

Señor

SUPERINTENDENTE DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES

SUPERINDUSTRIA Y COMERCIO

Radicacion : 00075818 00000001

Folios: 32

Fecha (AMD): 2000-11-29 17:32:38

Tramite : 002 PATENTES D 1 REGISTRO/ 329 COMPLENEN

Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

E. S D.

Re: P1.-UNILEVER N.V.-Solicitud de Patente de Invención para
"DISPENSADOR".- Clase A45d 40/40.-Expediente número
00-075.818.-

1. Me refiero a mi solicitud arriba nombrada de fecha 5 de Octubre de 2000.

2. Anexos me permito presentar a usted:

- (1) Copia autentica, debidamente certificada de la solicitud de patente presentada para el invento arriba nombrado **respecto de la cual reclamo prioridad**, a saber la solicitud británica número 9923923.8 de 8 de Octubre de 1999, junto con su traducción Oficial No. LLC-082-2000 correspondiente a las legalizaciones y reivindicaciones de dicho documento;
- (2) Copia debidamente autenticada por el Notario Sexto del Circulo de Bogotá, de los documentos que acreditan la calidad de Traductor Oficial del señor Gabriel Rueda Chadid quien elaboró la traducción de la legalizaciones de la solicitud británica número 9923923.8 respecto de la cual se reivindica prioridad en el presente caso;
- (3) Documento que acredita el traspaso que la sociedad Unilever PLC hace a favor de mí representado, de sus derechos sobre el mismo, debidamente legalizado hasta por el Ministerio de Relaciones Exteriores de Colombia bajo el número 388977 de 17 de Noviembre de 2000; y

- (4) Traducción Oficial No.0309, debidamente legalizada hasta por el Ministerio de Relaciones Exteriores de Colombia bajo el número 394498 de 27 de Noviembre de 2000, correspondiente a las partes pertinentes de dicho documento de traspaso.

3. Ruego a usted tomar atenta nota de lo anterior y proceder de conformidad.

Señor Superintendente,



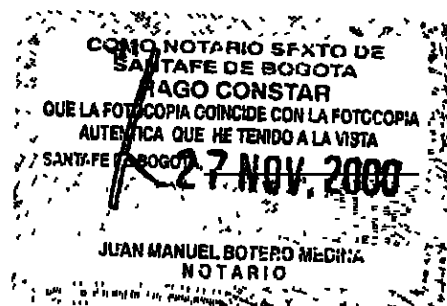
JOSE ANTONIO LEOREDA

T.P. 10.784

Código 231

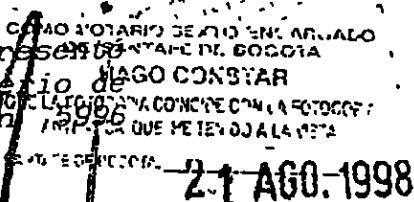
EL SUSCRITO JEFE DEL AREA DE
LEGALIZACIONES DE MINISTERIO DE
RELACIONES EXTERIORES.

HACE CONSTAR

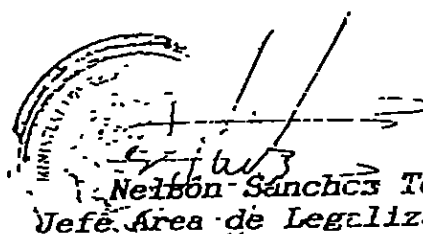


Que el señor Gabriel Rueda, se encuentra debidamente registrado ante este Ministerio, como traductor e intérprete oficial para los idiomas INGLES -ESPAÑOL, ESPAÑOL - INGLES.

Para efectos de esta certificación el interesado presenta copia autenticada de la certificación del Ministerio de Justicia acerca de la vigencia de la resolución 5896 de 1982.



Dada en Santafé de Bogotá, D.C., a los diez y nueve días (19) del mes de diciembre de 1994.


Nelson Sánchez Torres
Jefe Área de Legalizaciones

COMO NOTARIO SEFATO ENCARGADO DEL CIRCULO DE SANTAFE DE BOGOTA, HAGO CONSTAR QUE ESTA COPIA FOTOSTATICA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
01 JUL 1998

COMO NOTARIO SEFATO ENCARGADO DEL CIRCULO DE SANTAFE DE BOGOTA, HAGO CONSTAR QUE ESTA COPIA FOTOSTATICA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
01 SEP 2000

NST/gtm.



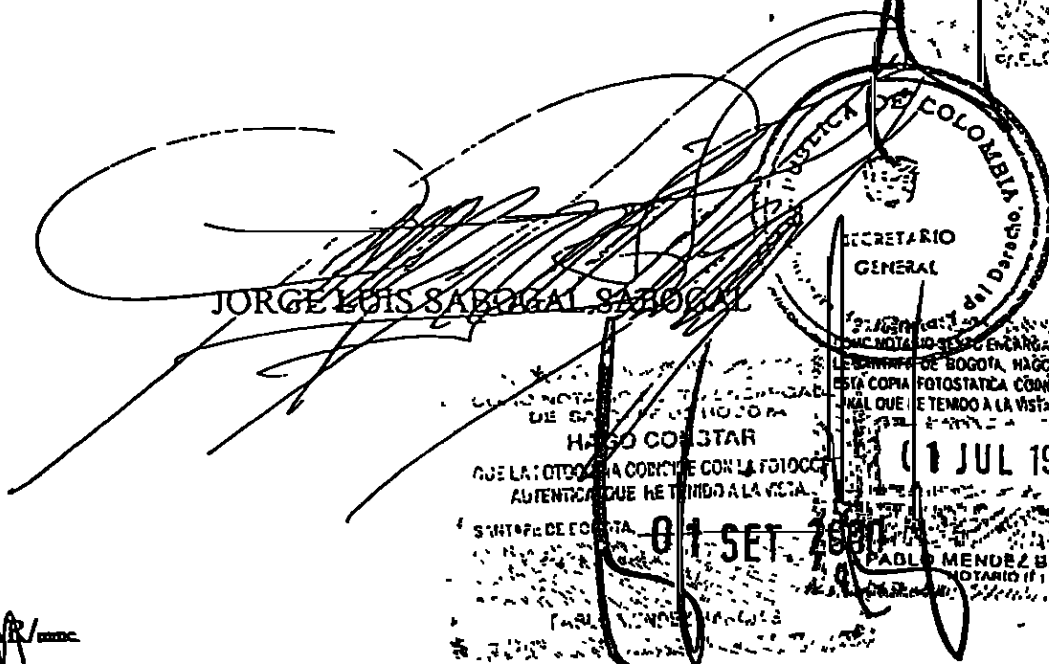
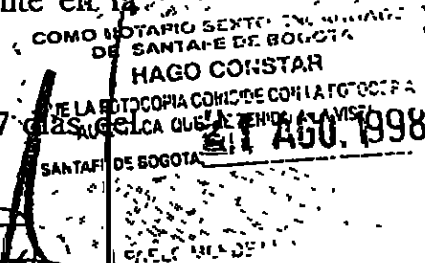
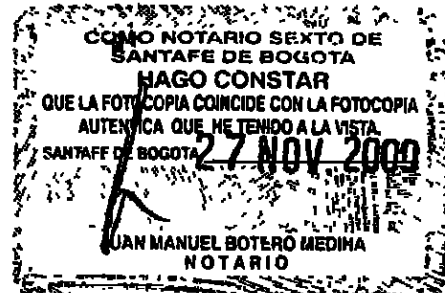
Ministerio de Justicia y del Derecho

EL SECRETARIO GENERAL DEL MINISTERIO DE
JUSTICIA Y DEL DERECHO

CERTIFICA:

Que por Resolución 5996 del 29 de noviembre de 1982, le fue expedida licencia para ejercer funciones de Traductor e Intérprete Oficial en los idiomas INGLÉS-ESPAÑOL, ESPAÑOL-INGLÉS a GABRIEL RUEDA CHADID, identificado con la cédula de ciudadanía No. 17.124.145 expedida en Bogotá. Que dicha resolución se encuentra vigente en la fecha.

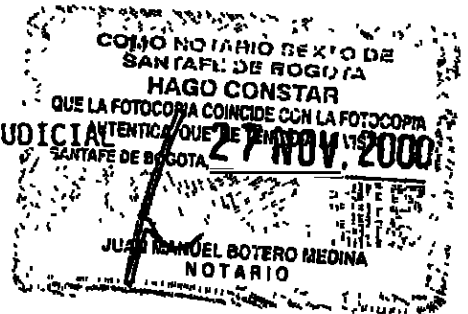
A solicitud del interesado, en Santafé de Bogotá D.C., a los 17 meses de noviembre de 1994.



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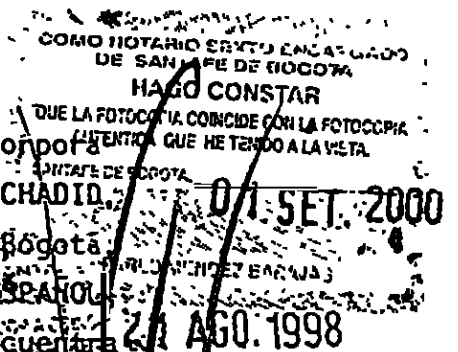
TRIBUNAL SUPERIOR DEL DISTRITO JUDICIAL DE SANTAFE DE BOGOTA
SECRETARIA GENERAL

LA SUSCRITA SECRETARIA DEL H. TRIBUNAL SUPERIOR DEL DISTRITO JUDICIAL
DE SANTAFE DE BOGOTA,

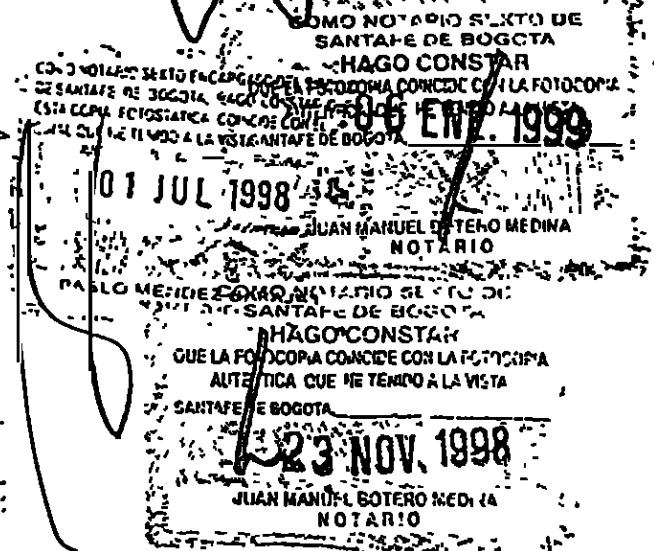
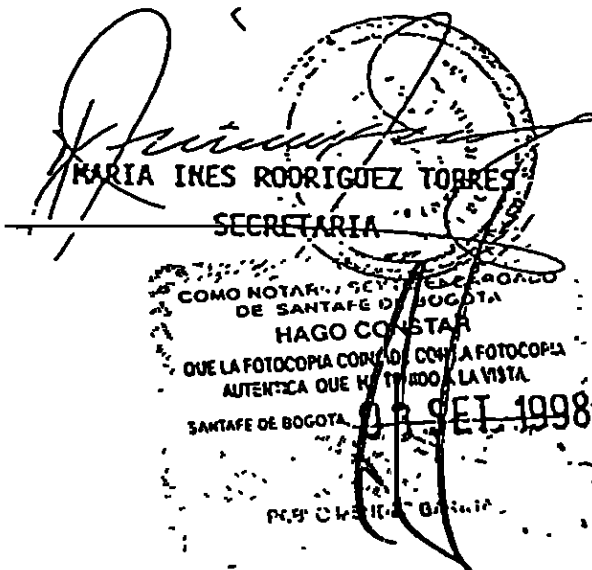


CERTIFICA:

Que el Acuerdo No. 183 de diciembre 3 de 1982 emanado de esta Corporación, por medio del cual dió posesión al señor GABRIEL RUEDA CHADID, identificado con Cédula de Ciudadanía número 17.124.145 de Bogotá, como TRADUCTOR E INTERPRETE OFICIAL de los idiomas INGLES-ESPAÑOL-ESPAÑOL-INGLES, en virtud de la Resolución No. 5996, se encuentra VIGENTE.



Se expide en Santafé de Bogotá D.C., a dieciseis (16) de noviembre de mil novecientos noventa y cuatro (1994).



CRM./

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35
Unilever N.V. J-3503(c)

REF: LLC-082-2000. La presente es Traducción Oficial de un documento presentado originalmente en inglés. Esta traducción es elaborada por Gabriel Rueda Chadid (Traductor Oficial).

OFICINA DE PATENTES

The Patent Office

The Patent Office

Cardiff Road

Newport

South Wales

NP10 8QQ

El suscrito en su condición de funcionario debidamente autorizado al tenor de lo dispuesto en el Artículo 74(1) y (4) de la Ley de Desregulación y Contratación de 1994, para firmar y expedir certificados a nombre del Contralor General, certifico mediante el presente instrumento que anexo se encuentra fiel copia de los documentos según fueron presentados originalmente en relación con la solicitud de patente que se identifica en dichos documentos.

De acuerdo con las Reglas sobre patentes (Nuevos Registros de Compañías) de 1982, si una compañía cuyo nombre aparece en el presente certificado y en los demás documentos que le acompañan se ha registrado nuevamente al amparo de la Ley de Sociedades de 1980, con el mismo nombre con el cual se había registrado inmediatamente antes del nuevo registro, con


GABRIEL RUEDA CHADID
TRADUCTOR OFICIAL
RESOLUCION 5996 DE NOV. 29-82
MINISTERIO DE JUSTICIA

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excepción de la sustitución o inclusión de la última parte del nombre en las palabras "Sociedad Pública Limitada." o sus equivalentes en Inglés, y las referencias al nombre de la sociedad en el presente certificado y en los demás documentos que le acompañan se considerarán como referencias al nombre con la cual se encuentran nuevamente registrada.

De acuerdo con las normas, las palabras Sociedad pública Limitada pueden ser reemplazadas por p.l.c., plc, P.L.C. o PLC.

El nuevo registro según lo dispone la Ley de Sociedades no constituye una nueva persona jurídica, sino tan solo somete a la sociedad a determinadas normas jurídicas adicionales aplicables a las compañías.

Firmado: (Hay firma)

Fecha: Septiembre 14, 2000

Entidad Ejecutiva del Departamento de Comercio e Industria


GABRIEL RUEDA CHADID
TRADUCTOR OFICIAL
RESOLUCION 5996 DE NOV. 29-82
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Oficina de Patentes
Solicitud de otorgamiento de patente

1/77
Oficina de Patentes
Cardiff Road
Newport
Gwent NP10 8QQ

Nota: Hay sello de la Oficina de Patentes de Fecha Octubre 8, 1999.

1. Referencia	J 3503 (C)/sje		
2. Número de Solicitud de patente (La Oficina de Patentes diligenciará esta sección)	Octubre 8, 1999	9923923.8	
3. Nombre completo, dirección y código postal del solicitante.	UNILEVER PLC UNILEVER HOUSE, BLACKFRIARS LONDON, EC4P 4BQ		
Número de Patentes ADP (si se conoce)	1628001		
Si el solicitante es persona jurídica, indicar el país o estado de su constitución.	UNITED KINGDOM		
4. Título del Invento	DISPENSADOR		
5. Nombre del Representante (en caso de tenerlo)	PEARCE, Timothy		
"Dirección para envío de correspondencia" en el Reino Unido al cual debe enviarse toda la correspondencia (se incluye el código postal).	PATENT DEPARTMENT, UNILEVER PLC COLWORTH HOUSE, SHARNBROOK BEDFORD, MK44 1LQ		
Número ADP de patentes (si se conoce)	760529001		
6. Si usted esta declarando prioridad a partir de una o más solicitudes de patentes anteriores, suministre el nombre del país y la fecha de presentación de cada una de estas solicitudes anteriores y (en caso de tener dicha información) el número de cada uno de los solicitantes.	País	No. Prioritario de Solicitud (si lo conoce)	Fecha de Presentación (día/mes/año)
7. Si la presente solicitud está dividida o se deriva de una solicitud anterior en el Reino Unido, suministre el número y fecha de presentación de la solicitud anterior.	No. de Solicitud anterior	Fecha de Presentación (día/mes/año)	
8. Existe declaración de invención y derecho de otorgamiento de una patente como requisitos de apoyo de esta solicitud? (Responder afirmativamente si:	Si		
a. Uno de los solicitantes cuyo nombre aparece en la sección 3 no es el inventor, o			
b. existe un inventor cuyo nombre no aparece como solicitante, o			
c. el solicitante cuyo nombre aparece es persona jurídica. Ver Nota (d)			

Ca
CABRERA RUEDA CHADID
TRADUCTOR OFICIAL
RESOLUCION 5996 DE NOV. 29-82
MINISTERIO DE JUSTICIA

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9. Ingresar el número de hojas para cada uno de los siguientes ítems que se radican junto con el presente formato. No contar copias correspondientes al mismo documento.

Hojas de continuación del presente formato

Descripción	11
Reivindicaciones	4
Resumen	1
Diseños	8

10 Si usted también esta presentando algunos de los siguientes documentos, indique el número de cada uno de ellos:

Documentos prioritarios	-
Traducciones de documentos prioritarios	-
Declaraciones de invención y derechos para otorgamiento de una patente (Formato de Patentes 7/77)	-
Solicitud de Examen preliminar e investigación (Formato de Patentes 9/77)	1
Solicitud de examen sustantivo (Formato de Patente 10/77)	-
Otros documentos (Favor especificar)	-

11. El suscrito solo solicita el otorgamiento de patente con base en la presente solicitud.

Firma:	Fecha:
Sandra Jane EDWARDS, Forma Autorizada	Octubre 8 de 1999

12 Nombre y número telefónico en horario hábil de la persona con la cual se deba establecer contacto en el Reino Unido. Sandra Edwards, Tel. 01234 22 2068

GABRIEL RUEDA CHADID
INTERPRETE OFICIAL
RESOLUCION 5996 DE NOV. 29-82
MINISTERIO DE JUSTICIA

REIVINDICACIONES

1. Un dispensador para bloque sólido o sólido blando que comprende:

- i) un cilindro provisto de un primer extremo a través del cual se dispensa el bloque sólido o el sólido blando, y un extremo expuesto conformado por una pared de base que define una abertura y que posee una superficie inferior,
 - ii) una rueda de rotor instalada por debajo del cilindro que tiene un corte tranversal similar al del cilindro y una superficie superior contigua a la superficie inferior del cilindro,
 - iii) un huso roscado colocado fijamente a la rueda del rotor y que se prolonga axialmente a través de la abertura en la pared de base del cilindro,
 - iv) un pistón al interior del cilindro que tiene un montaje roscado que engancha el huso y se mueve axialmente cuando se produce la rotación del huso,
- donde
- v) una de la pared base del cilindro o la superficie superior de la rueda del rotor porta un cubo que se extiende radialmente y tiene un perfil cónico hacia el interior y el otro elemento de la pared base o de la superficie superior tiene un cárter dimensionado para alojar el cubo de rueda y donde este se asienta cuando

la rueda del rotor y el cilindro quedan alineados.

2. Un dispensador de acuerdo con la reivindicación 1, donde existen por lo menos dos cubos de rueda y los correspondientes cárteres posicionados simétricamente alrededor de la rueda del rotor y de la pared base del cilindro.

3. Un dispensador de acuerdo con una de las reivindicaciones precedentes donde la rueda del rotor porta el cubo de rueda y la pared base del cilindro es indentada.

4. Un dispensador de acuerdo con la reivindicación 3 donde la rueda del rotor tiene una superficie superior flexible en los alrededores del cubo de rueda.

5. Un dispensador de acuerdo con la reivindicación 4 donde la rueda del rotor comprende una pieza ahuecada que tiene una pared superior flexible reforzada en los alrededores de su montaje dentro del cilindro.

6. Un dispensador de acuerdo con una de las reivindicaciones precedentes donde el cubo de rueda tiene una sección de corte transversal en forma cónica hacia adentro.

7. Un dispensador de acuerdo con una de las reivindicaciones precedentes donde el cubo de rueda tiene una relación de longitud radial con respecto de altura en un rango de 10:1 hasta 25:1.

8. Un dispensador de acuerdo con una de las reivindicaciones precedentes donde el cubo de rueda tiene una relación de longitud radial a ancho transversal máximo de 4:3 hasta 2:1.

9. Un dispensador de acuerdo con una de las reivindicaciones precedentes donde el cilindro y la rueda del rotor son ovaladas en la sección del corte transversal.

10. Un dispensador de acuerdo con una de las reivindicaciones precedentes donde la base del cilindro y la superficie superior de la rueda de rotor tienen cada una un perfil vertical en arco.

11. Un dispensador de acuerdo con la reivindicación 10 donde la base del cilindro es convexa y la superficie superior de la rueda del rotor es cóncava, y los perfiles tienen el mismo radio de curvatura.

12. Un dispensador de acuerdo con una de las reivindicaciones anteriores donde el cárter tiene forma de rombo con extensión radial, y un ancho máximo transversal suficiente para el asentamiento del cubo de rueda.

13. Un dispensador de acuerdo con una de las reivindicaciones anteriores donde el cárter tiene en todas sus partes profundidad similar.

14. Un dispensador de acuerdo con las reivindicaciones 12 o 13 donde el cilindro está formado por moldeo de

inyección dentro de un molde y donde hay una protuberancia irregular que ocurre al interior de una compuerta hacia el molde que se posiciona al interior del cárter, preferiblemente en sentido radial cercano al centro de la base del cilindro.

15. Un dispensador para aplicación de un material cosmético, de tocador u otro material para uso personal o en el hogar en forma de bloque sólido o de sólido blando sustancialmente igual a las descripciones del presente documento y con respecto de las Figuras 1 a 5 o Figuras 1 a 4 y Figura 6.

La anterior es Traducción Oficial de un documento presentado originalmente en inglés. Esta traducción fue realizada por GABRIEL RUEDA CHADID (Traductor Oficial). Resolución 5996 del Minjusticia, por lo cual estampo mi Sello y Firmo.

Bogotá D.C., Septiembre 29, 2000.


GABRIEL RUEDA CHADID
"TRADUCTOR OFICIAL
RESOLUCION 5996 DE NOV. 29-82
MINISTERIO DE JUSTICIA



INVESTOR IN PEOPLE

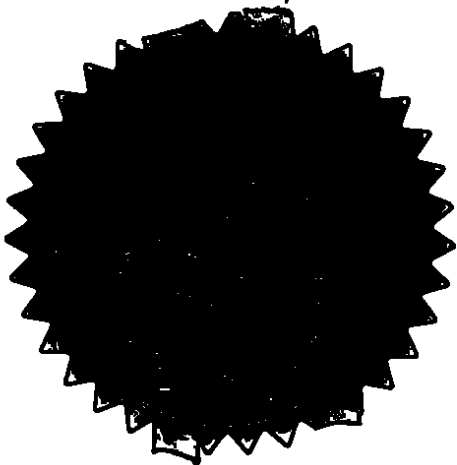
The Patent Office
Concept House
Cardiff Road
Newport
South Wales
NP10 8QQ

I, the undersigned, being an officer duly authorised in accordance with Section 74(1) and (4) of the Deregulation & Contracting Out Act 1994, to sign and issue certificates on behalf of the Comptroller-General, hereby certify that annexed hereto is a true copy of the documents as originally filed in connection with the patent application identified therein.

In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration save for the substitution as, or inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

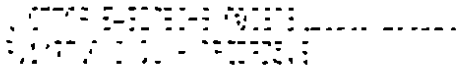
In accordance with the rules, the words "public limited company" may be replaced by p.l.c., plc, P.L.C. or PLC.

Re-registration under the Companies Act does not constitute a new legal entity but merely subjects the company to certain additional company law rules.



Signed *Andrew*

Dated 14 September 2000



The Patent Office
Cardiff Road
Newport
Gwent NP10 8QQ

Request for grant of a patent
(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

1.	Your reference	J 3503 (C)/sje		
2.	Patent application number <i>(The Patent Office will fill in this part)</i>	n 8 OCT 1999		9923923.8
3.	Full name, address and postcode of the or of each applicant <i>(underline all surnames)</i>	UNILEVER PLC UNILEVER HOUSE, BLACKFRIARS LONDON, EC4P 4BQ		
	Patents ADP number <i>(if you know it)</i>	(628001		
	If the applicant is a corporate body, give the country/state of its incorporation	UNITED KINGDOM		
4.	Title of the invention	DISPENSER		
5.	Name of your agent <i>(if you have one)</i>	PEARCE, Timothy		
	"Address for Service" in the United Kingdom to which all correspondence should be sent <i>(including the postcode)</i>	PATENT DEPARTMENT, UNILEVER PLC COLWORTH HOUSE, SHARNBROOK BEDFORD, MK44 1LQ		
	Patents ADP number <i>(if you know it)</i>	7445791001		
6.	If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and <i>(if you know it)</i> the or each application number	Country	Priority application number <i>(if you know it)</i>	Date of filing <i>(day / month / year)</i>
7.	If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application	Number of earlier application		Date of filing <i>(day/month/year)</i>
8.	Is a statement of inventorship and of right to grant of a patent required in support of this request? <i>(Answer 'Yes' if:</i> a) <i>any applicant named in part 3 is not an inventor, or</i> b) <i>there is an inventor who is not named as an applicant, or</i> c) <i>any named applicant is a corporate body.</i> <i>See note (d))</i>	YES		

Patents Form 1/77

9. Enter the number of sheets for any of the following items you are filing with this form.
Do not count copies of the same document

Continuation sheets of this form

Description	11
Claim(s)	4
Abstract	1
Drawing(s)	4 + 4 

10. If you are also filing any of the following, state how many against each item.

Priority Documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (*Patents Form 7/77*)

Request for preliminary examination and search (*Patents Form 9/77*)

1

Request for substantive examination (*Patents Form 10/77*)

Any other documents
(please specify)

11. I/We request the grant of a patent on the basis of this application.

Signature(s)

Date: 8-Oct-99

Sandra Jane EDWARDS, Authorised Signatory

12. Name and daytime telephone number of person to contact in the United Kingdom

Sandra Edwards, Tel 01234 22 2068

Warning

After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication or communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the Patents Act 1977 stops you from applying for a patent abroad without first getting written permission from the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been revoked.

Notes

- If you need help to fill in this form or you have any questions, please contact the Patent Office on 0645 500505.
- Write your answers in capital letters using black ink or you may type them.
- If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.
- If you have answered 'Yes' Patents Form 7/77 will need to be filed.
- Once you have filled in the form you must remember to sign and date it.
- For details of the fee and ways to pay please contact the Patent Office.

DUPLICATE

- 1 -

Dispenser

The present invention relates to a dispenser, in particular to a dispenser for a solid block or soft solid mass and especially for dispensing a cosmetic or toiletry or material for personal or household use.

Background

10 A number of known containers (alternatively referred to as dispensers) for a solid block or soft solid mass, such as dispensers in particular, for cosmetic materials or toiletries or other materials for personal or household use, comprise a barrel having one end through which the material
15 can be dispensed, that end being open for dispensing a solid block or closed by an apertured cap for dispensing a soft solid mass. A rotor wheel is mounted at the opposite end of the barrel, and is fixed to a threaded rod which extends axially within the barrel and engages a correspondingly
20 threaded mounting in a follower, a piston located within the barrel. When the rotor wheel is rotated, the threaded rod is likewise rotated and engages with the corresponding threading on the mounting of the piston, thereby translating the rotational movement of the rod into axial movement of
25 the piston.

The transverse cross section of the barrel is at the discretion of the producer, commonly being either round or oval. The rotor wheel has typically comprised a round wheel
30 projecting through opposed windows in a skirt depending from the base of the barrel. An alternative type of rotor wheel,

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as described in US-A-3612705 and subsequently in EP-A-713660, comprises a wheel having approximately the same transverse cross section as the barrel and mounted underneath the barrel. Such an arrangement is particularly
5 suitable for a non-circular barrel and wheel, for example, an oval barrel and wheel, because rotation of the wheel out of and into alignment with the barrel provides a readily apparent and effective means to meter the solid block or soft solid mass of material out of the dispenser. In US-A-
10 3612705 there is also described the location of small round bosses proud of the top surface of the rotor wheel and complementary shallow sockets indented into the bottom surface of the base of the barrel to align the rotor wheel with the barrel on each turn of the wheel. The present
15 inventors recognise that this has benefits not only during the dispensing operation, but also preventing the wheel and base to become misaligned during transportation of the dispenser before it is filled and however, the design described in US-A-3612705 presents a number of difficulties
20 in practice for its smooth and effective implementation. The barrel is often produced by injection moulding of a thermoplastic, and the gate into the mould is normally located at the bottom of the barrel. The residual excess plastic in the gate forms an irregular protuberance beneath
25 the bottom surface of the barrel which can impair the smooth rotation of rotor wheel. The alignment of a small round boss with a corresponding shallow socket is comparatively difficult because even a small special displacement can result in misalignment. Furthermore, when the small round
30 boss on the wheel is rotated into contact with the edge of the bottom of the barrel, the vertical displacement of the

- 3 -

wheel from the barrel bottom in order to accommodate the boss must be achieved suddenly due to the sharp profile of the boss. This has a number of effects. Impact of the boss at the same point at the base of the barrel wall can cause
5 damage to the wall or to the boss, and with repeated turnings of the wheel relative to the barrel can result in the boss being worn away, so that it ceases to be effective eventually to perform an alignment function. Because a round boss provides approximately a point contact with the
10 wall of the barrel on rotation, the impact is sudden and the resistance to rotation great, so that wheel rotation encounters a sudden stiffness.

It is an objective of the present invention to mitigate or
15 avoid one or more of the difficulties described hereinabove.

Brief description

According to the present invention there is provided a
20 dispenser for a solid block or a soft solid comprising:

- i) a barrel having a first end through which the solid block or soft solid is dispensed, and an opposite end comprising a base wall defining an aperture and having
25 a lower surface;
- ii) a rotor wheel mounted beneath the barrel having a transverse cross-section similar to the barrel and a top surface contiguous with the lower surface of the
30 barrel;

11i) a threaded spindle fixed to the rotor wheel and extending axially through the aperture in the base wall of the barrel;

5 iv) a piston within the barrel having a threaded mounting that engages the spindle and moves axially on rotation of the spindle;

in which,

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v) one of the base wall of the barrel or the top surface of the rotor wheel carries a radially extending boss having an inwardly tapered profile and the other of the base wall or the top surface has a sump dimensioned to
15 accommodate the boss and in which the boss is seated when the rotor wheel and barrel are aligned.

By the employment of a boss having an inwardly tapering profile, the contact is gradual between the boss and the
20 surface which it encounters during relative rotation of the rotor wheel and barrel. This alleviates or eliminates at least some of the difficulties identified hereinabove for a round boss.

25 Detailed Description

The present invention provides a dispenser for dispensing material in the form of a solid block or soft solid in which the material is propelled upwardly within a barrel by a
30 piston that is axially moveable by engagement with a threaded spindle fixed to a rotor wheel mounted beneath the

- 5 -

barrel, in which the base of the barrel and the top surface of the rotor wheel are aligned by seating a tapered boss on one of the barrel base surface or rotor wheel top surface into a corresponding sump in the other surface.

5

Preferably, the boss is located on the rotor wheel and the sump in the base of the barrel, at least partly because it is desirable to have a relatively stiff base for the barrel. By employing a hollow rotor wheel, it is possible to have a rotor wheel with a relatively flexible top surface that is contiguous with the base of the barrel. This is

10

particularly valuable, enabling the top surface to flex in the vicinity of boss, particularly when the top surface is thinned in the vicinity of the boss. Such flexibility

15

enables the surface of the rotor wheel to be displaced vertically away from the barrel base surface when the boss encounters the base. Especially in cooperation with the tapered profile of the boss, this minimises the resistance to the boss climbing onto and subsequently riding across the surface of the base. By easing the way in which the boss climbs onto and rides across the base surface, the risk of damage to the boss or to the surface of the base is reduced, thereby preserving the ability of the boss to perform its locating function.

20

25

On rotation of the rotor wheel relative to the barrel, the boss produces an audible sound, or click, as it drops into the sump, thereby providing an additional cue to the user that a unit volume of cosmetic material has been dispensed from the barrel. The tapered profile of the boss minimises the sound as it engages the base surface before it

30

- 6 -

encounters the sump, thereby minimising the risk that a click could be heard before the sump is reached and thereby avoiding confusing the user as to the amount of material dispensed if he or she were to hear a premature click.

5

It is preferably to employ a plurality of boss/sumps, most desirable disposed symmetrically around the barrel base/rotor wheel. Many useful dispensers according to the present invention are oval in transverse cross section, and
10 in such dispensers, it is preferable to employ two bosses/sumps located on the major transverse axis of the dispenser. Particularly preferably, the boss is located adjacent to the sidewall of the dispenser.

15 The boss in many preferred dispensers has a taper angle of from 9 to 18°. In a number of dispensers the ratio of boss height to radial length is from 10:1 to 25:1.

The boss advantageously can have an inward taper when viewed
20 in transverse cross section on the side of the boss encountering the base (or as the case may be, rotor wheel) surface. It is preferably for both sides of the boss to be tapered, and preferably symmetrically tapered, because it is preferable for the rotor wheel to be turned both ways, both
25 the dispense and also to retract, particularly when dispensing a solid block. The inward tapering of the boss is beneficial in that it reduces the contact angle between boss and the base (or wheel) wall that it is encountering by the angle of taper, thereby enabling the boss to climb more
30 smoothly over that wall. The side walls and end wall of the boss are often radiused to the top of the boss. The

- 7 -

boss, in many instances, tapers to a point. The ratio of radial length to transverse width of the boss is often selected in the range of from 4:3 to 2:1. The ratio of the radial length to boss to the radius of base/wheel on which it sits in the invention dispenser is commonly selected in the range of from 1:4 to 2:5. Such relative dimensions of the boss are particularly suitable for dispensers intended to dispense in the region of from 15 to 150 mls of material. It is especially suitable for the boss to be located at a radial distance from the axial centre of the rotor wheel that is greater than the minor radius of the barrel.

The or each sump which acts as a seating for the boss desirably has a depth just sufficient to accommodate the maximum height of the boss. It could, if desired, be dimensioned to fit the boss. However, especially conveniently, it is lozenge shaped, having a transverse width just wider than the maximum width of the boss. A lozenge shaped sump has an edge which is angled relative to the boss side wall, thereby assisting the boss to climb smoothly out of the sump. Its radial length is desirably a little longer than the boss to accommodate radial play in the dispenser.

The barrel is often non-circular, such as oval, in cross section, although circular barrels can be contemplated. The rotor wheel, advantageously, in some embodiments, has the same shape and external dimensions as the barrel.

The dispenser is normally manufactured from thermoplastics, such as high density polyethylene or polypropylene and

particularly by injection moulding methods. The plastic is injected into a mould through a gate, and residual material forms an irregular protuberance. It is particularly convenient to site that protuberance within the sump, and
5 especially as close as is practicable to the centre of the base.

The base of the barrel and the top surface of the rotor wheel are continuous, by which is meant that the two
10 surfaces are in contact over at least the greater part of their transverse surface area when the barrel and rotor wheel are aligned. The two surfaces can be flat planar, if desired. However, the surfaces can be radiused in one dimension, the one being convex and the other concave when
15 viewed along the minor axis of the barrel. Preferably, the barrel base has the convex profile.

The rotor wheel can desirably have a moulding in its side wall acting as a locator for a thumb, to guide the user as
20 to the direction of rotation for dispensing material from the barrel.

The top of the barrel may define an aperture through which a solid block is dispensed or it may be closed by a closure
25 having one or more openings in fluid communication with the interior of the barrel for dispensing a soft solid. Such barrels may be capped, as is conventional, or the openings plugged by a removable plug.

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Having described the invention in general terms, specific embodiments thereof will now be described in greater detail with reference to the accompanying Figures in which:-

- 5 Figure 1 represents an exploded cross-section through an oval barrel and rotor wheel/spindle viewed from their minor axis.

Figure 2 represents a plan view from above of the rotor
10 wheel.

Figure 3 represents an expanded cross section of the rotor wheel in the vicinity of the boss.

- 15 Figure 4 represents a plan view from below of the base of the barrel.

Figure 5 represents a plan view of the boss sited within the corresponding sump.

20

Figure 6 represents a side view of a barrel and rotor wheel for dispensing a solid block.

- Figure 7 represents a top/side view of a barrel for
25 dispensing a soft solid.

A dispenser for dispensing a solid block is described with respect to Figures 1 to 6, and a dispenser for dispensing a soft solid in Figures 1 to 5 plus 7.

30

- 10 -

The dispenser shown in Figures 1 to 6 comprises an oval barrel 1 and a rotor wheel 6. The barrel 1 has a convex base 2 in which are formed two sumps 3a and 3b which are lozenge shaped and extend radially, terminating in close proximity to the side wall 4 of the barrel. The base 2 defines an aperture 5.

The rotor wheel 6 is located beneath the barrel 1 and is hollow, comprising a sidewall 7 and a concave topwall 8. Two bosses 9a and 9b are moulded integrally onto the topwall 8. A threaded spindle 10 is fixed into a central mounting 11 in the rotor wheel 6. A threaded piston 12 engages with the threaded spindle 10. The bosses 9a and 9b are inclined to the rotor wheel top surface 8 at 12° (taper angle) and have a tear-drop shape in plan view, having symmetrical inward tapering sides respectively 13a, 13b and 13c, 13d. The top surface 8 is thinned in the vicinity 14 of the bosses 9a and 9b. The bosses 9a and 9b each have a radiused side/end wall 15a and 15b.

20

The sumps 3a and 3b have inclined sides respectively 21a, 21b and 21c, 21d which are parallel with the major axis of the barrel 1 and acutely angled to the respective sidewalls of the boss, 13a, 13b and 13c, 13d. The relative angle of inclination of sidewalls 13a, 13b to sides 21a, 21b enables the boss 9a to exit smoothly from the sump 3a by rotation of the rotor wheel 6 relative to the barrel 1. Sump 3b houses an irregular protuberance 16 which comprises residual thermoplastic in the mould gate during manufacture of the barrel 1.

30

- 11 -

The barrel for dispensing a solid block has an open end 17 and the rotor wheel has a thumb locating sump 18. The barrel for dispensing soft solid has a closure 19 having a plurality of openings 20.

5

In manufacture, the mounting 11 in the rotor wheel 6 is snap fitted in to aperture 5 in the base 2 of the barrel 1, and the piston 12 engaged with the spindle 10 near the base of the barrel 1. The rotor wheel 6 is rotated until the bosses 10 9a and 9b are in alignment with the sumps 3a and 3b. The barrel 1 is top filled with desired material.

In operation, the rotor wheel 6 is rotated relative to the barrel 1, each boss 9a and 9b climbing out of sumps 3a and 15 3b respectively. The top surface 8 of the rotor wheel 6 flexes in the regions 14 adjacent to the bosses 9a, 9b assisting the climb. The rotor wheel 6 continues to be rotated in the same direction of rotation. Next, as the boss emerges from beneath the barrel 1, the top wall 8 20 flexes and again as it encounters the side wall of the barrel. Rotation continues until the boss again is seated in the opposite sump, ie boss 9a in sump 3b. An audible click can be heard as the bosses 9a and 9b drop into sumps 3a and 3b respectively and strikes the base of the barrel. 25 The operation is repeatable at the discretion of the user until sufficient material judged to have been dispensed. If excess material has been dispensed, the rotor wheel can be rotated in the reverse direction to lower the piston 12, and retract material into the barrel 1.

Claims

1 A dispenser for a solid block or a soft solid
comprising:

5

i) a barrel having a first end through which the solid
block or soft solid is dispensed, and an opposite
end comprising a base wall defining an aperture and
having a lower surface

10

ii) a rotor wheel mounted beneath the barrel having a
transverse cross-section similar to the barrel and
a top surface contiguous with the lower surface of
the barrel

15

iii) a threaded spindle fixed to the rotor wheel and
extending axially through the aperture in the base
wall of the barrel

20

iv) a piston within the barrel having a threaded
mounting that engages the spindle and moves axially
on rotation of the spindle

in which

25

v) one of the base wall of the barrel or the top
surface of the rotor wheel carries a radially
extending boss having an inwardly tapered profile
and the other of the base wall or the top surface
has an sump dimensioned to accommodate the boss and

30

- 13 -

in which the boss is seated when the rotor wheel and barrel are aligned.

- 2 A dispenser according to claim 1 in which there are at
5 least two bosses and corresponding sumps symmetrically
positioned around the rotor wheel and base wall of the
barrel.
- 3 A dispenser according to either preceding claim in which
10 the rotor wheel carries the boss and the base wall of
the barrel is indented.
- 4 A dispenser according to claim 3 in which the rotor
wheel has a flexible top surface in the vicinity of the
15 boss.
- 5 A dispenser according to claim 4 in which the rotor
wheel comprises a hollow member having a flexible top
wall that is reinforced in the vicinity of its mounting
20 into the barrel.
- 6 A dispenser according to any preceding claim in which
the boss has an inwardly tapering tear drop transverse
cross section.
- 25
- 7 A dispenser according to any preceding claim in which
the boss has a ratio of radial length to height in the
range of from 10:1 to 25:1.

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- 8 A dispenser according to any preceding claim in which the boss has a ratio of radial length to maximum transverse width of from 4:3 to 2:1.
- 5 9 A dispenser according to any preceding claim in which the barrel and rotor wheel are oval in transverse cross section.
- 10 10 A dispenser according to any preceding claim in which the base of the barrel and the top surface of the rotor wheel each have an arcuate vertical profile.
- 11 11 A dispenser according to claim 10 in which the base of the barrel is convex and the top surface of the rotor wheel is concave, the profiles having the same radius of curvature.
- 15 12 A dispenser according to any preceding claim in which the sump has a radially extending lozenge shape, having a maximum transverse width just sufficient to seat the boss.
- 20 13 A dispenser according to any preceding claim in which sump has a similar depth throughout.
- 25 14 A dispenser according to claim 12 or 13 in which the barrel is formed by injection moulding into a mould and an irregular protuberance occurring within a gate to the mould is positioned within the sump, preferably radially closest to the centre of the barrel base.
- 30

- 15 -

- 15 A dispenser for dispensing a cosmetic material,
toiletry, or other material for personal or household
use as a solid block or a soft solid substantially as
described herein with respect to Figure 1 to 5 or Figure
5 1 to 4 and 6

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Abstract

Dispensers for a solid or soft solid mass comprise a barrel,
a piston within the barrel, and a mechanism for advancing
5 the piston axially within the barrel including a rotor
wheel. The invention provides a seating means for the rotor
wheel at a predetermined angular position relative to the
barrel comprising a boss having an inwardly tapered profile
(tear drop) and a sump dimensioned to receive the boss. The
10 boss is preferably formed on the rotor wheel and the sump in
the base of the barrel. Especially desirably, the dispenser
is provided with a pair of bosses and sumps, symmetrically
arranged around the rotor wheel and barrel base.

Figure 1.

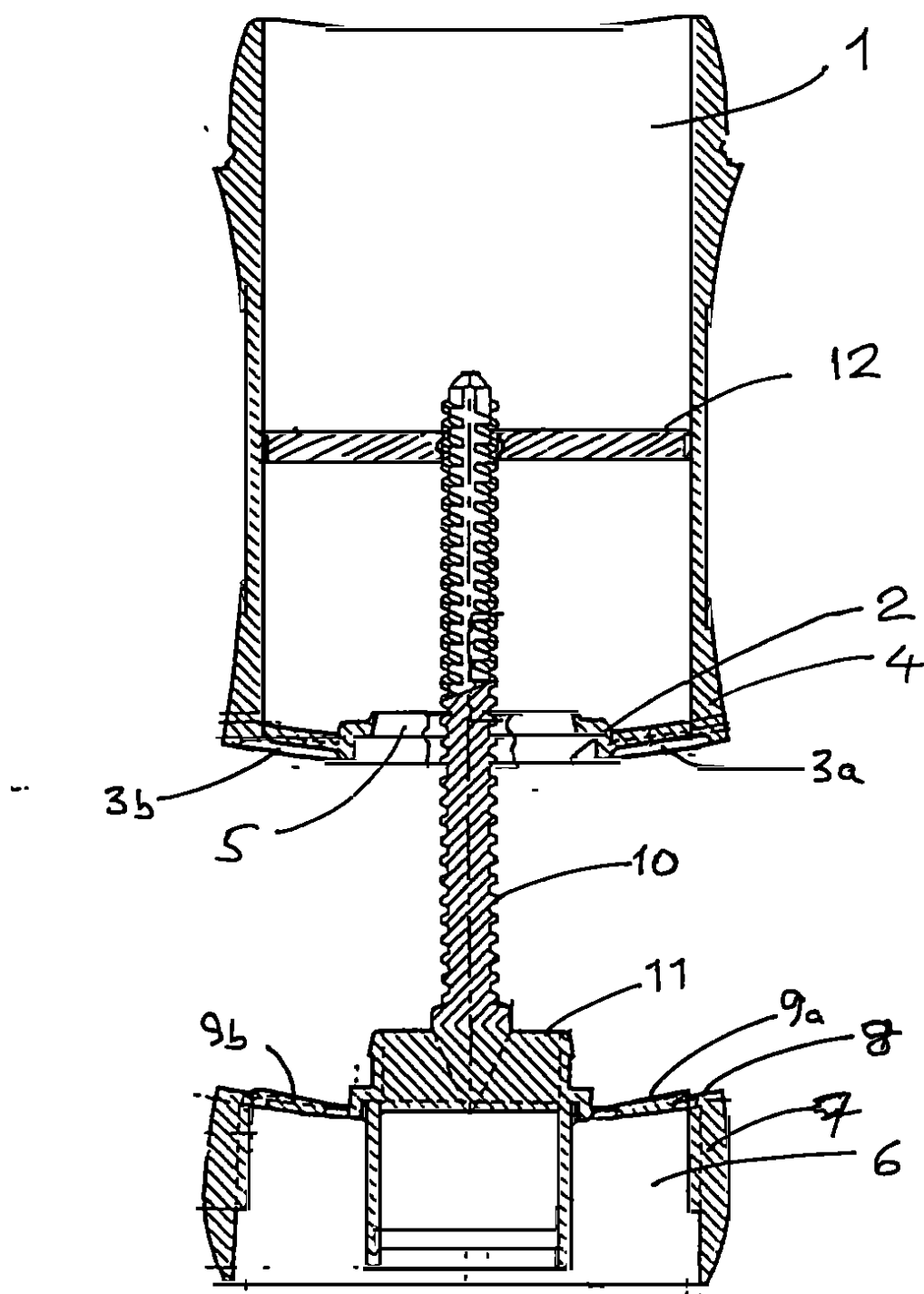


Figure 2

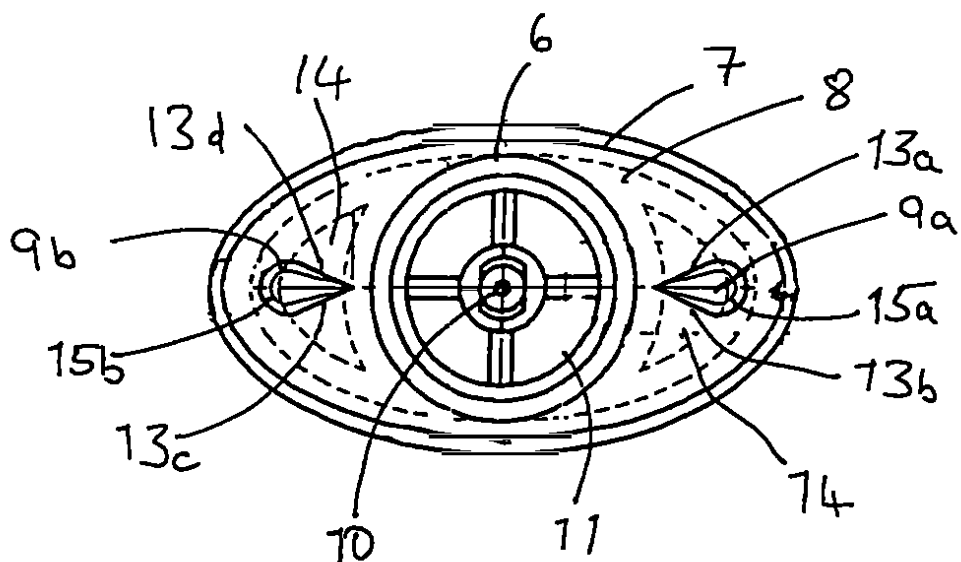


Figure 3

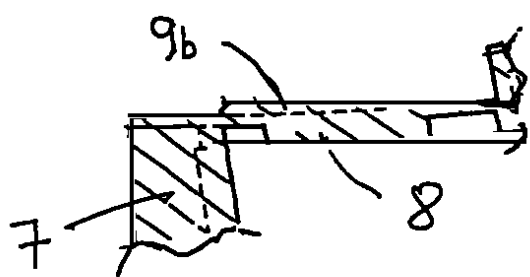


Figure 5

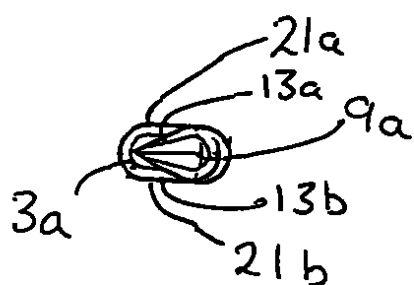


Figure 4

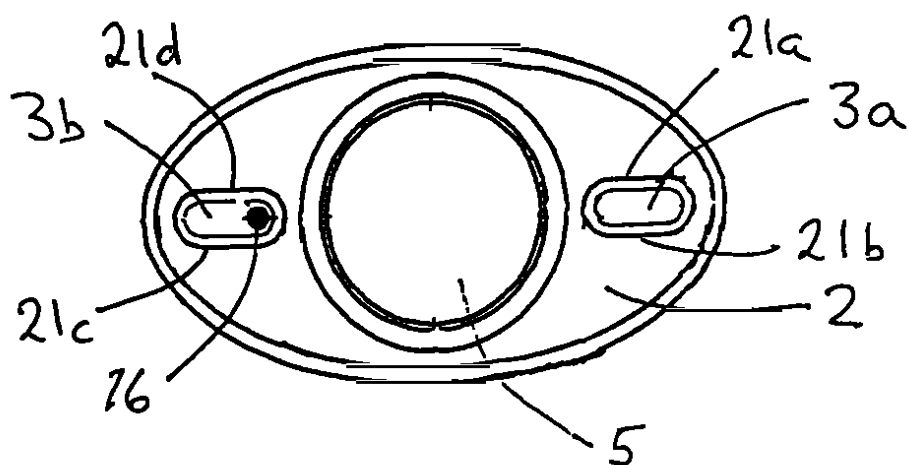


Figure 6

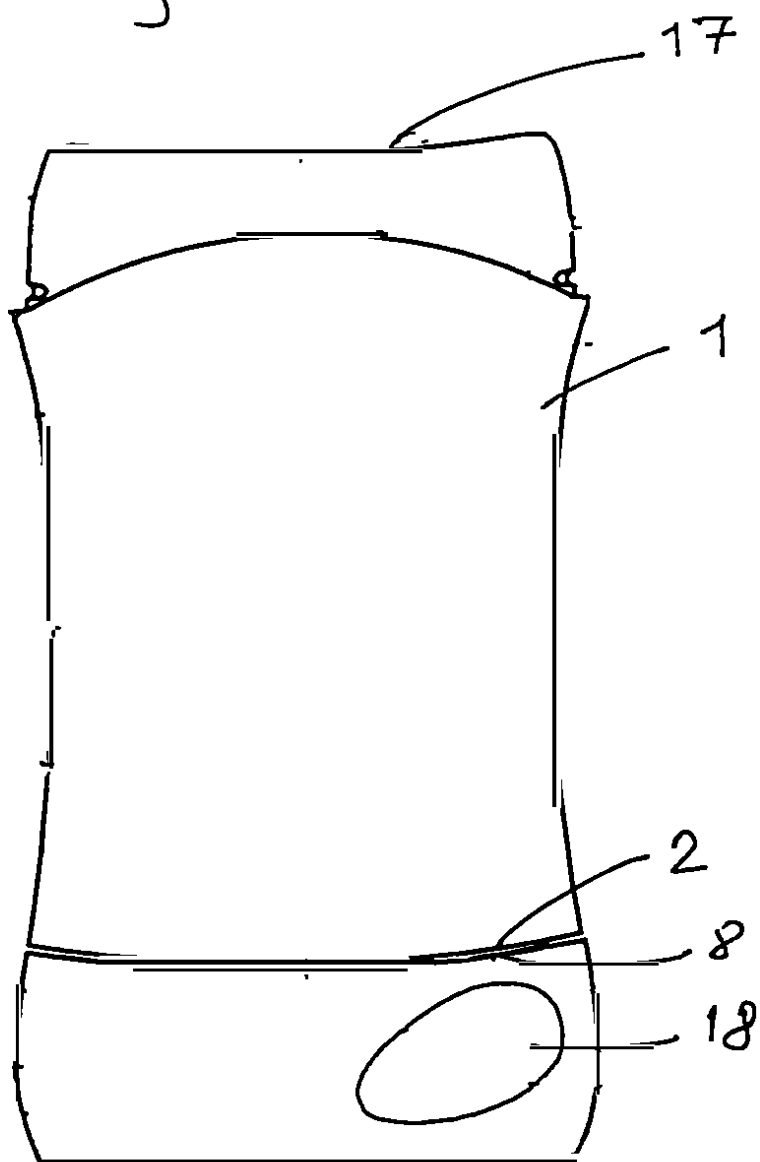
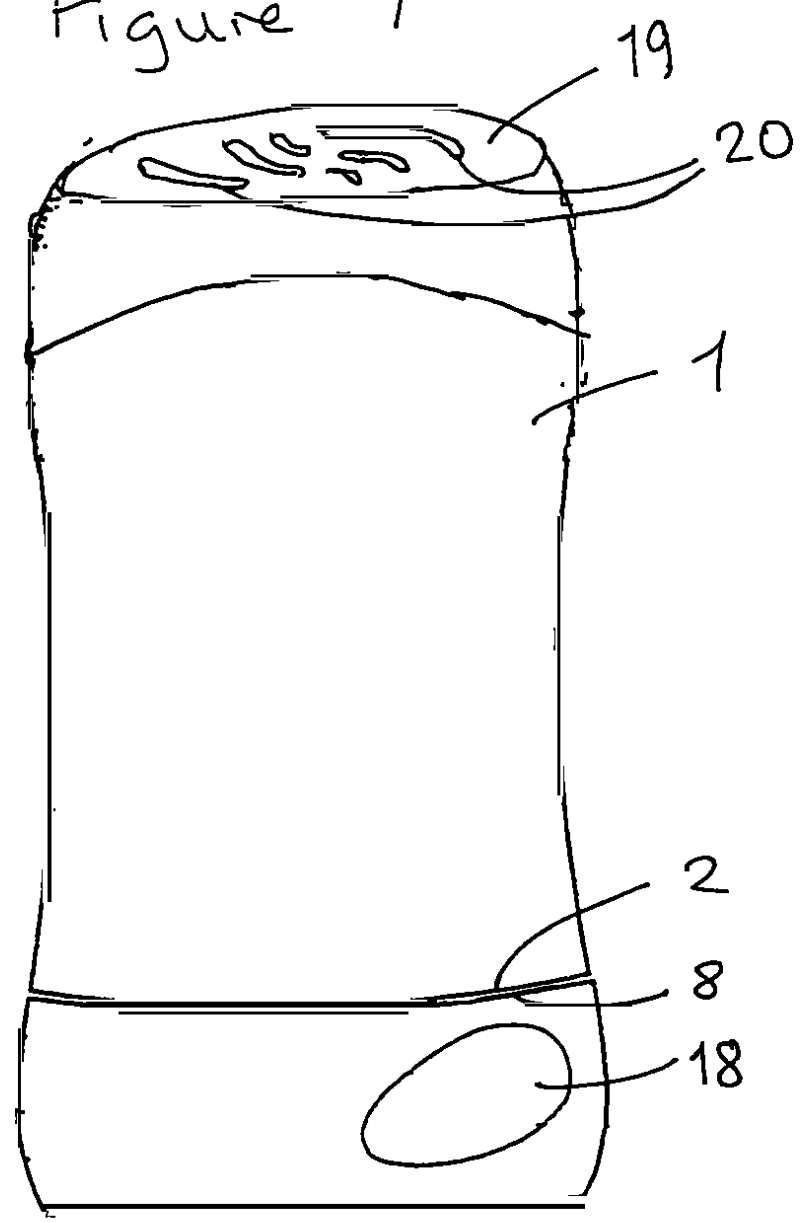


Figure 7



Noviembre 21, 2000
Traducción Oficial No 0309
REF: UNILEVER N.V
Relaciones

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Nosotros,

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Una compañía conformada de acuerdo a las leyes del Reino Unido de
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Por medio del presente cedemos a

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Una compañía Holandesa

Weena 455, 3013 AL Rotterdam Países Bajos

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Solicitud de Patente No. 9923923.8

En la fecha: Octubre 8 de 1999 (08 10.99)

Registrada en: Reino Unido

Por Unilever PLC (como anteriormente se
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Unilever N.V , por medio de la presente acepta dicha transferencia y traspaso.
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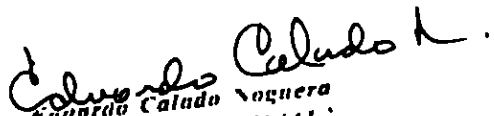
Firma Dilshad RAJAN

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UNILEVER N.V ,

Firma Sandra Jane EDWARDS

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Firma Notario Público William S. Horthey en Bedford, Inglaterra este dia 9 de
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Fecha.20 de Agosto, 2000

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Cónsul de Colombia Ana Georgina Charry.

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Sellos de Legalización: Ministerio de Relaciones Exteriores, No.388977, Firma
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Sellos de Legalización Ministerio de Relaciones Exteriores, fecha Noviembre
17 del año 2000, Hora: 12.09, Firma Jefe de Legalizaciones de Santafé de
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a company organised under the laws of Great Britain of
Unilever House, Blackfriars, London EC4P 4BQ, United Kingdom

hereby assign to

Unilever NV
a Dutch company of
Weena 455, 3013 AL Rotterdam, Netherlands

our entire right to apply for and to obtain a registered patent in their name, together with
the right of priority, in

COLOMBIA

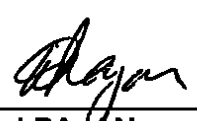
in conformity with the provisions of the International Convention for the Protection of
Industrial Property on the basis of

Patent Appl. No: 9923923.8
Dated: 8th October 1999 (08.10.99)
Filed in: United Kingdom
By: Unilever PLC (as above)

Unilever N.V., hereby accepts such transfer and assignment.

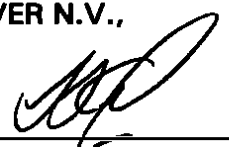
This present document is hereby signed on the 19th September 2000.

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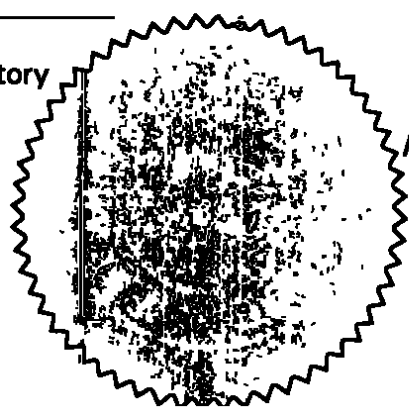

By: Dilshad RAJAN
UNILEVER PLC - Authorised Signatory

Seen by me William Sydney Hartley
Notary Public, FOR
LEGALISATION of the Signature/s of
Dilshad Rajan an authorised
signatory for Unilever P.L.C. and
Sandra Jane Edwards an
authorised signatory for Unilever N.V.

UNILEVER N.V.,


By: Sandra Jane EDWARDS
UNILEVER N.V. - Authorised Signatory

W.S. Hartley
Notary Public
Notarise/Apostille/Legalise
Bedford, England this
9th day of October 2000.



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Date **20 October, 2000**

This document bears
the signature / seal of **W S Northey**

Acting in the capacity of **Notary Public**

Signed by **J. Hoque**



*For Her Majesty's Principal Secretary of State
For Foreign and Commonwealth Affairs*



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LONDRES**

AUTENTICACION N° 1931-10

EL CONSUL DE COLOMBIA DE FE DE
QUE J. HOQUE
EJERCIA EN LA FECHA LAS FUNCIONES
DE OFICIAL MINISTERIO REL. EXTERIORES
Y QUE SU FIRMA Y SELLOS SON LOS
QUE ACOSTUMBRA EN SUS ACTOS
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A. Chamy
ANA GEORGINA CHAMY
Primer Consul