

42 95

REQUISITOS NECESARIOS PARA PRESENTACION Y AGILIZACION DEL TRAMITE

		USUARIO	RADICADOR
PATENTE DE INVENCION ✓	MODELO DE UTILIDAD	()	(✓)
-	Indicación de que se solicita la concesión de una patente.	()	(✓)
-	Datos de identificación del solicitante o de la persona que se presenta la solicitud.	()	(✓)
-	Descripción de la invención.	()	()
-	Dibujos de ser estos pertinentes.	()	(✓)
-	Comprobante de Pago de las tasas establecidas.		

COMPLETA (✓)

INCOMPLETA () ()

DISEÑO INDUSTRIAL ()

-	Indicación de que se solicita el registro de Diseño Industrial	()	()
-	Datos de identificación del solicitante o de la persona que presenta la solicitud.	(✓)	()
-	Representación gráfica o fotográfica del Diseño Industrial o muestra del Material que incorpora el diseño.	()	()
-	Comprobante de pago de las tasas establecidas	()	()

COMPLETA ()

INCOMPLETA () ()

ESQUEMA DE TRAZADO ()

-	Indicación de que solicita el registro de un Esquema de trazado.	()	()
-	Datos de identificación del solicitante o de la persona que presenta La solicitud.	()	()
-	Representación gráfica del esquema de trazado	()	()
-	Comprobante de pago de las tasas establecidas.	()	()

COMPLETA ()

INCOMPLETA () ()

Firma Responsable:



Fecha:

43 28

REPUBLICA DE COLOMBIA
SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

Bogotá,
2020

Doctor(a)
FERRERO EMILIO
Apoderado(a) y/o Representante de
HAUSBRANDT TRIESTE 1892 SPA

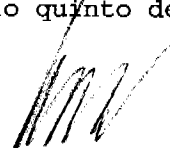
REFERENCIA	Radicación No.	5 99424
	Solicitud internacional	EP2003/012338
	Fecha inicio fase nacional	02/11/2005
	Trámite	11
	Evento	379
	Actuación	430
	Oficio No.	748

Como resultado del examen de forma, realizado con fundamento en el artículo 38 de la Decisión 486 de la Comisión de la Comunidad Andina, artículo 27 del Tratado de Cooperación en Materia de Patentes (PCT), regla 51 bis del Reglamento y Circular Única de la Superintendencia de Industria y Comercio, se le comunica que:

1. La traducción de los capítulos descriptivo y reivindicatorio deberán estar acompañadas de los respectivos dibujos

En cumplimiento de lo dispuesto por el artículo 39 de la Decisión 486, se le requiere para que dentro del término de dos meses siguientes a la fecha de notificación del presente oficio, complete los requisitos anteriormente enunciados. En caso de no dar cumplimiento al presente requerimiento, la solicitud se considerará abandonada y perderá su prelación.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No.10 de 2001.


ALIX CARMENZA CESPEDES DE VERGEL
Jefe de la división de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista de
fecha 27.5.20
adpall

EXAMEN DE FONDO Y/O PRELIMINAR DE BUSQUEDA		
Fecha del examen de Fondo:	09 de Abril del 2009	
Codigo del Examinador:	202072	
INFORMACION GENERAL DE LA SOLICITUD DE PATENTE		
Titulo de la solicitud		
CAPSULA DE PLASTICO DE DOSIS INDIVIDUAL PARA CAFÉ EN POLVO Y SIMILARES		
Solicitud Nacional:	No. de radicacion: 05 - 99424	Fecha de presentacion: 30/09/2005
Solicitud Inter/nal: X	No. de Prioridad: TV2003A000058	Fecha de prioridad: 02/04/2003
PALABRAS CLAVES PARA LA BUSQUEDA		
WITH WALLS FORMED WITH FILLING OR EMPTYING APERTURES CONTAINERS HAVING BODIES FORMED BY INTERCONNECTING OR UNITING TWO OR MORE RIGID OR SUBSTNACIALLY RIGID COMPONENTS MADE WHOLY OR MAINLY OF METAL.	CONTAINER PACKAGING ELEMENTS OR PACKAGES FOR CONTENTS PRESENTING PARTICULAR TRANSPORT OR STORAGE PROBLEMS, OR ADAPTED TO BE USED FOR NON. PACKAGING PURPOSES AFTER REMOVAL OF CONTENTS	DISPOSABLE CONTAINERS OR PACKAGES WITH CONTENTS WICH ARE INFUSED OR DISSOLVED INSITU
CLASIFICACIONES INTERNACIONALES ASIGNADAS A LA SOLICITUD O RELACIONADAS CON SU BUSQUEDA		
Asignadas originalmente (Oficina del pais donde se radico y/oExamen de forma)	Encontradas y/o Relacionadas	
B65D81/00	B65D85/804 B65D7/00 B65D7/40	
BASES DE DATOS CONSULTADAS		
ESPAENET: X	USPTO : X	JAPONESA:
MIMOSA :	WIPO:	COLOMBIANA:
EPOLINE: X	LATITPAT:	OTRAS:
DOCUMENTOS CORRESPONDIENTES EN OTROS PAISES DE LA SOLICITUD DE PATENTE		
No. De Patente original:	WO2004087529	
ZA200507320	PT1608569	MXPA05010348
US2006019000	PL377498	KR20050121684
UA78925	NZ542470	JP2006513790
HR20050869	EP1608569	CN1759049
HK1086803	DK1608569	CA2521063
ES2279212	DE60311014	BR0318217
RU2005133705	NO20055061	IS2437
INFORMES DE EXAMENES DE BUSQUEDA HECHAS POR OTRAS OFICINAS QUE AFECTAN Y/O SE RELACIONAN CON LA SOLICITUD DE PATENTE		
Oficina	Fecha	Reiv. Afectadas
EP0468079	29/01/1992	1, 4, 2, 3
US5287797	22/02/1994	2.,
EP0512148	11/11/1992	3.,
WO03082065 (E)	09/10/2003	1, 3, 4
ANTERIORIDADES ENCONTRADAS		
Documento	Relevancia (Novedad o Nivel inventivo)	Reiv. Afectadas
LITERATURA FUERA DE LAS PATENTES		
Documento	Relevancia	Reiv. Afectadas
OBSERVACIONES		



Industria y Comercio
SUPERINTENDENCIA

PETITORIO

FORMULARIO UNICO DE SOLICITUD DE PATENTE
PCT
ENTRADA EN FASE NACIONAL

1

☒ Patente de Invención.
☐ Capítulo I.

☐ Patente de Modelo de Utilidad.
☒ Capítulo II.

2

SOLICITANTE
(71)

Nombre: HAUSBRANDT TRIESTE 1892 SPA
sociedad constituida y existente bajo las leyes de Italia.

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Nervesa della Battaglia, I-31040
Treviso
Italia

Domicilio: Nervesa della Battaglia,Treviso
Italia.

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C.C.☐ NIT☐

C.E.☐ Otro☐

Cual

Número

3

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Cual

Número 438.019 T.P 31.929

4

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5

PCT (86)
Solicitud Internacional No. PCT/EP2003/012338
Publicación Internacional No. WO2004/087529 A1

Fecha: 5 de Noviembre de 2003
Fecha: 14 de Octubre de 2004

6

Título (54)
CAPSULA DE PLASTICO DE DOSIS INDIVIDUAL PARA CAFÉ EN POLVO Y SIMILARES

7

Clasificación Internacional (51) B65D 81/00

8

Prioridad

SI☒ NO☐

(33) País de Origen

IT

(32) Fecha

2 de Abril 2003

(31) Número de Solicitud

TV2003A000058

9

Comprobante de pago No.: 05- 74.088

Fecha: 26 de septiembre de 2005

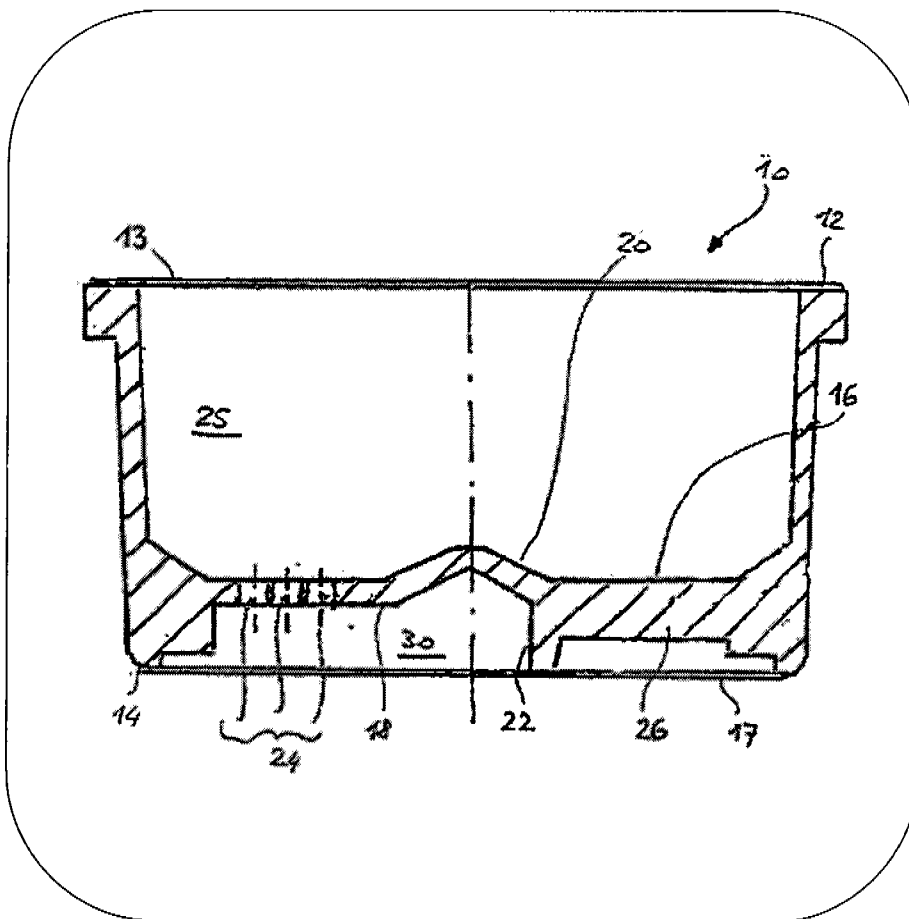
An

10

Anexos:

- ☒ Comprobante de pago de la tasa de presentación de la solicitud por \$ 443.000.00.
- ☐ Comprobante de pago por reivindicación de prioridad.
- ☐ Documento que acredita la existencia y representación legal cuando el solicitante sea persona jurídica.
- ☐ Poderes, si fuere el caso.
- ☐ Documento de cesión del inventor al solicitante o a su causante.
- ☐ Declaraciones.
- ☒ Copia de la solicitud internacional. (Resumen, descripción, reivindicaciones, dibujos)
- ☒ Traducción de la solicitud internacional al castellano. (Resumen, descripción, reivindicaciones, dibujos)
- ☒ Copia del examen preliminar efectuado por la IPEA.
- ☒ Traducción del examen preliminar efectuado por la IPEA.
- ☐ De ser el caso, copia del contrato de acceso.
- ☐ De ser el caso, documento que acredite la licencia o autorización de uso de conocimientos tradicionales de las comunidades indígenas.
- ☐ De ser el caso, certificado de depósito del material biológico.
- ☒ Arte final 12x12
- ☐ De ser el caso, información sobre otras solicitudes de patente o títulos obtenidos en el extranjero por el mismo titular o su causante, relacionadas parcial o totalmente con la invención de esta solicitud.
- ☒ Otros: VER HOJA DE DOCUMENTOS ANEXOS

11

FIGURA CARACTERÍSTICA

12

Solicito la concesión de la patente,

NOMBRE:

EMILIO FERRERO

FIRMA:

C.C. 438.019 de Usaquén T.P. 31.929

DOCUMENTOS ANEXOS

1. ☒ **Publicación Internacional WO 2004/087529 A1**

Descripción:

Páginas 3 en el idioma original

Páginas 5 en español

Reivindicaciones: Número (s) 3

Figuras: Número (s) 4

2. ☐ **Forma PCT/RO/101.** PCT Request
3. ☐ **Forma PCT/RO/106.** Invitation to Correct Defects.
4. ☒ **Forma PCT/ISA/210.** Informe de Búsqueda Internacional.
5. ☒ **Forma PCT/ISA/220.** Notificación De La Transmisión Del Informe De Búsqueda Internacional Y De La Opinión Escrita De La Administración Encargada De La Búsqueda Internacional, O De La Declaración.
6. ☐ **Forma PCT/ISA/237.** Opinión Escrita De La Administración Encargada De La Búsqueda Internacional.
7. ☐ **Forma PCT/IB/304.** Notification Concerning Submission Or Transmittal Of Priority Document.
8. ☐ **Forma PCT/IB/306.** Notification Of The Recoding Of A Change.
Descripción De Modificación:

9. ☐ **Forma PCT/IB/308.** Notice Informing The Applicant Of The Communication Of The International Application To The Designated Offices.
10. ☐ **Forma PCT/IB/332.** Information Concerning Elected Offices Notified Of Their Election.
11. ☐ **FORMA PCT/IB/345.** Communication in cases for which no other form is applicable.

12. ☐ **Forma PCT/IPEA/401.** PCT Demand
13. ☐ **Forma PCT/IPEA/402.** Notification Of Receipt Of Demand By Competent International Preliminary Examining Authority.
14. ☐ **Forma PCT/IPEA/408.** Written Opinion.
15. ☐ **Forma PCT/IPEA/416.** Notification Of Transmittal Of The International Preliminary Examination Report.
16. ☒ **Forma PCT/IPEA/409.** Informe Del Examen Preliminar Internacional.
17. ☐ Traducción Al Español Del Informe Del Examen Preliminar Internacional.
18. ☒ Traducción Al Español De Los Anexos Presentados Junto Con El Informe Del Examen Preliminar Internacional.
19. ☒ Extracto de publicación.



PCT

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

(81) **Designated States (national):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 5 November 2003 (05.11.2003)

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TI, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG).

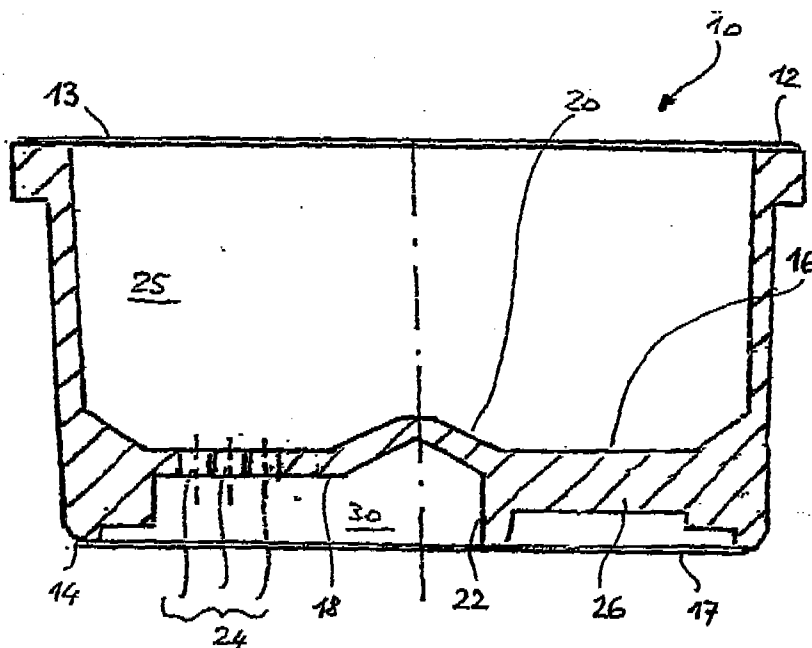
(30) Priority Data:
TV2003A000058 2 April 2003 (02.04.2003) IT

Declaration under Rule 4.17:
— *of inventorship (Rule 4.17(iv)) for US only*

Published:
— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/087529 A1



(57) Abstract: Single-dose capsule comprising a sealed moulded-plastic casing (10) having an end wall (16) provided with orifices (24) and a bottom sealing foil (17). A chamber (30) is formed between the said foil (17) and the bottom surface (18) of the perforated end wall (16) and is filled with the beverage percolated through the said orifices (24) before it is discharged directly towards an underlying container through the spout created at the moment of opening or tearing of the said bottom foil (17), immediately before the start of percolation. **USE:** preparation of a percolated beverage using a powdery raw material such as coffee. **ADVANTAGES:** high quality of the beverage.

Single-dose plastic capsule for powdered coffee and the like

* * *

Description

5 The present invention relates to a single-dose capsule made of moulded plastic and intended for coffee and other alimentary raw materials which are used for the preparation of beverages by means of percolation.

10 A capsule consists essentially of a casing with a frustoconical shape which is filled with coffee powder (or other powdery raw material) and has a peripheral edge onto which a sealing foil is applied. Said foil, at the time of use of the capsule in a professional and/or domestic machine for the preparation of *espresso* coffee and/or other hot beverages, is directed downwards, namely on the opposite side to the point of entry of the hot water under pressure into the capsule.

15 As a typical example of the state of the art, the Applicant cites the European patent EP-A-0 521 510 where it is envisaged forming, with the said foil, the flat bottom of the capsule and creating zones of reduced thickness so as to favour tearing of the foil at the time of preparation of the beverage, under the pressure of the water which passes through the powdery raw material in a vertical direction of flow.

20 The resultant percolated beverage is conveyed along inaccessible pipes inside the coffee machine and then dispensed.

25 The use of conventional capsules - owing to their particular constructional design - has the drawback that, since it is not possible to ensure the absolute cleanliness of the said internal pipes, there is the risk of fermentation or putrefaction of the fatty substances contained in the beverage (in particular in coffee). The least negative consequence is an undesirable alteration of the taste of the beverage.

30 Moreover, it is more difficult, compared to the use of loose coffee powder, to obtain the emulsification of the fatty substances in the coffee - namely the creamy coffee texture which makes Italian-style *espresso* coffee so popular world-wide - precisely owing to the presence of said pipes.

The object of the present invention is to provide a moulded-plastic capsule intended for coffee and other raw materials for the preparation of beverages by means of percolation, which does not have the abovementioned drawback and which allows

high-quality beverages to be obtained.

These and other objects are achieved by providing a capsule having the characteristic features of the appended claims, as will be clarified by the following description of a non-exclusive embodiment with reference to the accompanying drawing in which:

- Fig. 1 is a three-dimensional view, from above, of an open capsule according to the invention;

- Fig. 2 is a three-dimensional view from below;

- Fig. 3 is a plan view from above;

- Fig. 4 is a cross-section through the said capsule along the line A-A in Fig. 3.

A capsule according to the invention consists of a casing 10 with a slightly frustoconical shape which is made by thermoforming a sheet of polypropylene for alimentary use. The casing 10 has a continuous upper peripheral edge 12 projecting outwards and a bottom non-projecting edge 14. The upper edge 12 is designed to be sealed with a foil 13 of plastic material and/or aluminium. A foil of this kind, as well as its function in single-dose containers of alimentary products, is well known per se to persons skilled in the art, so that it is not considered necessary to describe it in further detail.

According to a characteristic feature of the invention, the end wall 16 of the casing 10 is inset with respect to the bottom edge 14; basically, as shown in detail in Fig. 4, there exist at least two steps between the edge 14 and the outer surface 18 of the end wall 16. In this way, underneath the upper chamber 25, which contains the powdery raw material, a bottom chamber 30 is formed, said chamber being able to receive and convey the percolated beverage, as explained more fully below, and being closed by a second foil 17. This second foil is preferably formed by a triple layer of film combined with aluminium so as to ensure that the capsule is impermeable and hygienic, it not being considered necessary to describe said foil in greater detail for the same reasons given above in connection with the foil 13.

According to another characteristic feature of the invention, the end wall 16 of the casing 10 has, around a central core having an upper portion in the shape of conical cusp 20 and a substantially cylindrical lower portion 22, a plurality of orifices 24 which are distributed in segments separated by radial ribs 26 - see Figs. 2 and 4.

The present capsule is used in a machine equipped with punching or drilling

- 3 -

means able to create in the upper foil 13 a path (not shown) for the incoming pressurized hot water and a spout (also not shown) directly in the second foil 17, due to a perforation of the conical cusp 20, immediately before the start of the percolation of the beverage through the orifices 24. Owing to the combined effect of the pressurized hot water fed from above into the capsule and the shape of the end wall 16, in particular the radial ribs 26, the beverage fills the abovementioned bottom chamber 30 with a turbulent movement which favours emulsification of the fatty substances. In this way, for example an Italian-style creamy coffee of excellent quality is obtained.

Moreover, the beverage is dispensed - through the spout created in the second foil 17 - directly into an underlying cup or glass, without being conveyed through the traditional pipes inside the machine and consequently without the risks mentioned hereinabove.

Although the description provided hereinabove relates to a preferred embodiment, it is understood that the invention may be developed with different forms and variants which are included within the following claims.

* * *

6

- 4 -

Claims

1. Single-dose capsule for the preparation of a percolated beverage using a powdery raw material such as coffee, comprising a sealed moulded-plastic casing (10) having an end wall (16) provided with orifices (24) and a bottom foil (17) for sealing the storage chamber (25) filled with the raw material, which can be opened or torn by the dispensing machine immediately before the start of percolation, **characterized in that** the perforated end wall (16) is inset with respect to the bottom edge (14) so that a bottom chamber (30) is formed between the said foil (17) and the bottom surface (18) of the end wall (16) and is filled with the beverage percolated through the said orifices (24) before the beverage is discharged directly towards an underlying container through a spout created at the moment of opening or tearing of the said bottom foil (17).

2. Single-dose capsule for the preparation of a percolated beverage according to Claim 1, characterized in that, in the end wall (16) of the casing (10), the said orifices (24) are distributed in segments around a central core having a cusp-shaped portion (20), these segments being separated by radial ribs (26).

3. Single-dose capsule for the preparation of a percolated beverage according to Claim 1 or Claim 2, characterized in that the said bottom sealing foil (17) consists of a triple layer of film combined with aluminium.

4. Single-dose capsule for the preparation of a percolated beverage according to any one of the preceding claims, characterized in that it is made preferably by means of thermoforming with a polypropylene grade compatible with foodstuff.

* * *

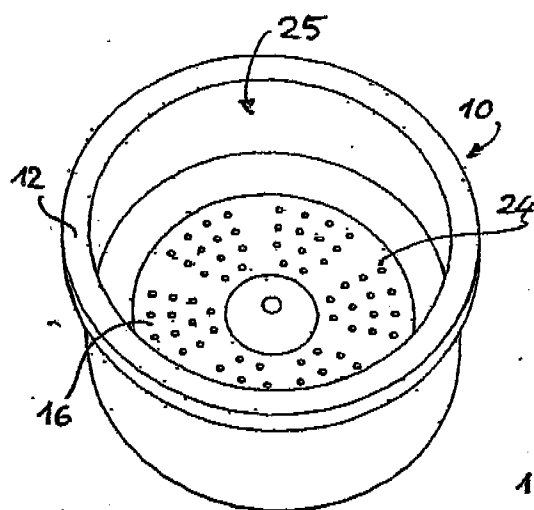


FIG. 1

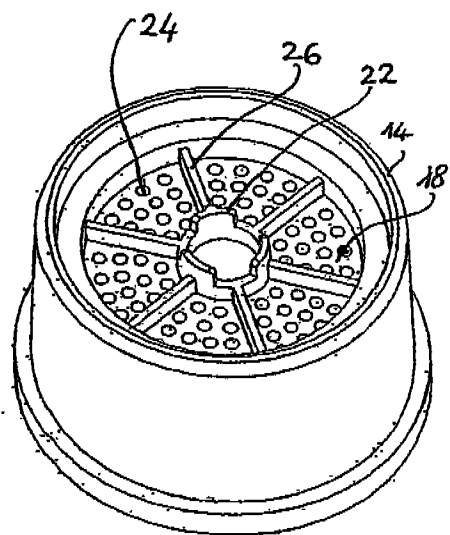


FIG. 2

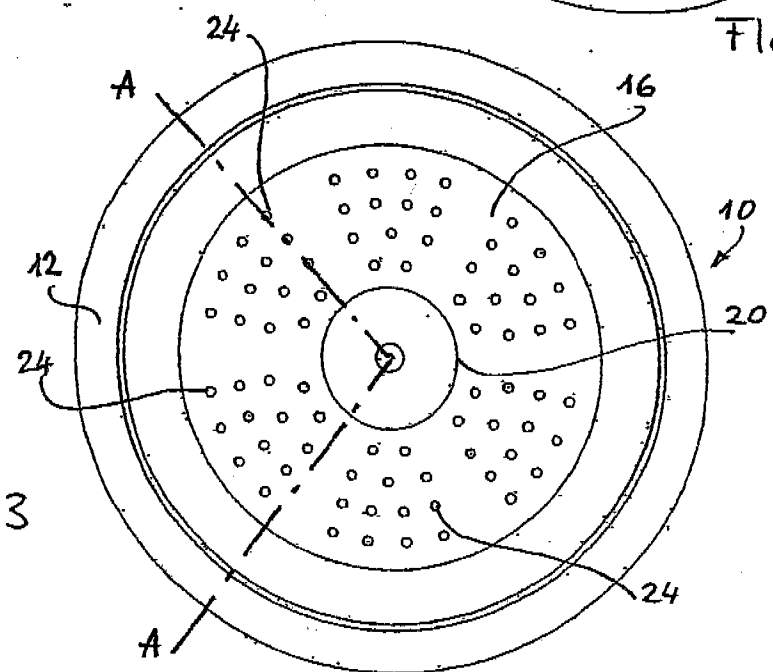


FIG. 3

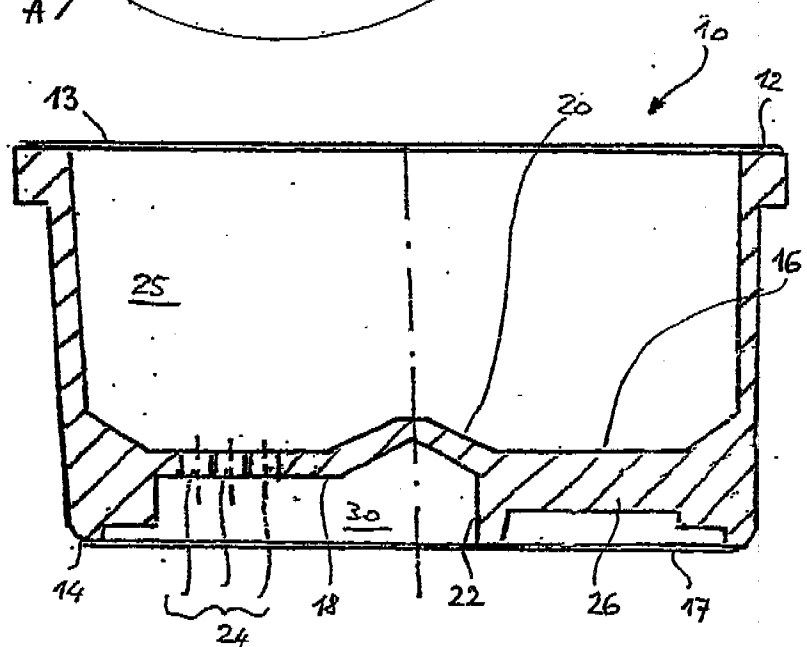


FIG. 4

CAPSULA DE PLASTICO DE DOSIS INDIVIDUAL PARA CAFÉ EN POLVO YSIMILARESCAMPO DE LA INVENCIÓN

5

La presente invención se refiere a una cápsula de dosis individual elaborada a partir de plástico moldeado y pretendida para café y otras materias primas alimenticias que se utilizan para la preparación de bebidas mediante percolación.

10

ANTECEDENTES DE LA INVENCIÓN

Una cápsula consiste esencialmente de una envoltura con una forma frustocónica que se llena con polvo de café (u otra materia prima en polvo) y tiene una orilla periférica sobre la cual se aplica una lámina delgada de sello. Dicha lámina delgada, al momento que se usa la cápsula en una máquina profesional y/o doméstica para preparar café *espresso* y/u otras bebidas calientes, se dirige hacia abajo, en específico sobre el lado opuesto al punto de entrada del agua caliente bajo presión al interior de la cápsula.

Como un ejemplo típico de la técnica más avanzada, el solicitante cita la patente europea EP-A-0 521 510 en la cual se contempla formar, con dicha lámina delgada, el fondo plano de la cápsula y crear zonas de espesor reducido para favorecer que la lámina delgada se pueda rasgar al momento de preparar la bebida, bajo la presión del agua que pasa a través de la materia prima en polvo en una dirección de flujo

25

vertical.

La bebida percolada resultante es transportada a lo largo de tubos inaccesibles dentro de la máquina para café y después se dispensa.

5 El uso de cápsulas convencionales - debido a su diseño de construcción particular - tiene el inconveniente que, debido a que no es posible asegurar la limpieza absoluta de dichos tubos internos, existe el riesgo de fermentación o putrefacción de las sustancias grasas contenidas en la bebida
10 (en particular en el café). La consecuencia menos negativa es una alteración indeseable del sabor de la bebida.

Asimismo, es más difícil, en comparación con el uso de polvo de café suelto, obtener la emulsificación de las sustancias grasas en el café - en específico la textura de
15 café cremoso que hace que el café *espresso* estilo italiano sea tan popular en todo el mundo - debido precisamente a la presencia de dichos tubos.

20 BREVE DESCRIPCIÓN DE LA INVENCION

El objetivo de la presente invención es proveer una cápsula de plástico moldeado pretendida para café y otras materias primas para preparar bebidas mediante percolación,
25 que no tenga los inconvenientes antes mencionados y que permita que se obtengan bebidas de alta calidad.

BREVE DESCRIPCIÓN DE LAS FIGURAS

9/9

Estos y otros objetivos se logran proveyendo una cápsula que tenga los rasgos característicos de las reivindicaciones anexas, como será aclarado por la siguiente descripción detallada de una modalidad no excluyente con
5 referencia a las figuras anexas en las cuales:

La figura 1 es una vista tridimensional, desde la parte superior, de una cápsula abierta de conformidad con la invención.

La figura 2 es una vista tridimensional desde la
10 parte inferior.

La figura 3 es una vista en planta desde la parte superior.

La figura 4 es una sección transversal a través de dicha cápsula a lo largo de la línea A-A en la figura 3.
15

DESCRIPCIÓN DETALLADA DE LA INVENCION

Una cápsula de conformidad con la invención consiste de una envoltura 10 con una forma ligeramente
20 frustocónica que se elabora mediante termo-formación de una lámina de polipropileno para uso alimentario. La envoltura 10 tiene una orilla periférica 12 superior continua que se proyecta hacia afuera y una orilla 14 inferior que no se proyecta. La orilla superior 12 está diseñada para que se
25 selle con una lámina delgada 13 de material de plástico y/o aluminio. Una lámina delgada de este tipo, así como su función en contenedores de dosis individual de productos alimentarios, es bien conocida per se por los expertos en la técnica, de modo que no se considera necesario describirla

con mayor detalle.

De conformidad con un rasgo característico de la invención, la pared de extremo 16 de la envoltura 10 se inserta con respecto a la orilla inferior 14; básicamente, como se muestra con detalle en la figura 4, existen por lo menos dos escalones entre la orilla 14 y la superficie exterior 18 de la pared de extremo 16. De esta manera, por debajo de la cámara superior 25, la cual contiene la materia prima en polvo, se forma una cámara inferior 30, dicha cámara puede recibir y transportar la bebida percolada, como se explica con mayor detalle más adelante, y se puede cerrar mediante una segunda lámina delgada 17. Esta segunda lámina delgada de preferencia está formada por una capa triple de película combinada con aluminio para asegurar que la cápsula sea impermeable e higiénica, no considerándose necesario describir dicha lámina delgada con mayor detalle por las mismas razones dadas anteriormente en conexión con la lámina delgada 13.

De conformidad con otro rasgo característico de la invención, la pared de extremo 16 de la envoltura 10 tiene, alrededor de un núcleo central que tiene una porción superior con forma de una cúspide cónica 20 y una porción inferior sustancialmente cilíndrica 22, una pluralidad de orificios 24 que están distribuidos en segmentos separados por las costillas radiales 26 - véase figuras 2 y 4.

La presente cápsula se utiliza en una máquina equipada con medios perforadores o para barrenado que puedan crear en la lámina delgada 13 superior una trayectoria (no mostrada) para el agua caliente presurizada entrante y un

/H

surtidor (tampoco mostrado) directamente en la segunda lámina delgada 17, debido a una perforación de la cúspide cónica 20, inmediatamente antes que inicie la percolación de la bebida a través de los orificios 24. Debido al efecto combinado del
5 agua caliente presurizada abastecida desde la parte superior hacia el interior de la cápsula y de la forma de la pared de extremo 16, en particular las costillas radiales 26, la bebida llena la cámara inferior 30 antes mencionada con un movimiento turbulento que favorece la emulsificación de las
10 sustancias grasas. De esta manera, se obtiene por ejemplo un café cremoso estilo italiano de excelente calidad.

Asimismo, la bebida se dispensa - a través del surtidor creado en la segunda lámina delgada 17 - directamente dentro de una taza o vaso subyacente, sin que
15 sea transportada a través de los tubos tradicionales dentro de la máquina y por consiguiente sin los riesgos mencionados anteriormente en la presente invención.

Aunque la descripción provista anteriormente en la presente invención se refiere a una modalidad preferida, se
20 entiende que la invención se puede desarrollar con formas y variantes diferentes que quedan incluidas dentro de las siguientes reivindicaciones.

NOVEDAD DE LA INVENCION

Habiendo descrito el presente invento se considera como novedad y por lo tanto se reclama como propiedad lo
5 contenido en las siguientes:

REIVINDICACIONES

1.- Una cápsula de dosis individual para la
10 preparación de una bebida percolada que utiliza una materia
prima en polvo tal como café, que comprende una envoltura de
plástico moldeado sellado (10) que tiene una pared de extremo
(16) provista con orificios (24) y una lámina delgada
inferior (17) para sellar la cámara de almacenamiento (25)
15 que está llena con la materia prima, la cual puede ser
abierta o rasgada por la máquina dispensadora inmediatamente
antes de iniciar la percolación, caracterizada porque la
pared de extremo (16) perforada se inserta con respecto a la
orilla inferior (14) de modo que se forme una cámara inferior
20 (30) entre dicha lámina delgada (17) y la superficie inferior
(18) de la pared de extremo (16) y se llena con la bebida
percolada a través de dichos orificios (24) antes que la
bebida se descargue directamente hacia un contenedor
subyacente a través de un surtidor creado al momento de abrir
25 o rasgar dicha lámina delgada inferior (17).

2.- La cápsula de dosis individual para la
preparación de una bebida percolada de conformidad con la
reivindicación 1, caracterizada porque en la pared de extremo
(16) de la envoltura (10), dichos orificios (24) están

distribuidos en segmentos alrededor de un núcleo central que tiene una porción con forma de cúspide (20), estando estos segmentos separados mediante costillas radiales (26).

3.- La cápsula de dosis individual para la
5 preparación de una bebida percolada de conformidad con la reivindicación 1 o la reivindicación 2, caracterizada porque dicha lámina delgada inferior de sello (17) consiste de una capa triple de película combinada con aluminio.

4.- La cápsula de dosis individual para la
10 preparación de una bebida percolada de conformidad con cualquiera de las reivindicaciones precedentes, caracterizada porque ésta se elabora de preferencia por medio de termoformación con un grado de polipropileno compatible con comestibles.

RESUMEN DE LA INVENCION

Se describe una cápsula de dosis individual que comprende una envoltura de plástico moldeado (10), sellado, que tiene una pared de extremo (16) provista con orificios (24) y una lámina delgada inferior de sello (17). Se forma una cámara (30) entre dicha lámina delgada (17) y la superficie inferior (18) de la pared de extremo (16) perforada y se llena con la bebida percolada a través de dichos orificios (24) antes que ésta se descargue directamente hacia un contenedor subyacente a través del surtidor que se crea al momento que se abre o rasga dicha lámina delgada inferior (17), inmediatamente antes de que inicie la percolación. USO: preparación de una bebida percolada utilizando una materia prima en polvo tal como café. VENTAJAS: alta calidad de la bebida.

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B65D81/00

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 7 B65D A47J

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)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 468 079 A (NESTLE SA) 29 January 1992 (1992-01-29) column 4, line 13 - line 52; figure 3	1,4
Y	---	2,3
Y	US 5 287 797 A (MCKANNA DOUGLAS E ET AL) 22 February 1994 (1994-02-22) column 4, line 28 - line 40; figure 2	2
Y	---	3
Y	EP 0 512 148 A (NESTLE SA) 11 November 1992 (1992-11-11) column 2, line 19 - line 28	
E	WO 03/082065 A (NEXSOL TECHNOLOGIES INC ;FIJEAU KIM (KR)) 9 October 2003 (2003-10-09) page 8, line 19 -page 10, line 21 page 13, line 13 - line 24; figure 1	1,3,4

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

26 May 2004

Date of mailing of the international search report

03/06/2004

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP 03/12338

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0468079	A	29-01-1992	EP 0468079 A1	29-01-1992
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			WO 03082065 A1	09-10-2003

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003 NV 102 E		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/12338	International filing date (day/month/year) 05.11.2003	Priority date (day/month/year) 02.04.2003	
International Patent Classification (IPC) or both national classification and IPC B65D81/00			
Applicant HAUSBRANDT TRIESTE 1892 SPA ET AL.			
1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 5 sheets, including this cover sheet. ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of 6 sheets.			
3. This report contains indications relating to the following items: I ☒ Basis of the opinion II ☐ Priority III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV ☐ Lack of unity of invention V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI ☐ Certain documents cited VII ☐ Certain defects in the international application VIII ☐ Certain observations on the international application			
Date of submission of the demand 21.10.2004		Date of completion of this report 14.01.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Lehe, J Telephone No. +31 70 340-3108	



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP 03/12338

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

Description, Pages

1-3 filed with the demand

Claims, Numbers

1-3 filed with the demand

Drawings, Sheets

1/1 filed with the demand

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP 03/12338

5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

see separate sheet

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-3
	No: Claims	
Inventive step (IS)	Yes: Claims	1-3
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-3
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/12338

Re Item I

Basis of the report

The amendments filed with the International Bureau under Article 19(1) introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 19(2) PCT. The amendments concerned are the following (claim 1, l. 15-17 and p. 2, l. 33 p. 3, l. 2):

- consisting of vertical cylindrical segments separated from one another by indentations

From the drawings (fig. 2) it appears that the cylindrical segments are not separated, but connected. Therefore this report has been established as if the above-mentioned amendment had not been made.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document:

D1: EP-A-0 468 079 (NESTLE SA) 29 January 1992 (1992-01-29)

2.1. The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows:

Single-dose capsule for the preparation of a percolated beverage using a powdery raw material such as coffee, comprising a sealed moulded-plastic casing having a bottom edge and forming a storage chamber filled with the raw material and having a lower wall provided with orifices and a bottom sealing foil which can be opened or torn by the dispensing machine immediately before the start of percolation, in which said perforated lower wall is inset with respect to the bottom edge.

2.2. The subject-matter of claim 1 differs from this known capsule in that said lower wall has:

1. at its central core an upper portion in the shape of a conical cusp and a substantially cylindrical lower portion and
2. a plurality of radial ribs directed downwards, which separate the segments in which the orifices are distributed, in order to create - in the chamber formed between the said foil and the bottom surface of the lower wall and filled with the

18-78

beverage percolated through the said orifices - a turbulent movement of the beverage when this is directly dispensed towards an underlying container through a spout created at the moment of opening or tearing of the said bottom foil.

2.3. The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

2.4. The problem to be solved by the present invention may be regarded as rendering the lower wall more stable.

2.5. The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: None of the cited documents discloses or renders obvious to reinforce the lower wall with a central core having an upper portion in the shape of a conical cusp.

3. Claims 2 and 3 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

2003 NV 102 E

Single-dose plastic capsule for powdered coffee and the like

* * *

5

Description

The present invention relates to a single-dose capsule made of moulded plastic and intended for coffee and other alimentary raw materials which are used for the preparation of beverages by means of percolation.

10

A capsule consists essentially of a casing with a frustoconical shape which is filled with coffee powder (or other powdery raw material) and has a peripheral edge onto which a sealing foil is applied. Said foil, at the time of use of the capsule in a professional and/or domestic machine for the preparation of *espresso* coffee and/or other hot beverages, is directed downwards, namely on the opposite side to the point of entry of the hot water under pressure into the capsule.

15

As a typical example of the state of the art, the Applicant cites the European patent EP-A-0 521 510 where it is envisaged forming, with the said foil, the flat bottom of the capsule and creating zones of reduced thickness so as to favour tearing of the foil at the time of preparation of the beverage, under the pressure of the water which passes through the powdery raw material in a vertical direction of flow.

20

The resultant percolated beverage is conveyed along inaccessible pipes inside the coffee machine and then dispensed.

25

The use of conventional capsules - owing to their particular constructional design - has the drawback that, since it is not possible to ensure the absolute cleanliness of the said internal pipes, there is the risk of fermentation or putrefaction of the fatty substances contained in the beverage (in particular in coffee). The least negative consequence is an undesirable alteration of the taste of the beverage.

30

Moreover, it is more difficult, compared to the use of loose coffee powder, to obtain the emulsification of the fatty substances in the coffee - namely the creamy coffee texture which makes Italian-style *espresso* coffee so popular world-wide - precisely owing to the presence of said pipes.

Other documents representing the state of art are EP-A-469 079, EP-A-512 148 and US-A-5 287 797.

The object of the present invention is to provide a moulded-plastic capsule

19

intended for coffee and other raw materials for the preparation of beverages by means of percolation, which does not have the abovementioned drawback and which allows high-quality beverages to be obtained.

5 These and other objects are achieved by providing a capsule having the characteristic features of the appended claims, as will be clarified by the following description of a non-exclusive embodiment with reference to the accompanying drawing in which:

- Fig. 1 is a three-dimensional view, from above, of an open capsule according to the invention;

10 - Fig. 2 is a three-dimensional view from below;

- Fig. 3 is a plan view from above;

- Fig. 4 is a cross-section through the said capsule along the line A-A in Fig. 3.

15 A capsule according to the invention consists of a casing 10 with a slightly frustoconical shape which is made by thermoforming a sheet of polypropylene for alimentary use. The casing 10 has a continuous upper peripheral edge 12 projecting outwards and a bottom non-projecting edge 14. The upper edge 12 is designed to be sealed with a foil 13 of plastic material and/or aluminium. A foil of this kind, as well as its function in single-dose containers of alimentary products, is well known per se to persons skilled in the art, so that it is not considered necessary to describe it in
20 further detail.

According to a characteristic feature of the invention, the end wall 16 of the casing 10 is inset with respect to the bottom edge 14; basically, as shown in detail in Fig. 4, there exist at least two steps between the edge 14 and the outer surface 18 of the end wall 16. In this way, underneath the upper chamber 25, which contains the
25 powdery raw material, a bottom chamber 30 is formed, said chamber being able to receive and convey the percolated beverage, as explained more fully below, and being closed by a second foil 17. This second foil is preferably formed by a triple layer of film combined with aluminium so as to ensure that the capsule is impermeable and hygienic, it not being considered necessary to describe said foil in greater detail for the
30 same reasons given above in connection with the foil 13.

According to another characteristic feature of the invention, the end wall 16 of the casing 10 has, around a central core having an upper portion in the shape of conical cusp 20 and a substantially cylindrical lower portion 22, **consisting of**

- 3 -

several cylindrical segments 31 separated from one another by indentations 32, a plurality of orifices 24 which are distributed in segments separated by radial ribs 26 - see Figs. 2 and 4.

5 The present capsule is used in a machine equipped with punching or drilling means able to create in the upper foil 13 a path (not shown) for the incoming pressurized hot water and a spout (also not shown) directly in the second foil 17, ~~due to a perforation of the conical cusp 20~~, immediately before the start of the percolation of the beverage through the orifices 24. Owing to the combined effect of the pressurized hot water fed from above into the capsule and the shape of the end wall 10 16, in particular the radial ribs 26, the beverage fills the abovementioned bottom chamber 30 with a turbulent movement which favours emulsification of the fatty substances. In this way, for example an Italian-style creamy coffee of excellent quality is obtained.

15 Moreover, the beverage is dispensed - through the spout created in the second foil 17 - directly into an underlying cup or glass, without being conveyed through the traditional pipes inside the machine and consequently without the risks mentioned hereinabove.

20 Although the description provided hereinabove relates to a preferred embodiment, it is understood that the invention may be developed with different forms and variants which are included within the following claims.

* * *

25

Claims

1. Single-dose capsule for the preparation of a percolated beverage using a powdery raw material such as coffee, comprising a sealed moulded-plastic casing (10) **having a bottom edge (14) and forming a storage chamber (25) filled with the raw material and having an end a lower wall (16) provided with orifices (24) and a bottom sealing foil (17) for sealing the storage chamber (25) filled with the raw material** which can be opened or torn by the dispensing machine immediately before the start of percolation, **in which said perforated lower wall (16) is inset with respect to the bottom edge (14), characterized in that** ~~the perforated end wall (16) is inset with respect to the bottom edge (14) so that a bottom chamber (30) is formed between the said foil (17) and the bottom surface (18) of the end wall (16) and is filled with the beverage percolated through the said orifices (24) before the beverage is discharged~~ **said lower wall (16) has :**
- **at its central core an upper portion in the shape of a conical cusp (20) and a substantially cylindrical lower portion (22) consisting of vertical cylindrical segments (31) separated from one another by indentations (32) and**
 - **a plurality of radial ribs (26) directed downwards, which separate the segments in which the orifices (24) are distributed,**
- in order to create - in the chamber (30) formed between the said foil (17) and the bottom surface (18) of the lower wall (16) and filled with the beverage percolated through the said orifices (24) - a turbulent movement of the beverage when this is directly dispensed towards an underlying container through a spout created at the moment of opening or tearing of the said bottom foil (17).**
- ~~2. Single-dose capsule for the preparation of a percolated beverage according to Claim 1, characterized in that, in the end wall (16) of the casing (10), the said orifices (24) are distributed in segments around a central core having a cusp-shaped portion (20), these segments being separated by radial ribs (26).~~
2. Single-dose capsule for the preparation of a percolated beverage according to Claim 1 ~~or Claim 2~~, **characterized in that** the said bottom sealing foil (17) consists of a triple layer of film combined with aluminium.
3. Single-dose capsule for the preparation of a percolated beverage

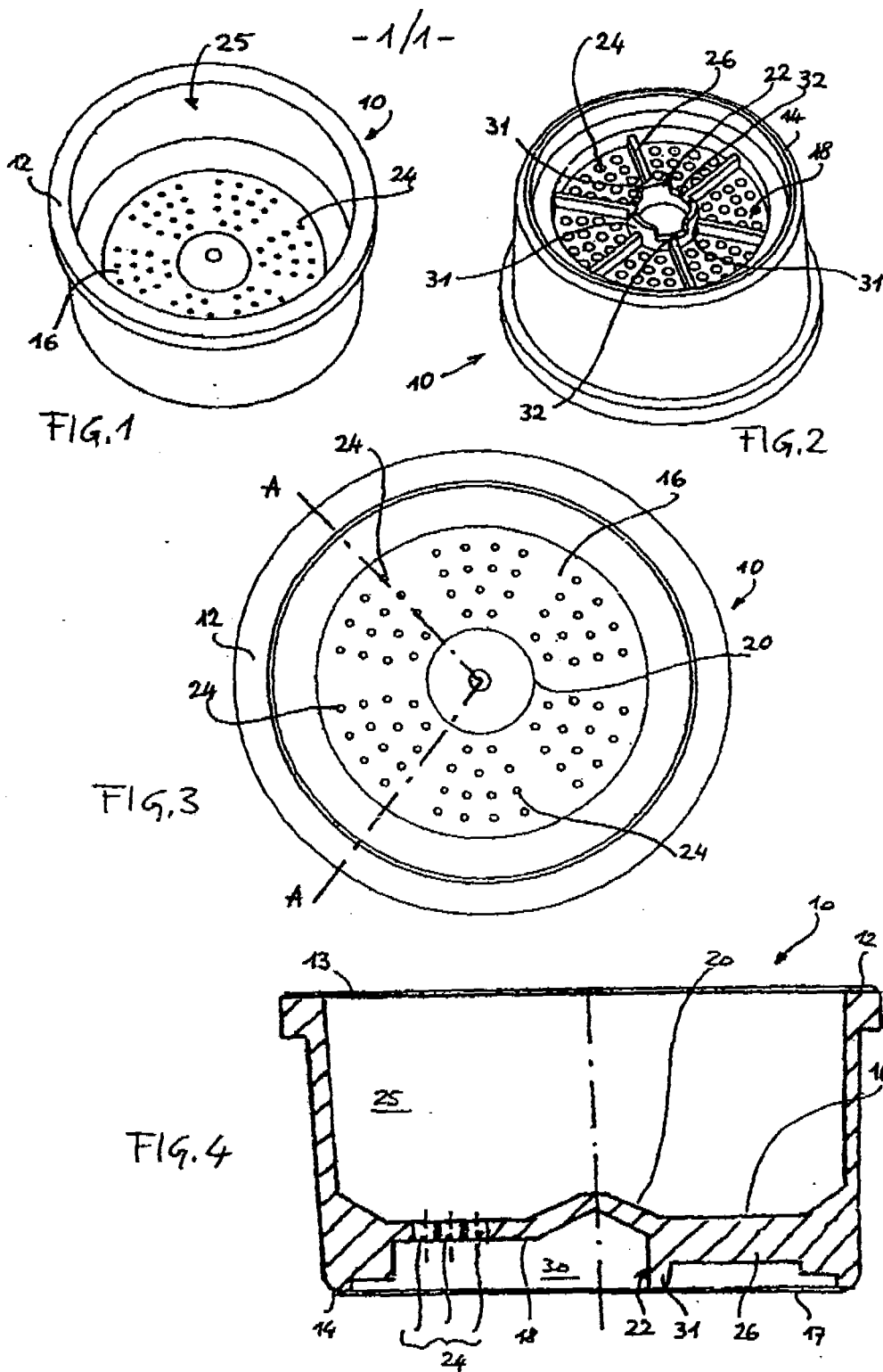
- 5 -

according to ~~any one of the preceding claims~~ **claim 1**, characterized in that it is made preferably by means of thermoforming with a polypropylene grade compatible with foodstuff.

* * *

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CAPSULA DE PLASTICO DE DOSIS INDIVIDUAL PARA CAFÉ EN POLVO YSIMILARESCAMPO DE LA INVENCIÓN

5

La presente invención se refiere a una cápsula de dosis individual elaborada a partir de plástico moldeado y pretendida para café y otras materias primas alimenticias que se utilizan para la preparación de bebidas mediante
10 percolación.

ANTECEDENTES DE LA INVENCIÓN

Una cápsula consiste esencialmente de una envoltura
15 con una forma frustocónica que se llena con polvo de café (u otra materia prima en polvo) y tiene una orilla periférica sobre la cual se aplica una lámina delgada de sello. Dicha lámina delgada, al momento que se usa la cápsula en una máquina profesional y/o doméstica para preparar café espresso
20 y/u otras bebidas calientes, se dirige hacia abajo, en específico sobre el lado opuesto al punto de entrada del agua caliente bajo presión al interior de la cápsula.

Como un ejemplo típico de la técnica más avanzada, el solicitante cita la patente europea EP-A-0 521 510 en la
25 cual se contempla formar, con dicha lámina delgada, el fondo plano de la cápsula y crear zonas de espesor reducido para favorecer que la lámina delgada se pueda rasgar al momento de preparar la bebida, bajo la presión del agua que pasa a través de la materia prima en polvo en una dirección de flujo

vertical.

La bebida percolada resultante es transportada a lo largo de tubos inaccesibles dentro de la máquina para café y después se dispensa.

5 El uso de cápsulas convencionales - debido a su diseño de construcción particular - tiene el inconveniente que, debido a que no es posible asegurar la limpieza absoluta de dichos tubos internos, existe el riesgo de fermentación o putrefacción de las sustancias grasas contenidas en la bebida
10 (en particular en el café). La consecuencia menos negativa es una alteración indeseable del sabor de la bebida.

Asimismo, es más difícil, en comparación con el uso de polvo de café suelto, obtener la emulsificación de las sustancias grasas en el café - en específico la textura de
15 café cremoso que hace que el café espresso estilo italiano sea tan popular en todo el mundo - debido precisamente a la presencia de dichos tubos.

Otros documentos que representan la técnica más avanzada son EP-A-469 079, EP-A-512 148 y US-A-5 287 797.

20

BREVE DESCRIPCIÓN DE LA INVENCION

El objetivo de la presente invención es proveer una cápsula de plástico moldeado pretendida para café y otras materias primas para preparar bebidas mediante percolación,
25 que no tenga los inconvenientes antes mencionados y que permita que se obtengan bebidas de alta calidad.

BREVE DESCRIPCIÓN DE LAS FIGURAS

Estos y otros objetivos se logran proveyendo una cápsula que tenga los rasgos característicos de las reivindicaciones anexas, como será aclarado por la siguiente descripción detallada de una modalidad no excluyente con
5 referencia a las figuras anexas en las cuales:

La figura 1 es una vista tridimensional, desde la parte superior, de una cápsula abierta de conformidad con la invención.

La figura 2 es una vista tridimensional desde la
10 parte inferior.

La figura 3 es una vista en planta desde la parte superior.

La figura 4 es una sección transversal a través de dicha cápsula a lo largo de la línea A-A en la figura 3.
15

DESCRIPCIÓN DETALLADA DE LA INVENCION

Una cápsula de conformidad con la invención consiste de una envoltura 10 con una forma ligeramente
20 frustocónica que se elabora mediante termo-formación de una lámina de polipropileno para uso alimentario. La envoltura 10 tiene una orilla periférica 12 superior continua que se proyecta hacia afuera y una orilla 14 inferior que no se proyecta. La orilla superior 12 está diseñada para que se
25 selle con una lámina delgada 13 de material de plástico y/o aluminio. Una lámina delgada de este tipo, así como su función en contenedores de dosis individual de productos alimentarios, es bien conocida per se por los expertos en la técnica, de modo que no se considera necesario describirla

con mayor detalle.

De conformidad con un rasgo característico de la invención, la pared de extremo 16 de la envoltura 10 se inserta con respecto a la orilla inferior 14; básicamente, como se muestra con detalle en la figura 4, existen por lo menos dos escalones entre la orilla 14 y la superficie exterior 18 de la pared de extremo 16. De esta manera, por debajo de la cámara superior 25, la cual contiene la materia prima en polvo, se forma una cámara inferior 30, dicha cámara puede recibir y transportar la bebida percolada, como se explica con mayor detalle más adelante, y se puede cerrar mediante una segunda lámina delgada 17. Esta segunda lámina delgada de preferencia está formada por una capa triple de película combinada con aluminio para asegurar que la cápsula sea impermeable e higiénica, no considerándose necesario describir dicha lámina delgada con mayor detalle por las mismas razones dadas anteriormente en conexión con la lámina delgada 13.

De conformidad con otro rasgo característico de la invención, la pared de extremo 16 de la envoltura 10 tiene, alrededor de un núcleo central que tiene una porción superior con forma de una cúspide cónica 20 y una porción inferior sustancialmente cilíndrica 22, que consiste de muchos segmentos cilíndricos 31 separados entre sí por indentaciones 32, una pluralidad de orificios 24 que están distribuidos en segmentos separados por las costillas radiales 26 - véase figuras 2 y 4.

La presente cápsula se utiliza en una máquina equipada con medios perforadores o para barrenado que puedan

crear en la lámina delgada 13 superior una trayectoria (no mostrada) para el agua caliente presurizada entrante y un surtidor (tampoco mostrado) directamente en la segunda lámina delgada 17, inmediatamente antes que inicie la percolación de la bebida a través de los orificios 24. Debido al efecto combinado del agua caliente presurizada abastecida desde la parte superior hacia el interior de la cápsula y de la forma de la pared de extremo 16, en particular las costillas radiales 26, la bebida llena la cámara inferior 30 antes mencionada con un movimiento turbulento que favorece la emulsificación de las sustancias grasas. De esta manera, se obtiene por ejemplo un café cremoso estilo italiano de excelente calidad.

Asimismo, la bebida se dispensa - a través del surtidor creado en la segunda lámina delgada 17 - directamente dentro de una taza o vaso subyacente, sin que sea transportada a través de los tubos tradicionales dentro de la máquina y por consiguiente sin los riesgos mencionados anteriormente en la presente invención.

Aunque la descripción provista anteriormente en la presente invención se refiere a una modalidad preferida, se entiende que la invención se puede desarrollar con formas y variantes diferentes que quedan incluidas dentro de las siguientes reivindicaciones.

NOVEDAD DE LA INVENCION

Habiendo descrito el presente invento se considera como novedad y por lo tanto se reclama como propiedad lo
5 contenido en las siguientes:

REIVINDICACIONES

1.- Una cápsula de dosis individual para la
10 preparación de una bebida percolada que utiliza una materia prima en polvo tal como café, que comprende una envoltura de plástico moldeado sellado (10) que tiene una orilla inferior (14) y que forma una cámara de almacenamiento (25) llena con la materia prima y que tiene una pared más baja (16) provista
15 con orificios (24) y una lámina delgada inferior de sello (17) la cual puede ser abierta o rasgada por la máquina dispensadora inmediatamente antes de iniciar la percolación, en la cual dicha pared más baja (16) perforada se inserta con respecto a la orilla inferior (14), caracterizada porque
20 dicha pared más baja (16) tiene:

- como su núcleo central una porción superior en forma de una cúspide cónica (20) y una porción inferior (22) sustancialmente cilíndrica que consiste de segmentos cilíndricos verticales (31) separados uno del otro mediante
25 las indentaciones (32) y

- una pluralidad de costillas radiales (26) dirigidas hacia abajo, las cuales separan los segmentos en los cuales están distribuidos que los orificios (24), con el fin de crear - en la cámara (30) formada entre dicha lámina

delgada (17) y la superficie inferior (18) de la pared más baja (16) y que se llena con la bebida percolada a través de dichos orificios (24) - un movimiento turbulento de la bebida cuando ésta se dispensa directamente hacia un contenedor
5 subyacente a través de un surtidor creado al momento de abrir o rasgar dicha lámina delgada inferior (17).

2.- La cápsula de dosis individual para la preparación de una bebida percolada de conformidad con la reivindicación 1, caracterizada porque dicha lámina delgada
10 inferior de sello (17) consiste de una capa triple de película combinada con aluminio.

3.- La cápsula de dosis individual para la preparación de una bebida percolada de conformidad con la reivindicación 1, caracterizada porque ésta se elabora de
15 preferencia por medio de termo-formación con un grado de polipropileno compatible con comestibles.

RESUMEN DE LA INVENCION

Se describe una cápsula de dosis individual que comprende una envoltura de plástico moldeado (10), sellado, 5 que tiene una pared de extremo (16) provista con orificios (24) y una lámina delgada inferior de sello (17). Se forma una cámara (30) entre dicha lámina delgada (17) y la superficie inferior (18) de la pared de extremo (16) perforada y se llena con la bebida percolada a través de 10 dichos orificios (24) antes que ésta se descargue directamente hacia un contenedor subyacente a través del surtidor que se crea al momento que se abre o rasga dicha lámina delgada inferior (17), inmediatamente antes de que inicie la precolación. USO: preparación de una bebida 15 percolada utilizando una materia prima en polvo tal como café. VENTAJAS: alta calidad de la bebida.

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

To:
DRAGOTTI & ASSOCIATI SRL
Attn. Agostini, Agostino
Via Paris Bordone 9
I-31100 Treviso
ITALY

RICEVUTO - 4 GIU. 2004

Date of mailing
(day/month/year) 03/06/2004

Applicant's or agent's file reference
2003 NV 102 E

FOR FURTHER ACTION See paragraphs 1 and 4 below

International application No.
PCT/EP 03/12338

International filing date
(day/month/year) 05/11/2003

Applicant

HAUSBRANDT TRIESTE 1892 SPA

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Fascimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority

 European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Louis Kainde

26.06.09

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 2003 NV 102 E	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 03/12338	International filing date (day/month/year) 05/11/2003	(Earliest) Priority Date (day/month/year) 02/04/2003
Applicant HAUSBRANDT TRIESTE 1892 SPA		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

4
☐ None of the figures.

Extracto de publicación
folio 31

32
33

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

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***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	Nº. PAGO	FECHA PAGO	VAL. PAGO
CAVELICA ABOGADOS	CONSIGNACION	BANCO POPULAR	050-00110-6	31556014	26/09/2003	29.755.000.00

***** C O N C E P T O *****

CANT.	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01 SOLICITUDES	
1	TRAMITES DE SOL. DE PATENTE DE IN	440.000.00
	TOTAL :	440.000.00

SOM: CUATROCIENTOS CUARENTA Y TRES MIL PESOS

RESPONSABLE :



RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

Co 14932-891-001-8