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<p>(54) Title: A PRODUCT FOR CLEANING OR AIR FRESHENING</p>		
<p>(57) Abstract</p> <p>A product for cleaning or air freshening, which product comprises at least one cleaning material or air freshening material sealed inside an envelope of a water-soluble gelatine material. The product is preferably in the form of a capsule or a sachet.</p>		

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A PRODUCT FOR CLEANING OR AIR FRESHENING

This invention relates to a product for cleaning or air freshening.

Cleaning materials and air freshening materials are often supplied in aerosol containers. The aerosol containers often contain harmful propellant gases such for example as chloro-fluoro-carbons. Cleaning and air freshening materials which are not dispensed from aerosol containers are dispensed from a variety of other types of containers. Once the containers are empty, the containers are discarded and yet the containers form a relatively large part of the overall expense of the packaged cleaning material or air freshening material as sold. Still further, the discarded containers often cause environmental problems since they are difficult to dispose of.

It is an aim of the present invention to reduce the above mentioned problems.

Accordingly, the present invention provides a product for cleaning or air freshening, which product comprises at least one cleaning material or air freshening material sealed inside an envelope of a water-soluble gelatine material.

Because the gelatine material is water-soluble, the product of the present invention can be produced in pre-determined doses ready for adding to empty non-aerosol containers. All that is then necessary is for the product of the invention to be dissolved in water and the container can be reused. Thus the cost of providing a new container is avoided, together with the environmental problems caused by disposing of used containers. Still further, the use of the product of the present invention is able to help to avoid aerosol containers and their harmful propellant gases.

The use of the water-soluble gelatine material is particularly advantageous in that concentrated cleaning materials or air freshening materials can easily be handled without fear of the person handling the materials becoming burnt or receiving an irritation from the materials.

Preferably, the water-soluble gelatine material is in the form of a capsule or a sachet. The capsules or sachets can be of any suitable and appropriate shape and size.

The water-soluble gelatine material may be any known and appropriate type of gelatine material. The gelatine material may be synthesized if desired. The gelatine material is stable under normal environmental conditions and it gives a good shelf life. The gelatine

material is also relatively quickly dissolved in hot water so that it is an easy matter to dissolve the product of the present invention in an appropriate container so that the container is then ready for reuse. Still further, the gelatine material is advantageous in that it totally dissolves and thus will not clog spray tubes in containers if the containers are squeeze-type containers for spraying the cleaning material or the air freshening material.

The use of the water-soluble gelatine material is also advantageous in that it can be handled without premature disintegration. This is especially so when the product of the invention is in the form of a sachet which will usually have relatively thinner side walls than a capsule. If, for example, the sachet were to be made of a water-soluble material such for example as polyvinyl alcohol, then the sachet would disintegrate too quickly and, for example, it could prematurely disintegrate on being handled by a person with wet hands. Thus, for example, the sachet could disintegrate whilst a person was handling the sachet in order to place it into an empty container. The cleaning material or the air freshening material would thus be wasted and could cause harm to the person if it were of a concentrated caustic nature.

The water-soluble gelatine material may include a plasticiser. The plasticiser can be used to make the gelatine material soft and pliable. The plasticiser may be used in amounts of 10-40% by weight. The plasticiser may be glycerol, sorbitol or any other suitable and appropriate type of plasticiser.

The product may be one in which the cleaning material or the air freshening material is in liquid form, the water-soluble gelatine material then being such that it is not dissolved by the liquid cleaning material or the liquid air freshening material.

The product may alternatively be one in which the cleaning material or the air freshening material is in non-liquid form. The cleaning material or the air freshening material may then be in powder form or solid form.

The cleaning material may be any suitable and appropriate known type of cleaning material. Thus, for example, the cleaning material may be a cleaning material for use in houses for cleaning hard surfaces such for example as kitchen tiles, floors, mirrors and windows. Such a cleaning material for use in houses for cleaning hard surfaces may comprise a surfactant and an alcohol-based solvent. The cleaning material may comprise at least one of glycols: alcohols: sodium metasilicates: phosphates: aliphatic hydrocarbons:

chlorinated hydrocarbons: ethereal oils: solvents:
organic acids: esters: sodium linear alkylate
sulphonates: aluminium silicates: wetting agents: non
ionic, anionic, cationic or amphoteric surfactants:
chlorine based bleaching agents: sequestering agents:
sodium gluconates: sodium heptonates: poly carboxylates.
The alcohol-based solvent may be an ethyl alcohol-based
solvent. Other types of alcohol-based solvents may
however be employed.

The cleaning material may alternatively be a
cleaning material for cleaning surfaces which need care
such for example as furniture or cars. In this case,
the cleaning material may be a wax and an alcohol-based
solvent. The wax is preferably beeswax but other types
of wax may be employed. A silicone may be used instead
of a wax. The alcohol-based solvent is preferably an
ethyl alcohol-based solvent but other alcohol-based
solvents may be employed.

The air freshening material may be any known and
appropriate type of air freshening material. Thus, for
example, the air freshening material may be at least one
of an aldehyde, ketone, alcohol, an essential oil or
ester.

The cleaning material and the air freshening
material in the product of the present invention are
preferably such that they do not form a stable foam.

The product of the invention may use one or more cleaning materials, or one or more air freshening materials.

If desired, the product of the invention, for example in capsule or sachet form, can be sold in packets containing a plurality of the products. Especially in the case of capsules, the capsules could be pushed out of discrete compartments in a sheet packaging, in the same way that tablets are pushed out of similar compartments when they are desired to be used. Any suitable and appropriate type of packaging may be employed including foil such as aluminium foil.

In order that the invention will be fully understood, reference will now be made to the following Example which is given by way of illustration only.

EXAMPLE

A water-soluble gelatine material was prepared from gelatine, water and a plasticiser in the form of 30% by weight of glycerol. The gelatine material was produced into the form of capsules using known rotary drum capsule-forming apparatus. As is well known, this rotary drum apparatus comprises a pair of rotating drums which come together at a nip point and which seal together at the nip point two separate sheets of the gelatine material. The outer surface of the drums have

appropriate depressions into which capsules are formed as the two sheets of gelatine material are sealed together.

As the capsules were being formed, approximately 50ml of a cleaning material were introduced into each capsule. The cleaning material had the following composition:

Isopropanol alcohol	60% by weight
Butyl glycol	35% by weight
Non-ionic surfactant	3% by weight
Colour and perfume	2% by weight

A capsule produced in accordance with this Example was introduced into an empty squeeze-type container. Hot water was introduced until the container had 500ml of the hot water. The capsule dissolved in approximately 2 minutes and produced a stable and effective cleaning material for hard surfaces such for example as glass and kitchen tiles. The gelatine material was found to have been completely dissolved and there were no non-dissolved particles likely to cause blocking of the spray apparatus in the container.

In order to further illustrate the invention, reference will now be made to the accompanying drawings in which:

Figure 1 shows a first type of container for dispensing the product of the invention;

Figure 2 shows a second type of container for dispensing the product of the invention;

Figure 3 shows a third type of container for dispensing the product of the invention;

Figure 4 shows a fourth type of container for dispensing the product of the invention; and

Figure 5 shows a fifth type of container for dispensing the product of the invention.

Referring to Figure 1, there is shown a trigger action dispenser 2 having a bulbous body 4 and a spray head 6. The spray head 6 has a trigger 8 which is squeezed by a person holding the spray head 6. Squeezing of the spray head 6 causes a spray to be ejected through a jet aperture 10 in a spraying nozzle 12.

The dispenser 2 can easily be reused because it has a screw part 14 for enabling the spray head 6 to be unscrewed from the body 4. When the body 4 is empty, the spray head 6 can be unscrewed from the body 4 and the product of the invention can be placed into the body 4. An appropriate quantity of hot water can then be run into the body 4, for example simply by placing the body 4 under a hot water tap. The product of the invention dissolves to form liquid 16 in the body 4. The spray

head 6 then only needs to be screwed back on to the body 4 and the dispenser 2 is ready for reuse. Thus the dispenser 2 will have been simply and economically refilled. The cost of a new dispenser 2 will have been avoided. Environmental problems associated with the disposal of the empty dispenser 2 will also have been avoided.

Figure 2 shows a pump action dispenser 2. Similar parts as in Figure 1 have been given the same reference numerals for ease of comparison and understanding. The dispenser 2 shown in Figure 2 operates by an up and down pumping action on the spray head 6.

Figure 3 shows a squeeze-action dispenser 2. Similar parts as in Figure 1 have again been given the same reference numerals for ease of comparison and understanding. In Figure 3, a rubber or other flexible bulb 18 is squeezed in order to spray the liquid 16 through the aperture 10. The dispenser 2 shown in Figure 3 is the type of dispenser usually used for dispensing air freshening materials. The dispensers shown in Figures 1 and 2 are the type of dispensers usually used for dispensing cleaning materials.

Referring now to Figures 4 and 5, similar parts have again been given the same reference numerals. Figure 4 shows a dispenser 2 which is like the dispenser 2 shown in Figure 2 but which is able to be refilled

with water by removing a bung 18, for example made of rubber. The dispenser 2 is then turned upside down and filed with water. The bung 18 is then reinserted into the body 4 and the dispenser 2 turned the right way up.

Figure 5 shows a spray nozzle 12 with a cut-off part 20. This part 20 can be any screw part 20 if desired. The dispenser 2 has a re-fillable pressurised air container 22. A push button 24 enables air to be released from the container 22 to force liquid 16 through the spray nozzle 12. The container 2 shown in Figure 5 is especially suitable for heavy duty use, for example for industrial applications.

It is to be appreciated that the embodiments of the invention described above with reference to the Example and the accompanying drawings have been given for illustrative purposes only and that modifications may be effected. Thus, for example, the dispensers may be of a different shape than those shown in the drawings. Any suitable and appropriate cleaning material or air freshening material may be dispensed. Where the product is in the form of a capsule or a sachet, then any suitable and appropriate shape may be employed for the capsule or sachet. The product such for example as the capsule or sachet may be made in various sizes depending upon the amount of cleaning material or air freshening material required. It is envisaged that the product

will be made up in various unit dosage forms, for example 1 - 100 ml, appropriate for pre-determined amounts of water such for example as 250ml, 500ml, 750ml and 1000ml of water. The product may have an envelope thickness of from 0.25 - 3mm, and preferably between 0.5 - 1.5mm.

CLAIMS

1. A product for cleaning or air freshening, which product comprises at least one cleaning material or air freshening material sealed inside an envelope of a water-soluble gelatine material.
2. A product according to claim 1 in which the water-soluble gelatine material is in the form of a capsule.
3. A product according to claim 1 in which the water-soluble gelatine material is in the form of a sachet.
4. A product according to any one of the preceding claims in which the water-soluble gelatine material includes a plasticiser.
5. A product according to any one of the preceding claims in which the cleaning material or the air freshening material is in liquid form, the water-soluble gelatine material then being such that it is not dissolved by the liquid cleaning material or the liquid air freshening material.

6. A product according to any one of claims 1-4 in which the cleaning material or the air freshening material is in non-liquid form.

7. A product according to claim 6 in which the cleaning material or the air freshening material is in powder form.

8. A product according to claim 6 in which the cleaning material or the air freshening material is in solid form.

9. A product according to any one of the preceding claims in which the cleaning material comprises at least one of glycols: alcohols: sodium metasilicates: phosphates: aliphatic hydrocarbons: chlorinated hydrocarbons: ethereal oils: solvents: organic acids: esters: sodium linear alkylate sulphonates: aluminium silicates: wetting agents: non ionic, anionic, cationic or amphoteric surfactants: chlorine based bleaching agents: sequestering agents: sodium gluconates: sodium heptonates: poly carboxylates.

10. A product according to claim 9 in which the cleaning material comprises a surfactant and an alcohol-based solvent.

11. A product according to any one of claims 1-9 in which the cleaning material is a wax and an alcohol-based solvent.

12. A product according to claim 11 in which the wax is beeswax.

13. A product according to any one of claims 1-8 in which the air freshenening material is at least one of an aldehyde, ketone, alcohol, an essential oil or ester.

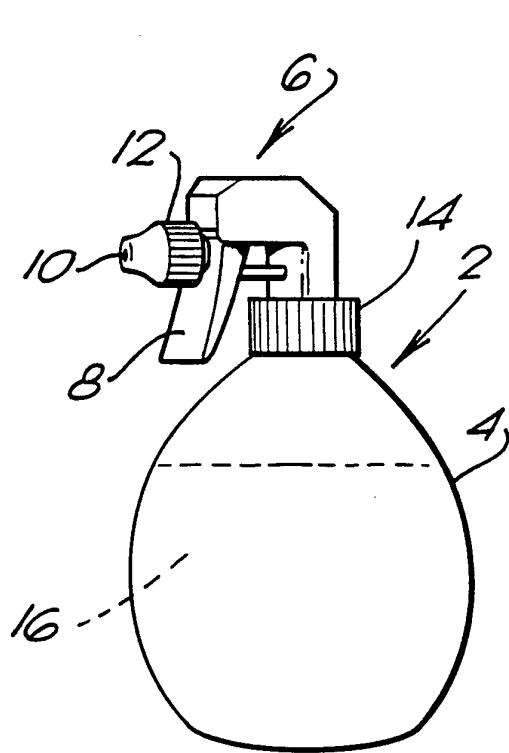


FIG. 1

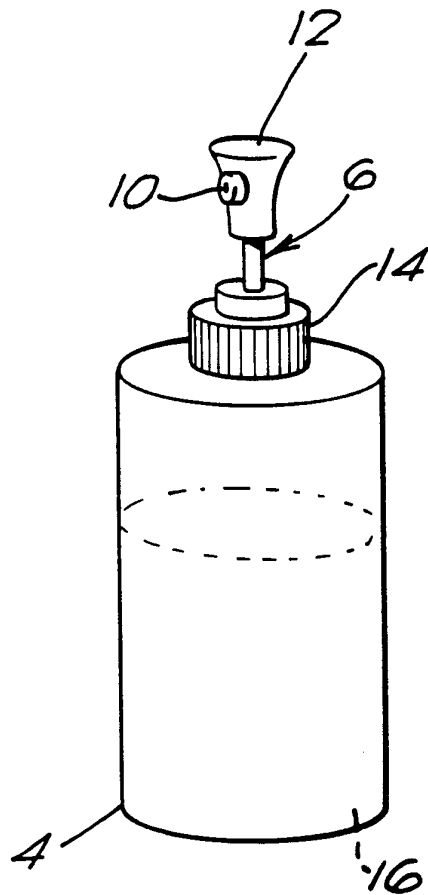


FIG. 2

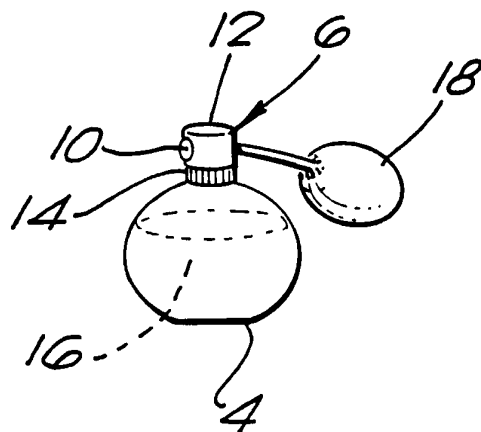
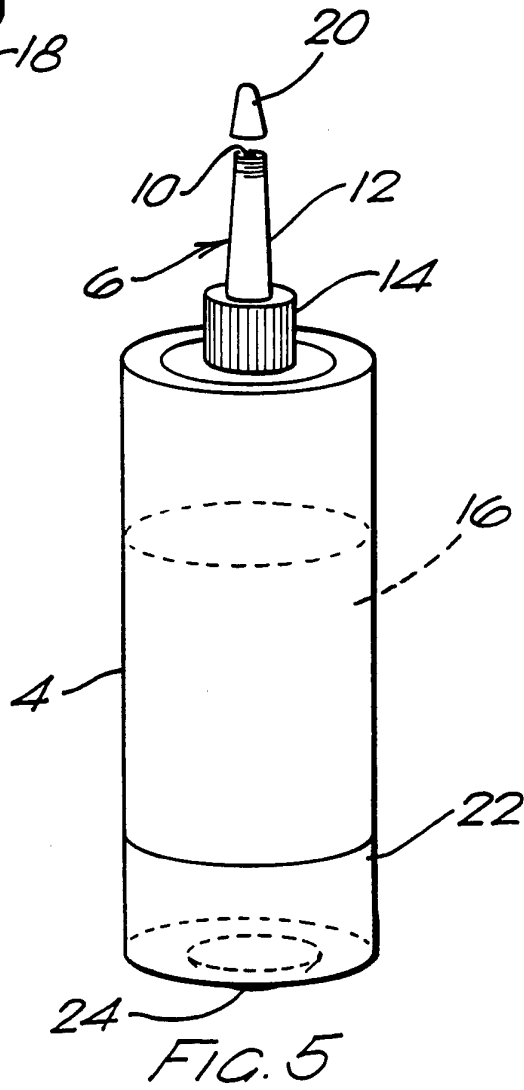
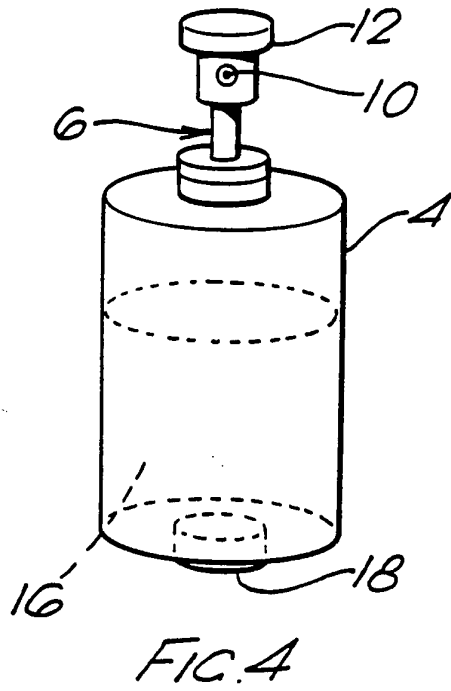


FIG. 3



INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 95/00837

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 6 A61L9/04 A61L9/12 C11D17/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 A61L C11D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE,A,43 01 358 (SCHELER H.) 5 August 1993 see page 2, line 1 - line 17; claims 1-6 ---	1,2,5-7, 9,10
X	US,A,3 528 925 (CHAPUIS J.) 15 September 1970 see column 4, line 35 - line 43 ---	1,2,4,5, 9,10
X	US,A,3 549 544 (JOHNSON K.L.) 22 December 1970 see column 1, line 18 - line 27 ---	1,2,4,5, 9
X	GB,A,2 158 356 (MEEHAN F.) 13 November 1985 see claims 1-3 ---	1,3,5
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the international search

17 July 1995

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International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB,A,1 544 410 (LINK ASSOCIATES) 19 April 1979 see claim 4 -----	1,2

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 95/00837

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		JP-A- 60242856	02-12-85
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