there are others drawbacks associated with the use of these containers which are often heavy and difficult to carry. For example, all the containers, widely used to dispense cleaning compositions, are made of expensive material, such as plastic, which are thrown away after use and which are, most of the time, in practice, not recycled, resulting thus in creating excessive waste. In addition to the production of waste material, compositions packages, are very expensive to produce which renders the final product more expensive than necessary.

25 **[0005]** Hence, packaging, storage and shipment weight of such containers comprise a significant portion of the purchase price.

30 **[0006]** It would, therefore, be a significant advancement in the art to provide means which would avoid the problem of packaging as set forth above, and which would be an adequate means for the consumers in term of delivering a high choice of products in a safe and economical manner. In particular, it would be an advancement in the art to provide an apparatus which would be good for the environment, i.e. which would reduce waste, and which, at the same time, would provide the consumers a way of customizing the products according to their individual needs.

35 **[0007]** Within the scope of the above mentioned aim, the present invention relates to a filling apparatus, for providing cleaning compositions, allowing users to perform all of the filling operations in a very simple and automatic manner.

[0008] A main advantage of the apparatus of the present invention is, thus, to provide customized cleaning compositions in a package. Indeed, the apparatus will allow the consumer to choose from different options to customize his composition according to its needs and preferences. The user will thus be able to choose his composition and to select additional and specific ingredients of his choice, which will be mixed to the cleaning composition.

40 **[0009]** Another advantage of the present invention is that the apparatus provides cleaning compositions packaged in flexible containers. Such flexible containers require less material, are lighter and can take disruptive shapes; they are hence good alternatives to regular bottles and containers. The present invention has thus the advantage of being better for the environment than conventional plastic containers or bottles. This apparatus has also the advantage of providing a gain of space. Indeed, the shopping aisles do not have to store a large amount of different type of product in view of being able to satisfy all kind of consumers having specific need and preferences.

BACKGROUND ART

50 **[0010]** The following documents are representative of the prior art available for self-service apparatus capable of providing liquid compositions.

[0011] EP -B1- 1507741, published on February 23, 2005, is directed to apparatus and method for diluting a concentrate form of a product and to prepare aqueous cleaning compositions in refillable containers.

55 **[0012]** WO -A1- 2005/097644, published on October 20, 2005, relates to devices for dispensing drinking water in sealed container.

[0013] US 4,929,818, issued on May 29, 1990, describes methods of vending a containerized product using multiple filling of the same container.

SUMMARY OF THE INVENTION

[0014] The present invention is thus directed to apparatus for providing a cleaning composition. This apparatus is an automatic self-service filling machine which comprises:

- a. a flexible container (1) stored in said apparatus;
- b. a dispenser (2) adapted to receive said container and being capable of filling said container;
- c. an user interface (3);
- d. at least, a liquid cleaning composition;
- e. at least, an additional ingredient to be mixed with the cleaning composition.

[0015] The present invention also encompasses a method for dispensing cleaning compositions comprising the step of:

- a. Providing a flexible container from an automatic self-service machine;
- b. Selecting the desired ingredients;
- c. Filling the flexible container with the cleaning composition and with selected ingredients;
- d. Sealing the flexible container;
- e. Taking the flexible container out of the automatic self-service machine.

BRIEF DESCRIPTION OF THE DRAWING

[0016]

Figure 1 is a schematic of the dispenser of the apparatus of present invention.

Figure 2 is a schematic of the external front view of the dispenser of the apparatus of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0017] The present invention relates to an automatic self-service apparatus for providing a cleaning composition as well as a method for dispensing the cleaning composition.

[0018] The apparatus of the present invention have the characteristic of being very well adapted for supplying cleaning compositions. The apparatus of the present invention is an automatic self-service filling machine. "Self-service" means herein that the user of the apparatus will be the consumers of the cleaning composition. The user will be the one to activate the apparatus in view of performing all of the filling operations in a very simple and automatic manner. By "automatic", it is means herein that all the steps will be done without any other intervention of the user.

[0019] The apparatus of the present invention comprises as essential elements : a flexible container (1) which will be stored in said apparatus; a dispenser (2) adapted to receive a flexible container and being capable of filling said container ; an user interface (3); at least, a liquid cleaning composition; and, at least, an additional ingredient to be mixed with the cleaning composition.

The dispenser

[0020] An essential element of the apparatus of the present invention is that it comprises a dispenser (2). This dispenser is adapted to receive a flexible container (1), such as a pouch, and being capable of filling said container.

[0021] Preferably, the dispenser (2) comprises a framework (4) able to store the flexible containers (1), the liquid cleaning compositions and the additional ingredients. The framework (4) is generally enclosed within a cabinet (5). Such cabinet (5) is configured such that it can be placed on conventional stores without taking up unjustifiable amount of valuable space.

[0022] The dispenser (2) comprises one or more filling station (6) wherein containers (1) can be filled with a cleaning product.

[0023] In one preferred embodiment, the flexible container (1) is placed in the filling station (6), then filling nozzle (7) adds the cleaning composition to the container. In a preferred embodiment, several filling nozzles (7) are present in the filling station (6). The other filling nozzles (7) have the purpose of adding the optional ingredients.

[0024] Each individual filling station (6) has typically a source of concentrated product, and a source of additional ingredients and, optionally, a source of water.

[0025] In a preferred embodiment, at least one optional ingredient to the composition is delivered to the filling station (6).

[0026] Thus, in one more preferred embodiment of the present invention, a flexible container (1) is placed in the filling station (6) of the dispenser (2), wherein concentrated cleaning composition is filled into said flexible container.

[0027] Optionally, the product is diluted by the addition of water. In view of obtaining a diluted product, the product comes to the flexible container (1) already diluted, or the filling step of the flexible container (1) with the concentrated product will be followed with a diluting step of adding water. A diluted cleaning composition is thus obtained by the addition of a predetermined amount of water.

[0028] Typically, the dispenser of the present invention will contain reservoirs (8). Preferably, these reservoirs are located within the dispenser (2). These reservoirs (8) are filled with cleaning composition, preferably with concentrated cleaning composition, i.e. with a concentrated product form of the product being dispensed. Reservoirs (8) may also contain diluted product, i.e. already containing water. In a preferred embodiment, the dispenser (2) of the present invention will also have reservoirs of optional ingredients. Typically, the size of the reservoir (8) will be comprised between 1 and 30 L, preferably between 2 and 20L. The reservoir (8) containing the cleaning composition will have bigger size than the reservoir containing the additive ingredients.

[0029] In a preferred embodiment of the present invention, the dispenser (2) will comprise means capable of pumping and carrying the composition from the container to the filling station (6). In a preferred embodiment, the means, capable of pumping and carrying the product, are pump, preferably peristaltic pump (9).

[0030] In a preferred embodiment, the dispenser (2) comprises a system adapted to mix the ingredients to the cleaning composition before the step of filling the flexible container. The mixing of these optional ingredients may occur in a specific reservoir, such as a specific chamber, or mixed during the filling step of the flexible container or even after the filling step of the pouch. Preferably, the mixing of the optional ingredients with the cleaning/composition will occur before the filling step of the pouch, more preferably by the use of a mixing unit. Hence, in a preferred embodiment, the dispenser comprises a mixing unit.

[0031] Thus, as mentioned above, the apparatus of present invention is particularly well adapted for mixing at least two fluid components to form a final liquid mixture.

[0032] In one other preferred embodiment, after the step of filling the pouch, the flexible container will be sealed, preferably with a specific top or cap. The flexible containers are preferably filled from above, and the dispenser preferably includes a sealing station and lifting means to raise the container to the sealing station.

[0033] In one aspect of the invention, the dispenser is adapted to provide a flexible container (1) having a removable cap via a spout. In more detail, the dispenser (2) is adapted to remove the cap prior the filling of the flexible container, to fill the container through the opening which is normally closed by the cap, and to replace the cap after the filling step.

[0034] This measure has the advantage of providing a flexible container that is closed when the user will take it and which will avoid any risk of contamination of the neck region.

[0035] Preferably, the dispenser (2) of the apparatus of present invention includes a single or a plurality of stack of flexible containers (1). Preferably, the dispenser includes a feed mechanism for selecting and delivering a container from one of the stacks to a filling and sealing station. In a preferred embodiment, the flexible containers will be placed on rails.

[0036] In a more preferred embodiment the dispenser (2) includes a plurality of flexible containers (1), preferably arranged in a magazine, and which are selected one by one for the step of filling and for the step of sealing.

[0037] In an even more preferred embodiment, the dispenser of the apparatus of the present invention comprises a pick-up cavity (10) wherein the user is able to take-out the flexible container (1) filled with the cleaning composition.

[0038] The dispensers of the present invention may typically be located in any type of store such as supermarkets, warehouse clubs, building supply stores, convenience stores, mass merchandisers, or any other store that typically sells cleanings and cleaners.

The container

[0039] An essential element of the apparatus of the present invention is that automatic self-service apparatus comprise containers (1) adapted to receive the cleaning composition. This container is stored into said apparatus. Preferably, said container is stored into the dispenser. An essential element of the present invention is that the container is a flexible container.

[0040] As flexible container, it is meant herein non-rigid container which is adapted to contain liquid, notably, liquid cleaning compositions and, preferably, adapted to liquid detergent compositions. Preferably, the flexible container (1) of the present invention is a soft and flexible bag made of any material adapted to contain liquid.

[0041] In a preferred embodiment, the flexible container is a flexible container or bag, and it is preferably made from a plastic film. In a more preferred embodiment of the present invention, the flexible container is a pouch.

[0042] By "flexible" it is meant herein that the container may be flexibly deformed, but that it is not resilient in the sense that it recovers its original shape when the deforming pressure is removed.

[0043] Preferably, flexible containers of the present invention are formed from plastic film or films which are sealed together at the edge in order to form a closed container. Preferably, the container is provided with an opening which is sealed around the closure.

[0044] Most preferably the plastic film of the flexible container is made from polyethylene, polypropylene, polyester, nylon, polyethylene terephthalate, vinyl, or laminate thereof.

[0045] Some extensively use laminate materials for the films are polyethylene terephthalate/polyethylene, polyethylene terephthalate/ EVOH (modified polyvinyl alcohol produced by Nippon-Gohsei)/ polyethylene and polyethylene terephthalate/ metalized polyethylene terephthalate / polyethylene.

[0046] In a preferred embodiment, the flexible container of the present invention has a wall thickness of from 50 to 250 micrometers.

[0047] Such flexible containers may have folded side gussets to allow expansion upon filling. Such flexible containers may typically have a capacity in the range of 100 to 5000 ml, preferably in the range of 200 to 2000 ml, more preferably 300 to 1000ml.

[0048] The flexible containers of the present invention can be of any shape, preferably rectangular or square, and, preferably, has a filling opening adapted for hermetic sealing and/or a sealable filling opening along one side.

[0049] In a preferred embodiment, the flexible container will have a predetermined cap, spout or nozzle which will allow the filling and/or the sealing of said container.

[0050] The spout can contain a screw cap. In such a case, the removal and re-capping stations typically comprise a gripper to unscrew and re-screw the cap, and means to lift the cap from the flexible container neck during the filling thereof.

[0051] The closures of the flexible container can be achieved with a plastic spout as available on the market and for instance as described in WO2007/067029. These spouts can be of low density polyethylene. In another preferred embodiment, the spout of the flexible container may be closed by means of a screw cap, or a flip-top cap.

[0052] In a preferred embodiment, the flexible container is a "squeezing" bottle, meaning thus that the user will be able to give the bottle a squeeze in order to release the composition packaged therein.

[0053] In another preferred embodiment, the flexible container contains a pipette which can be filled with the compositions and which will allow the user to dose the cleaning composition. The pipette is, preferably, located in the cap of the container

[0054] In a preferred embodiment the dispenser described above includes a mechanical, air or vacuum device for separating the walls of the flexible container to permit the filling thereof.

[0055] Another advantage of the present invention is, hence, that this apparatus provides flexible container that will be sealed, i.e. hermetically closed, having thus the advantage of avoiding any kind of contamination by comparison with refillable station known in the prior art wherein the user comes with its own container.

[0056] Once filled, the flexible container is hermetically sealed, for example by ultrasonic welding, either at its top or at its bottom, and transferred by a suitable mechanism to the pick-up cavity (10) of the dispensing drawer (2).

[0057] Flexible containers according to the present invention can be available from different suppliers such as Huhtamäki, Alcan, Bischof & Klein Packaging or Kobusch.

The user interface

[0058] Another essential element of the automatic self-service apparatus in the present invention is that it comprises a user interface (3).

[0059] Preferably, said user interface will be part of dispenser (2) and will be located in the front of the framework (4) which constitutes the dispenser.

[0060] In a preferred embodiment, the user interface (3) allows the user to customize the cleaning composition he wants to obtain from the apparatus by choosing from a plurality of ingredients. The user is thus able to choose and select the product he wants to have by selecting all the additional ingredients he wishes to add to the cleaning composition.

[0061] The user interface (3) of the present invention can be constitutive of, for example, a screen, which may have a separate keypad or which may be a touch sensitive screen. This screen will allow the consumer to select the ingredient and products he wants, as well as the level he wants. In one preferred embodiment, the screen could be a touch screen. In a more preferred embodiment, the user interface (3) is a touch-screen.

[0062] Additionally, the screen could display instructions and information about the products, but also advertising or any other information that may be desirable to be communicated to the user.

[0063] In a more preferred embodiment, the touch screen will be adapted to provide the user a selection of ingredients that will be part of the cleaning composition.

The cleaning composition

[0064] Another essential element of the automatic self-service apparatus of the present invention is that it comprises liquid cleaning composition.

[0065] As used herein, the term "cleaning composition" includes liquid fabric detergents; fabric care agent; hand dishwashing agents or light duty dishwashing agents; machine dishwashing agents; liquid and rinse-aid types for house-

hold and institutional use; liquid cleaning and disinfecting agents; car or carpet shampoos; bathroom cleaners; hair shampoos and hair-rinses; shower gels and foam baths; metal cleaners; as well as cleaning auxiliaries such as bleach additives.

[0066] In a preferred embodiment, the cleaning composition contained in the apparatus of the present invention will be a cleaning detergent composition, more preferably a liquid cleaning detergent composition.

[0067] As detergent composition, it is meant herein a composition which contains at least a surface active material, such as anionic, cationic or nonionic surfactants.

[0068] The liquid cleaning detergent of the present invention can be any type of detergent composition such as for example, laundry detergent, hand dish washing detergents, automatic dish washing machine detergent, hard surface cleaners, hand soap, toilet cleaners, floor cleaners, car care products, kitchen cleaners, bathroom cleaners, window cleaners, tile cleaners and other household types of cleaners and the like...

[0069] In a much more preferred embodiment of the present invention, the detergent composition is a liquid laundry detergent composition.

[0070] By liquids, it is meant herein a composition having the form of a liquid, a gel or a paste. The viscosity of the composition will be comprised from 20 to 3000 cps (when measured at 25°C at 20^{s-1} or at 60 rpm), preferably, the viscosity of the composition is from 100 to about 1500 cps.

[0071] In view of obtaining a dilute product, water can be added to a concentrated cleaning composition. The water could be added first, followed by the addition of concentrated product, or the concentrated product could be added first, followed by the addition of water, or the water and cleaning composition could be mixed very quickly in a separate reservoir located near the filling station (6).

[0072] Therefore, the present invention has the advantage of either proving a dilute or a concentrate composition. The composition will generally be fresh, i.e. it is not intended to stay long on storage before being sold.

[0073] The level of water present in the final composition is preferably from 1 to 99 % by weight of the total composition, preferably from 2 % to 75 %, more preferably from 3 % to 50 %; even more preferably from 5 to 45 % by weight of the total composition.

[0074] In a more preferred embodiment, the composition is a liquid concentrated detergent composition. Thus in a preferred embodiment of the present invention, the liquid concentrated detergent composition have an amount of water from 5 to 60 % by weight of the total composition.

[0075] As a matter of fact, the level of water in the cleaning composition and the viscosity of the composition will be dependant upon the kind of the composition which is desired by the user of the apparatus.

[0076] As an example, the composition can be a liquid diluted composition and will thus have a mount of amount of water comprised from 60 to 99 % of water by weight of the total composition and a viscosity comprised between 200 and 1200 cps when measured at 25°C and at 60 rpm.

[0077] The composition can be a concentrated liquid composition and will thus have an amount of water comprised from 40 to 60 % of water by weight of the total composition and a viscosity comprised between 300 and 1500 cps when measured at 25°C and at 60 rpm.

[0078] The composition can be a gel and will thus have a mount of amount of water from 25 to 40 % of water by weigh of the total composition and a viscosity comprise between 4000 and 8000 cps when measured at 25°C and at 60 rpm.

[0079] The apparatus of the present invention have the advantage of being very well adapted to the concentrated composition, meaning thus that the apparatus is very well adapted to deliver composition having a high level of viscosity and/or a low amount of water. As high level of viscosity, it is meant herein having a viscosity above 500 cps, as a low amount of water, it is meant herein having a water content of less than 50 % of water by weight of the total composition.

[0080] All the measurements of viscosity are made using a Rheometer model AR 1000® (Supplied by TA Instruments) with a 4 cm conic and a truncation of 57 micrometer spindle in stainless steal (linear increment from 1 to 70 sec⁻¹).

Example of viscosity and water content of a laundry detergent composition:

[0081]

Compositions:	Viscosity in cps (measured at 60rpm)	% of water of the total composition
Dilute liquid:	320 - 450	64 - 66
	230 - 350	73 - 76
	750 - 1100	64 - 67

(continued)

Compositions:	Viscosity in cps (measured at 60rpm)	% of water of the total composition
Concentrated liquid:	320 - 450	49 - 51
	800 - 1400	45 - 49
	700 - 900	9 - 11
Gel:	4500- 7500	32 - 38

The additional ingredients:

[0082] Another essential element of the present invention is that the automatic self-service apparatus for providing a cleaning composition comprises additional ingredients.

[0083] The additional ingredients mean herein any ingredients which can be added to the liquid cleaning composition. In a preferred embodiment, the additional ingredients are additional ingredients for liquid laundry detergent composition.

[0084] These additional ingredients are chosen among a vast group of ingredients and, notably, can be selected from the group constitutive of perfume, dye, bleach, color care ingredients, polymeric dispersants, viscosity modifiers, brighteners and the like.

[0085] In the present invention, the dispenser (2) is designed in a way that the user is able to choose the additives he wants to include in his cleaning composition. The user will also be able to choose the intensity and/or concentration of these ingredients.

[0086] For example, the user of the apparatus of the present invention is able to choose the scent of his cleaning composition as well as the intensity of the scent. For example, the user can choose among a gentle, balanced or intense lavender or camomile scent for its composition.

[0087] In another example, the user is also able to choose whether he wants to add fabrics care compounds, or whitening agents such as a brightener or bleach.

[0088] By the combination of all the above mentioned choice made by the user, the apparatus of the present invention will be able to dispense a large amount of different kinds of products, up to 100 different kinds for example.

[0089] The apparatus has thus the advantage of providing all these choices of product without having the disadvantage and the necessity of having to store all these different products.

Method for dispensing the cleaning composition.

[0090] In another aspect, the present invention relates to a method for dispensing a cleaning composition. The end-result of this method is a flexible container containing a liquid cleaning composition in the form of a ready-to-use product.

[0091] The method of the present invention for providing a cleaning composition comprises the steps of:

- a. Providing a flexible container from an automatic self-service apparatus;
- b. Selecting the desired ingredients;
- c. Filling the flexible container with the liquid cleaning composition and with selected ingredients;
- d. Sealing the flexible container;
- e. Taking the flexible container out of the vending automatic self-service apparatus.

[0092] In a preferred embodiment of the present invention, the automatic self service apparatus is a vending machine.

[0093] In another preferred embodiment, the desired ingredients to be incorporated in the cleaning composition are selected with the use of a user interface (3). The user interface is preferably a touch-screen interface.

[0094] In another preferred embodiment, the method encompasses the step of mixing the selected ingredient with the liquid cleaning composition before the step of filling the composition into the pouch.

[0095] In another preferred embodiment, the method of the present invention includes the step of diluting the concentrated compositions with water before filling the flexible container with said composition.

[0096] An important aspect of the present invention is that the flexible container is stored in the machine and is provided automatically by the machine. Hence it is meant that the user, in view of obtaining the cleaning composition in the form of a "ready-to-use" product, will just have to follow the instruction given by the machine, select the desired ingredients and take out the flexible container out of the dispenser.

[0097] In another preferred embodiment of the present invention, the flexible container is filled automatically with the desired composition containing the selected ingredients. Preferably, the flexible container of the present invention has the form of a pouch.

[0098] Therefore, the method of the present invention requires a user to identify a product to be dispensed and take it out of the dispenser.

[0099] The final product, which is dispensed with the apparatus of the present invention, is preferably a "ready-to-use" product, which can be either a concentrate or a diluted product. Preferably, the final product is a concentrated laundry liquid detergent product.

Examples

[0100] These examples are meant to exemplify the method and the apparatus of the present invention but are not necessarily used to limit or otherwise define the scope of the present invention.

[0101] The following examples further illustrate the method of using the apparatus of the present invention as well as a method for providing a cleaning composition.

Example A:

[0102] In view of providing a laundry cleaning composition, several steps have to be done but a user:

- a) Activation of the apparatus, a pouch is thus provided;
- b) Selection of the product to purchase, i.e. a laundry cleaning composition;
- c) Selection of the laundry load (i.e. Colored, Mixed or White loads);
- d) Selection of the perfume (i.e. Original, Citrus, Ocean or Sensitive);
- e) Selection of the perfume intensity (i.e. Gentle, Balanced or Intense);
- f) The flexible container is filled with liquid cleaning composition and with selected ingredients;
- g) The flexible container is taken out from the apparatus by the user.

Example B:

[0103]

- a) Activation of the apparatus, a pouch is thus provided;
- b) Selection of the product to purchase, i.e. laundry cleaning composition;
- c) Selection of the laundry load (Colored, Mixed or White loads);
- d) Selection of stain categories that are present on the laundry (Foods and drinks; Outdoor stains; Paint and glue stains; Body soil stains ; Personal care product stains)
- e) Selection of a diluted composition;
- f) The flexible container is filled with water, with the liquid cleaning composition and with selected ingredients;
- g) The flexible container is taken out of the apparatus by the user.

[0104] The dimensions and values disclosed herein are not to be understood as being strictly limited to the exact numerical values recited. Instead, unless otherwise specified, each such dimension is intended to mean both the recited value and a functionally equivalent range surrounding that value. For example, a dimension disclosed as "40 mm" is intended to mean "about 40 mm".

Claims

1. An automatic self-service apparatus adapted for providing cleaning compositions comprising:

- a. a flexible container (1) stored in said apparatus;
- b. a dispenser (2) adapted to receive said container and being capable of filling said container;
- c. an user interface (3);
- d. at least, a liquid cleaning composition;
- e. at least, an additional ingredient to be mixed with the cleaning composition.

2. An apparatus such as described in claim 1 wherein the dispenser (2) comprises a framework (4) able to store the flexible container (1), the liquid cleaning composition and the additional ingredients.

3. An apparatus, according to any of the preceding claims, wherein the dispenser (2) comprises a pick-up cavity (10)

wherein the user is able to take-out the flexible container (1) filled with the cleaning composition.

4. An apparatus, according to any of the preceding claims, wherein the dispenser (2) comprises a system adapted to mix the ingredient to the cleaning composition, preferably a mixing chamber.

5. An apparatus, according to any of the preceding claims, wherein the user interface (3) is a screen which allows the user to customize his cleaning composition, preferably a touch-screen.

6. An apparatus, according to any of the preceding claims, wherein the cleaning composition is a detergent composition, preferably a liquid laundry detergent composition.

7. An apparatus, according to claim 6, wherein the additional ingredients are chosen among the group constituting of perfume, dye, bleach, color care ingredients, polymeric dispersants, viscosity modifiers, brighteners.

8. Method for dispensing a cleaning composition comprising the steps of:

- a. Providing a flexible container from an automatic self-service machine;
- b. Selecting the desired ingredients;
- c. Filling the flexible container with the cleaning composition and with the selected ingredients;
- d. Sealing the flexible container;
- e. Taking the flexible container out of the automatic self-service machine.

9. Method, according to claim 8, wherein the desired ingredient is selected using a user interface, preferably a touch screen.

10. Method, according to claim 8 or 9, wherein the cleaning composition is liquid laundry detergent composition.

11. Method, according to any of the claims 8-10, wherein the selected desired ingredients are mixed with the liquid cleaning composition before being filled into the flexible container.

12. Method, according to any of the claims 10-11 wherein the cleaning composition is diluted with water before being filled into the flexible container.

13. Method, according to any of the claims 10-12 wherein the flexible container is stored in the machine and provided automatically by the machine.

14. Method, according to any of the claims 10-13 wherein the flexible container is a pouch.

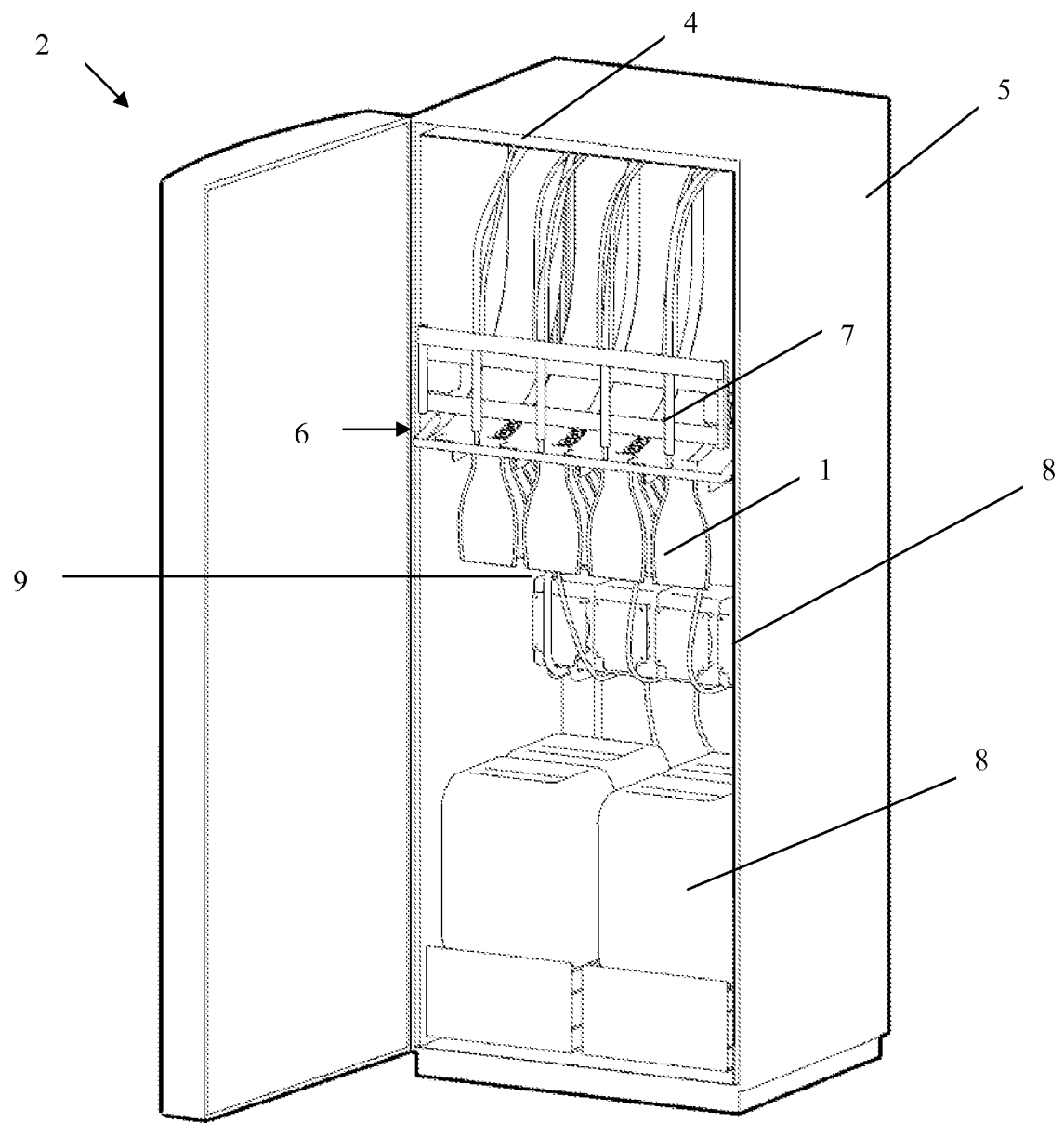


FIG.1

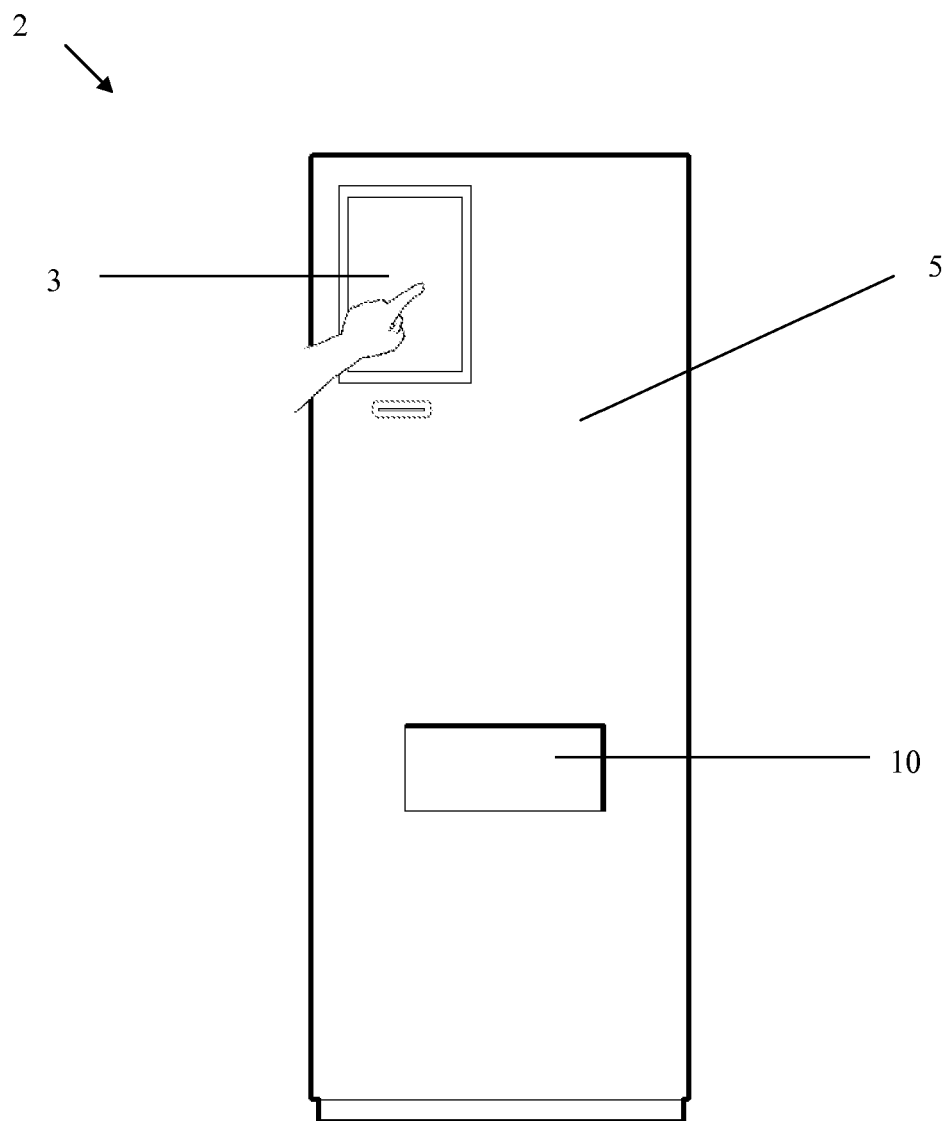


FIG.2



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 12 1881

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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