

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 13-297829- -4	FECHA: 2015-05-19 18:25:27
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 1 REGISTRO/DEPOSITO/CONCESION/DEPOSITO
TRA: 3 PATENTES DE MODELO DE UTILIDAD	FOLIOS: 5
ACT: 430 REQUERSOLICITA	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
HELENA CAMARGO WILLIAMSON

Asunto: Radicación: 13-297829- -4
 Trámite: 3
 Evento: 1
 Actuación: 430
 Oficio: 5458
 Folios: 5

Patente de Invención				Patente de Modelo de Utilidad	X
Vía Nacional	X				
Vía PCT (Fase Nacional)		Capítulo I		Capítulo II	
No. Solicitud Internacional					
Fecha de Presentación Internacional					

Como resultado del Examen de Fondo realizado, con fundamento en el artículo 85 y en concordancia con el artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le comunica:

1. Documentos estudiados

Descripción:	Rad. N° 13-297829-00000-0000	20/Diciembre/2013
Reivindicaciones:	Rad. N° 13-297829-00000-0000	20/Diciembre/2013
Dibujos:	Rad. N° 13-297829-00000-0000	20/Diciembre/2013
Prioridad:	BR 202013000672-1	10/Enero/2013

2. Análisis de la Prioridad

Se acepta la reivindicación de Prioridad porque esta solicitud fue presentada dentro del plazo establecido (Art. 9 D 486) y su contenido técnico corresponde con el de la prioridad reivindicada.

3. Objeto de la invención

En el presente documento se aplicará lo establecido en la Circular Única en su Título X, con respecto a que cuando la solicitud contenga más de diez (10) reivindicaciones y no se

haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada al momento de realizar el examen de patentabilidad consagrado en el artículo 45 de la Decisión 486.

Título de la solicitud: “Disposición constructiva en termo hermético y no desarmable” (Fl. 1).

El problema planteado en esta solicitud, consiste en lograr un termo mejorado que ofrezca al consumidor un producto hermético, que no sea desarmable, evitando así daños en la ampolla interna de vidrio, lo que puede comprometer la vida útil del recipiente.

Para resolver este problema técnico, la solicitud en estudio propone un termo hermético que comprende una ampolla de vidrio en el interior de un cuerpo externo, el cual encaja con la boca del termo por medio de una saliente y un canal que interactúan entre sí.

El objeto de la presente Solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): A 47 J 41/02.

4. De la Solicitud de Patente

Reivindicaciones (Art 30 D 486, Art 22 PCT)

El capítulo reivindicatorio no es claro porque:

- 1- Los materiales no pueden ser objeto de protección vía modelo de utilidad. En este tipo de patente, solo se protegen las características constructivas del producto para el cual se solicita protección. Por ende, utilizar expresiones que hacen referencia a materiales o a sus propiedades, como: “*de vidrio*” no pueden ser incluidas dentro de la reivindicación independiente como una característica esencial de la invención. Cabe agregar, que se pueden incluir como características particulares en reivindicaciones dependientes, pero no afectan el examen de patentabilidad.
- 2- La expresión: “*...puede haber un elemento de aislamiento...*” no es limitativa, porque hace opcional a la característica y no limita el alcance de la reivindicación. Se sugiere eliminar el término “puede” e incluir las características opcionales en una reivindicación dependiente.

Asimismo, la reivindicación 2 también contiene la expresión “*...puede ser aplicado...*” la cual también es de carácter opcional. Se sugiere al solicitante eliminar dicha expresión o en su defecto reemplazarla por una que limite la invención.
- 3- La expresión “*...para promover la estanquedad del conjunto...*” (reivindicación 1), describe una función, ventaja o un resultado a alcanza, los cuales no son aspectos susceptibles de patente. Para mayor claridad, el producto reclamado se debe definir técnicamente mediante sus características estructurales. Se sugiere al solicitante eliminar la expresión citada.

De igual manera, por la forma como están redactadas las reivindicaciones 2 y 3, se exponen funciones, ventajas o resultados a alcanzar. En este caso, se sugiere replantear la redacción de estas reivindicaciones, de tal manera que se describan las características constructivas del producto reclamado, así como también la interacción entre las mismas.

4- Se presentan errores de transcripción dentro del capítulo reivindicatorio, por ejemplo: “estanquedad” (reivindicación 1), “ser absorbidas” (reivindicación 3). Se sugiere al solicitante, que al replantear el capítulo reivindicatorio se eviten dichos errores de transcripción, con el fin de no comprometer la claridad del capítulo reivindicatorio.

5. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de presentación de la solicitud de prioridad: enero 10 de 2013, y se encontraron los siguientes documentos que anticipan el objeto de esta solicitud:

Ítem	Documento	Título	Fecha de Publicación
D1	GB 850.502	'Improvement in or relating to insulating vessels'	05/Octubre/1960
D2	US 3'076.575	'Vacumm containers'	05/Febrero/1963
D3	GB 866.264	'Improvements in or relating to vacuum flasks'	26/Abril/1961

El documento D1 ¹ divulga un contenedor aislado, como un recipiente de vacío, que tiene una cobertura exterior que consiste en un material elástico, una pared doble de vidrio y una pluralidad de nervaduras que se disponen entre la superficie y la cobertura exterior (Pág. 1, líneas 10 a 17).

El documento D2 ² divulga un contenedor de vacío y más particularmente a los recipientes que contiene dicho contenedor (Col. 1, líneas 9 a 11).

El documento D3 ³ divulga un recipiente de vacío que comprende un recipiente retenido en un contenedor cilíndrico por medio de un hombro anular (Pág. 1, líneas 10 a 15).

6. Examen de Patentabilidad (Art 14 D486)

El examen de patentabilidad que se muestra a continuación, se realiza teniendo en cuenta las objeciones de patentabilidad expuestas en el numeral 4 de esta comunicación.

Novedad (Art 16 D486)

La reivindicación 1 consiste en: “*DISPOSICIÓN CONSTRUCTIVA EN TERMO HERMÉTICO Y NO DESARMABLE, constituida por una ampolla de vidrio...*” (ver página 7 incluida en el radicado bajo No. Rad. N° 13-297829-00000-0000).

Comparación de las características técnicas **esenciales**, con las del Estado de la Técnica:

Características esenciales	D1	D2	D3
Termo hermético caracterizado por:	Termo hermético caracterizado por:	Termo hermético caracterizado por:	Termo hermético caracterizado por:
Ampolla cubierta por un cuerpo externo y una boca.	Un inserto (B) de doble pared, una cubierta exterior (C) y un cuello	Un contenedor en el cual se encuentra un recipiente (4) y una	Una ampolla (1) localizada en un contenedor cilíndrico (2) y

1 http://worldwide.espacenet.com/publicationDetails/biblio?DB=EPODOC&II=0&ND=3&adjacent=true&locale=en_EP&FT=D&date=19601005&CC=GB&NR=850502A&KC=A
2 <https://www.google.ca/patents/US3076575?dq=3076575&hl=es&sa=X&ei=n7sdVenvF4imNpSAg5gD&ved=0CB0Q6AEwAA>
3 http://worldwide.espacenet.com/publicationDetails/biblio?DB=EPODOC&II=0&ND=3&adjacent=true&locale=en_EP&FT=D&date=19610426&CC=GB&NR=866264A&KC=A

	(11) (Pág. 2, líneas 67 a 65).	sección superior (1) (Col.2, líneas 11 a 20)	una boca (3) (Pág. 2, líneas 21 a 24).
El encaje entre el cuerpo externo y la boca se da por la interferencia de un pequeño canal y una saliente anillada.	El encaje entre el cuerpo externo (C) y el cuello (11) se da por la interferencia de un pequeño canal y una saliente anillada (14) (Fig.3; Pág. 2, líneas 73 a 81).	Un enganchen la forma de nervadura y ranura es usado. Varios tipos de juntas en el cuerpo o otras piezas del recipiente pueden utilizarse (Figs. 6 a 12; Col.2, líneas 41 y 42)	El encaje entre el cuerpo externo (1) y la boca (3) se da por la interferencia de un pequeño canal (7) y una saliente anillada (6) (Figs. 1 y 2).

Las características **esenciales** del termo de la reivindicación 1 habían sido divulgadas previamente en D1, D2 y D3. En consecuencia, la reivindicación 1 no es nueva.

Aunque, tal y como está redactada la reivindicación 1, se entiende que el elemento de aislamiento es una característica opcional, cabe agregar que en el campo técnico de la solicitud y en los termos convencionales que pueden encontrarse en el mercado, es bien conocido que lleven sellos para lograr la estanqueidad y hermeticidad del termo ^{4 5}. De acuerdo con lo anterior, se considera que el elemento de aislamiento es un elemento implícito en los termos ya conocidos y, por lo tanto, no puede dar novedad al producto para el cual se solicita protección.

Por su parte, aunque no es clara la redacción de las reivindicaciones 2 y 3, se aclara que los elementos incluidos en ellas ya habían sido enseñados en los documentos antecedentes, así:

- Reivindicación 2: Un enganchen la forma de nervadura y ranura es usado. Varios tipos de juntas en el cuerpo o otras piezas del recipiente pueden utilizarse (D2=Figs. 6 a 12; Col.2, líneas 41 y 42).
- Reivindicación 3: Nervaduras (17) las cuales, en su parte inferior, forman unos hombros inclinados (19) en el cual el recipiente interior descansa. Esto previene que el contenedor o inserto interior pueda romperse (D1=Fig. 1; Pág. 2, líneas 91 a 112). Una porción cilíndrica (61) que comprende unas nervaduras (62) radiales. Dentro de la porción (61) se encuentra un resorte (63) que recibe la parte inferior del recipiente (4) (D2=Fig. 15; Col. 5, líneas 20 a 28).

Asimismo, Las reivindicaciones 2 y 3 también fueron afectadas en el numeral 4 del presente requerimiento.

7. Conclusión

Los requisitos de Patentabilidad de la presente Solicitud están afectados así:

Ítem	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	GB 850.502	1 y 3	Novedad
D2	US 3'076.575	1 a 3	Novedad
D3	GB 866.264	1	Novedad

4

<https://web.archive.org/web/20121209123802/http://www.shopstanley-pmi.com/category/parts/stoppers>
5 <https://www.youtube.com/watch?v=Aatbz4LG0lo>

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de treinta (30) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de treinta (30) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

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.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-05-26

Elaboró: Monica Andrea Gutierrez Almonacid
Revisó: Sonia Andrea Diaz Pirazan

PATENT SPECIFICATION

DRAWINGS ATTACHED

850,502



*Date of Application and filing Complete
Specification: Aug. 29, 1958*

No. 27839/58.

Application made in Germany on Feb. 27, 1958.

Complete Specification Published: Oct. 5, 1960.

Index at acceptance:—Classes 64(2), I1; and 125(3), T(4F : 9X).

International Classification:—B67b, F25d.

COMPLETE SPECIFICATION

Improvements in or relating to insulating vessels.

1, KARL KREBS, a German Citizen, personally responsible partner of the firm Gerdes & Co., of 33, Loherstrasse, Schwelm, Westphalia, Germany, do hereby declare
5 the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention relates to an insulating vessel, such as a vacuum flask, having an outer cover consisting of elastic material, and double-walled glass insert held therein, a plurality of supporting ribs being disposed
15 between the surface of the outer cover on the one hand and the glass insert on the other.

The invention is distinguished from known insulating flasks of this kind first of all
20 advantageously essentially in that the supporting ribs viewed in cross-section, extend secantially, that is to say are inclined to the diameter, while they extend in the
25 diameter in the same circumferential direction, the axial end edges of the ribs advantageously extending tangentially.

With such an insulating flask it has proved particularly advantageous for the outer
30 cover neck part consisting of elastic synthetic resin material to be held on the lower part by means of an annular press-button fastener, one of the two parts to be connected together—preferably the bottom part—
35 being provided with an annular protuberance having two shoulders facing away from one another, while the other part, preferably the neck part, at the end of the fastener has an overlapping channel, the inside cavity of
40 which corresponds to the profile of the protuberance of the bottom part, the neck part overlapping the opening edge of the lower part so as to straddle the same.

A further feature of the invention consists
45 in that the inner wall of the drinking cup

[Price 3/6]

encasing the stopper of the flask is made perfectly smooth, and that in addition the diameter of the cup is so dimensioned that it is held only by adhesive fit, that is to say purely by static friction, on the outer cover
50 neck part consisting preferably of hard polyethylene or the like, and in addition the outer cover neck part in the region of the cup fit can be provided with channeling, which may be formed essentially from ribs
55 distributed at regular intervals over the periphery and extending in the longitudinal direction of the flask.

Moreover, it is also advantageous to provide the neck part of the insulating flask
60 on the one hand in the region of the mouth edge of the glass insert with a spout integrally connected to the neck part as regards material, and on the other hand at least in the region of the spout with two
65 sealing lips disposed one above or one behind the other.

In contradistinction to all known insulating flask constructions, the flask of the present invention, provided with the inner
70 supporting ribs in a secantial position, has the considerable advantage that the otherwise constant risk of crushing or damage of the glass insert is completely eliminated. In fact, if the outer cover of the present
75 invention is compressed the spacing ribs provided in the form of fins in the chordal direction simply yield. They thus give way, whereby the glass insert is extensively relieved of pressure so that there is no
80 danger of breakage, that is to say the glass insert remains undamaged. In actual fact the ribs bend about their point of connection to the surface of the outer cover, and on the other hand they can easily flex in themselves.
85 Finally, in consequence of their secantial position, they slide on the outer surface of the glass insert in the circumferential direction, if the pressure is so great. In this way, in consequence of their secantial
90

position, the ribs protect the glass insert from the risk of becoming damaged through pressure on the elastic outer cover.

- 5 The adhesion fit of the drinking cup as proposed according to the invention also has decisive advantages in that on the one hand the inside wall of the cup can be made completely smooth so that all the otherwise
10 customary smoothing means, such as screw-threads, are completely eliminated, so that the liquid in the cup now no longer has the opportunity of remaining in the cup when poured out, that is to say leave residues
15 behind. On the other hand, the construction of the cup from hard polyethylene obviates another previous drawback, namely that the edge of the cup can split open too easily when use is made of polystyrene. Last but
20 not least, the tedious task of screwing the cup on to and unscrewing it from the flask is completely eliminated since it is held on the outer cover neck part simply by an adhesion fit. On the one hand it fits
25 sufficiently firmly and on the other hand it can be removed from the neck part just as easily.

- Moreover, the construction of the spout in one piece with the elastic outer cover has
30 the advantage that it is always and in every case connected firmly and captively to the flask and can be manufactured integrally with the outer cover. Finally, in these circumstances there are no longer any
35 sealing difficulties, on the one hand because the spout no longer need be removed and fitted as was previously the case and on the other hand because the two-fold sealing lip in the region of the spout ensures perfect
40 sealing between the neck part and the glass insert even if the spout gives rise to accumulations of material which might of themselves impair sealing-tightness.

- In order that the invention may be more
45 readily understood, reference is made to the accompanying drawings, which illustrate diagrammatically and by way of example two embodiments thereof and in which:-

- Figure 1 shows one embodiment of insulating flask according to the invention in
50 axial longitudinal section on the line I-I of Figure 2, the glass flask being shown in elevation in the lower part and in section in the upper part of the drawing;

- 55 Figure 2 is a plan view of a half of the lower part of the outer cover;

- Figure 3 is the detail "A" in Figure 1 on an enlarged scale;

- 60 Figure 4 is an elevation of another embodiment of insulating flask having a pouring spout; the top neck part and the spout being shown in section;

- Figure 5 is a corresponding plan view of the insulating flask of Fig. 4, and

- 65 Figure 6 is an enlarged partial section of

the spout on the line VI-VI of Figure 4.

The insulating flask illustrated consists of four main parts, namely a glass insert B of *per se* known construction of double-walled thin glass, an outer cover C comprising a 70 lower part 10, 10¹ and a neck part 11, a stopper D and a drinking cup E.

The lower part 10, 10¹ of the outer cover C consists, as does the neck part 11, of an elastic synthetic resin material—for 75 example polyethylene. The lower part 10, 10¹ has a base, 10¹ with an inner lug 12 and a hollow-cylindrical surface 10. Near the mouth edge 13 the casing 10 has an annular protuberance 14, extending around it and 80 having two shoulders 15, 16 (Fig. 3). The shoulder 15 facing downwards, that is to say facing the base 10¹ of the lower part 10, 10¹ is inclined at an angle of about 45° to the horizontal and is thus made considerably 85 flatter than the shoulder 16 extending towards the opening edge 15 and which is considerably steeper and advantageously also curved outwards slightly (in this connection compare especially Figure 3). 90

Inside the lower part 10, 10¹ supporting ribs 17, extending in the axial direction of the flask are provided and are connected by unity of material to the casing wall 10 and the base 10¹. At their upper ends, the ribs 95 17 reduce, by radial decrease of depth, to the wall 10 of the lower part, so that they form a kind of insertion funnel star 18 for the glass insert B. Near the base 10¹ of the lower part the ribs 17 project inwardly, 100 forming inclined shoulders 19, on which the curved base of the insert rests (see Figure 1). The axial ribs 17 are inclined to the diameter, that is to say in the chordal direction, as will be seen best in Figure 2. They thus form 105 secantial fins, the inner end edges 20 of which are bevelled and thus adapted to the circumferential surface of the insert B. They support the insert against the casing 10 of the lower part 10, 10¹ in such manner that 110 the ribs 17 prevent the sensitive glass insert from being crushed. In fact, pressure on the casing 10 of the lower part causes the fin-like supporting ribs 17 to bend about their axial base lines 21. In addition, they can easily 115 flex in themselves. In the event of considerable pressure, their longitudinal end edges 20 extend tangentially to the circumference of the glass insert B. They thus not only permit adequate insulating air between the 120 outer cover and the glass insert but also take any pressures acting on the casing from the outside without dangerously transmitting these pressures to the glass vessel. 125

The neck part 11 is a kind of thin-walled ring of elastic synthetic resin material, for example polyethylene. It is provided with a plurality of diameter reduction stages. At its opening edge facing the lower part it 130

is of double-walled construction, the channel 22 formed in this way and of annular shape being adapted, in respect of cross-section, to the upper edge of the lower part of the casing 10, so that the edge 22 of the neck part 11 is adapted to fit over the mouth edge 13, 14 of the lower part 10, 10¹ so as to straddle the same, the neck and lower part engaging one in the other after the style of an annular press-button fastener. The fitting of the neck part is facilitated in these circumstances by the steep shoulder 16, while the flatter co-acting shoulder 15 dependably prevents unintentional loosening of the neck part but does not render intentional removal thereof impossible.

Over the middle diameter stage 23 of the neck part 11 is fitted a cup E which may preferably consist of transparent synthetic resin material, so that it is possible to see without obstruction whether the stopper D fits firmly and tightly in the glass insert. This is impossible in known insulating flasks, because in those the cups are non-transparent even when they consist of synthetic resin material. It was therefore always necessary to remove the cup to check this. The cup E, in consequence of the good static friction of the polyethylene neck part 11, fits firmly on the latter; screw connections or the like are unnecessary. Moreover, the upper neck part of the outer cover is provided with channeling extending around it, which is formed from a plurality of individual ribs disposed side by side at intervals from one another. This channeling favours the fitting of the cup inasmuch as the inside air present between the inside of the cup and in the region above the neck part is not compressed but can escape freely to the outside.

The upper edge 24 of the neck part 11 is made feather-edged after the style of an annular lip formed by a conical surface. Said lip serves as a seal between the neck part 11 of the outer cover C and the neck of the glass insert B. The sealing lip 24 and the neck part 11 are thus connected together by unity of material, so that loose and hence losable sealing means are avoided.

The stopper D is of an advantageously two-part hollow construction comprising a shaped hollow stopper portion 25 and a removable cover plate 26 which snaps into position in an annular groove 27 in the part 25. A plurality of flexible ribs constitute the liquid seal in the neck of the glass portion B. The interior of the hollow stopper houses a filler body 28 of insulating material preferably of foamed plastic for example foamed polystyrene, polyurethane or the like.

In the embodiment of Figs. 4 to 6, the outer cover C is provided, in the region of the neck part 111, with a spout 125 which is made in one piece with the neck part 111.

The neck part 111 which is provided with an annular sealing lip 126, has at the height of the opening edge 127 of the glass insert B the lateral spout 125 which facilitates the pouring out of the contents. In the region of the spout 125 a second sealing lip 126¹ is provided which serves as an additional sealing means between the neck part 111 and the glass insert B in order to prevent the penetration of liquid in every case into the gap between the neck part and the glass vessel. In other respects this embodiment is similar to that of Figs. 1 to 3.

As already stated, the embodiments illustrated and described are only examples for the embodiment of the invention and the latter is not limited to them; on the contrary, many other constructions and applications are possible within the framework of the invention. This applies especially to the construction, shape and arrangement of the fins 17, which, if desired could also be inclined to the longitudinal axis of the flask, instead of being disposed in the axial direction. They could, for example, be disposed after the style of coarse thread turns on the inner wall surface of the lower part. As regards moulding, however, the axial ribs are preferable. Moreover, the ribs 17 need not all be inclined to the diameter in one direction, but could also be inclined alternately to the left and to the right of the diameter. Nor need they be absolutely joined fast to the casing 10, or even be integral with the latter. In some cases, in fact, the supporting ribs 17 could be constructed as a kind of basket which is simply placed into the lower part 10, 10¹ of an insulating flask. In that case, the basket could also be used subsequently to equip flasks already existing, in order to ensure dependable positioning of the insert B.

WHAT I CLAIM IS:—

1. An insulating vessel, such as a vacuum flask, with an outer cover consisting of elastic material and a double-walled glass insert held therein, a plurality of supporting ribs being disposed between the surface of the outer cover on the one hand and the glass insert on the other hand, characterised in that the supporting ribs viewed in cross-section, are disposed secantially, that is to say are inclined to the diameter.

2. An insulating flask as claimed in Claim 1, wherein the ribs extend in the axial direction and are all inclined to the diameter in the same circumferential direction.

3. An insulating flask as claimed in Claim 1, or 2, wherein the axial end edges of the ribs extend tangentially.

4. An insulating flask as claimed in Claim 1, having a two-part outer cover, wherein the ribs, beginning at the mouth of the lower part of the outer cover, first project inwardly from the casing after the

style of a funnel star, then, for the main part of their length, extend parallel to the casing, and at their lower part near the base form preferably inclined carrying shoulders for the glass insert.

5. An insulating flask as claimed in Claim 4, wherein the neck part consisting of elastic synthetic resin material, of the outer cover is held by an annular press-button fastener on the lower part, one of the two parts to be connected—preferably the lower part—being provided with an annular protuberance having two shoulders facing away from one another, while at the fastener end the neck part has an overlap channel the inside cavity of which corresponds to the profile of the protuberance of the lower part, the neck part overlapping the opening edge of the lower part so as to straddle the same.

6. An insulating flask as claimed in Claim 5, wherein the outer or upper shoulder facing the mouth of the lower part is inclined more steeply than the remote shoulder that is to say the shoulder facing the base of the lower part.

7. An insulating flask as claimed in any of Claims 4 to 6, wherein the upper opening edge of the neck part consisting of elastic material, for example polyethylene, is feather-edged to form an annular sealing lip forming a conical surface.

8. An insulating flask as claimed in any of the preceding claims, with a synthetic resin cup encasing the stopper, wherein the inside wall of the drinking cup is completely smooth, and that in addition the diameter of the cup is so dimensioned that it is held solely by means of an adhesion fit, that is to say purely by static friction, on the neck part consisting of elastic synthetic resin

material of the outer cover.

9. An insulating flask as claimed in Claim 8, wherein the outer cover is provided with a channeling or the like in the region of the neck part serving to receive the cup.

10. An insulating flask as claimed in Claim 9, wherein the channeling of the neck part of the outer cover is formed essentially from ribs distributed at regular intervals over the periphery and extending in the axial direction of the flask.

11. An insulating flask according to Claims 8 to 10 wherein at least one structural part of the adhesion fit mounting, that is to say the cup or the neck part, is produced from hard polyethylene or another synthetic resin having equivalent properties.

12. An insulating flask as claimed in Claim 8, wherein the cup is made from transparent synthetic resin.

13. An insulating flask as claimed in any of the preceding claims wherein the neck part of the insulating flask is on the one hand in the region of the mouth edge of the glass insert provided with a spout integrally connected by unity of material to the neck part and on the other hand at least in the region of the spout is provided with two sealing lips disposed one above or one behind the other.

14. An insulating flask substantially as herein described and as illustrated in Figs. 1 to 3 or Figs. 4 to 6 of the accompanying drawings.

H. A. L. VENNER,
Chartered Patent Agent,
1 Great James Street,
Bedford Row, London, W.C.1.
Agent for Applicant.

FIG. 1

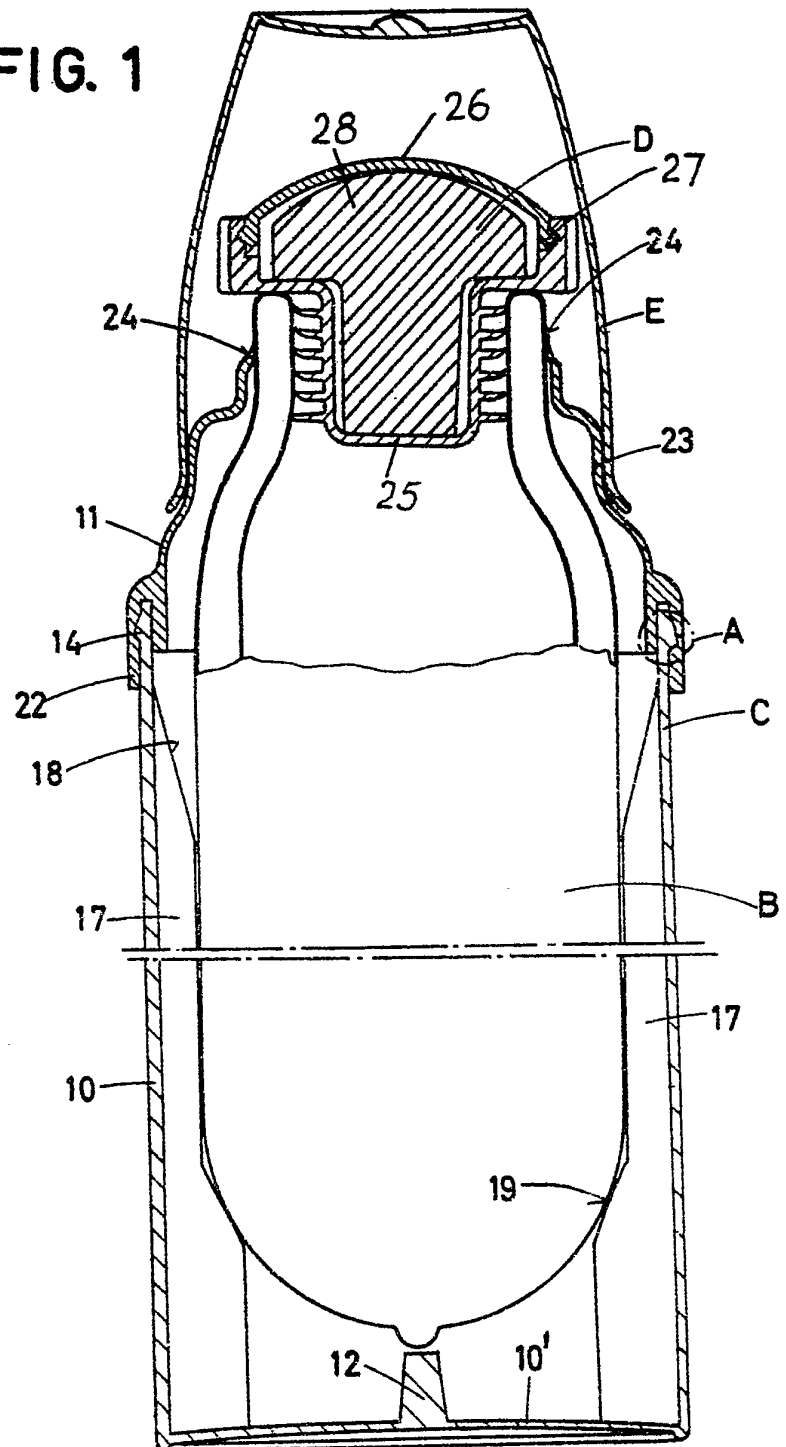


FIG. 2

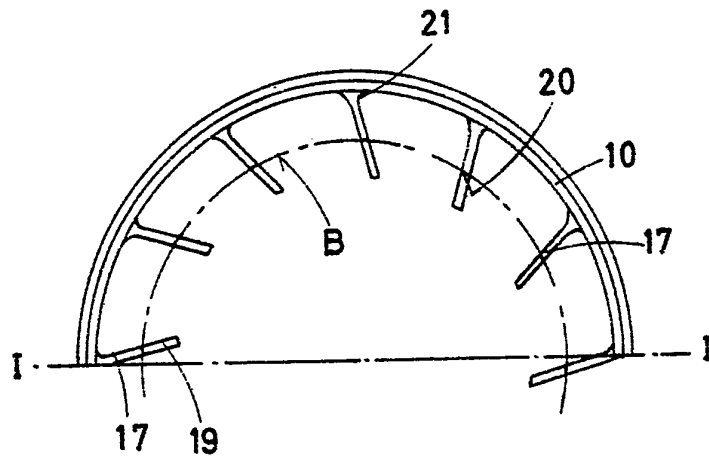
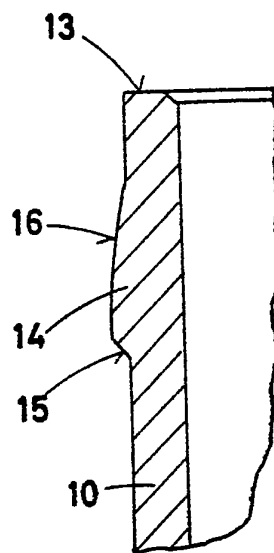


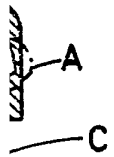
FIG. 3



27

4

23



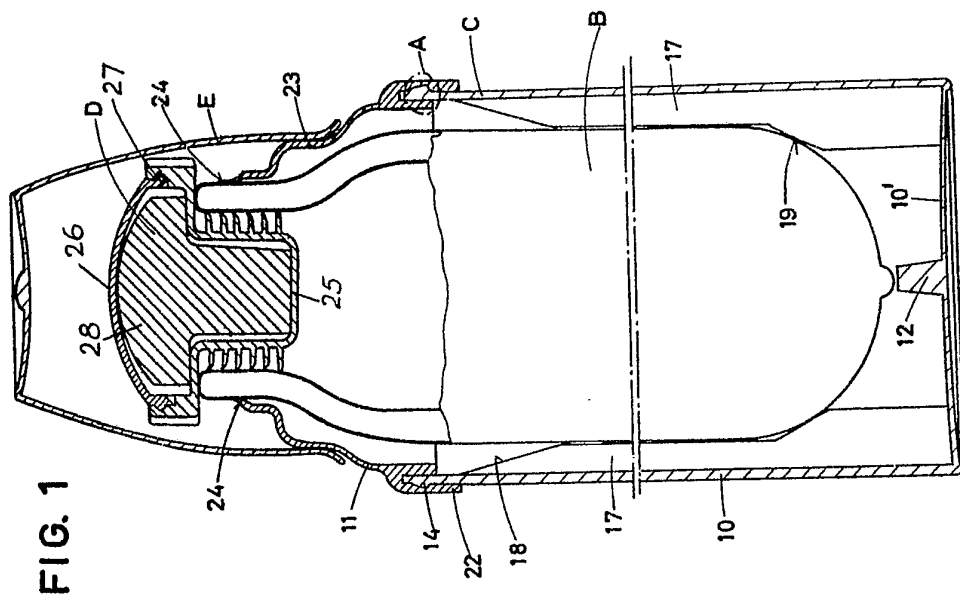


FIG. 2

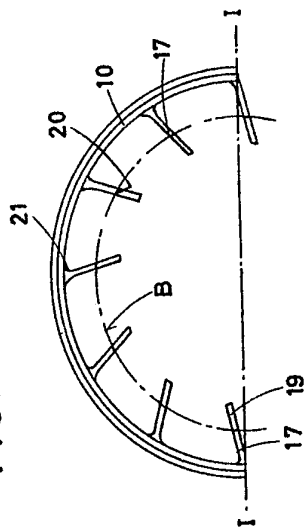


FIG. 3

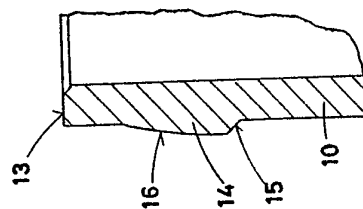


FIG. 4

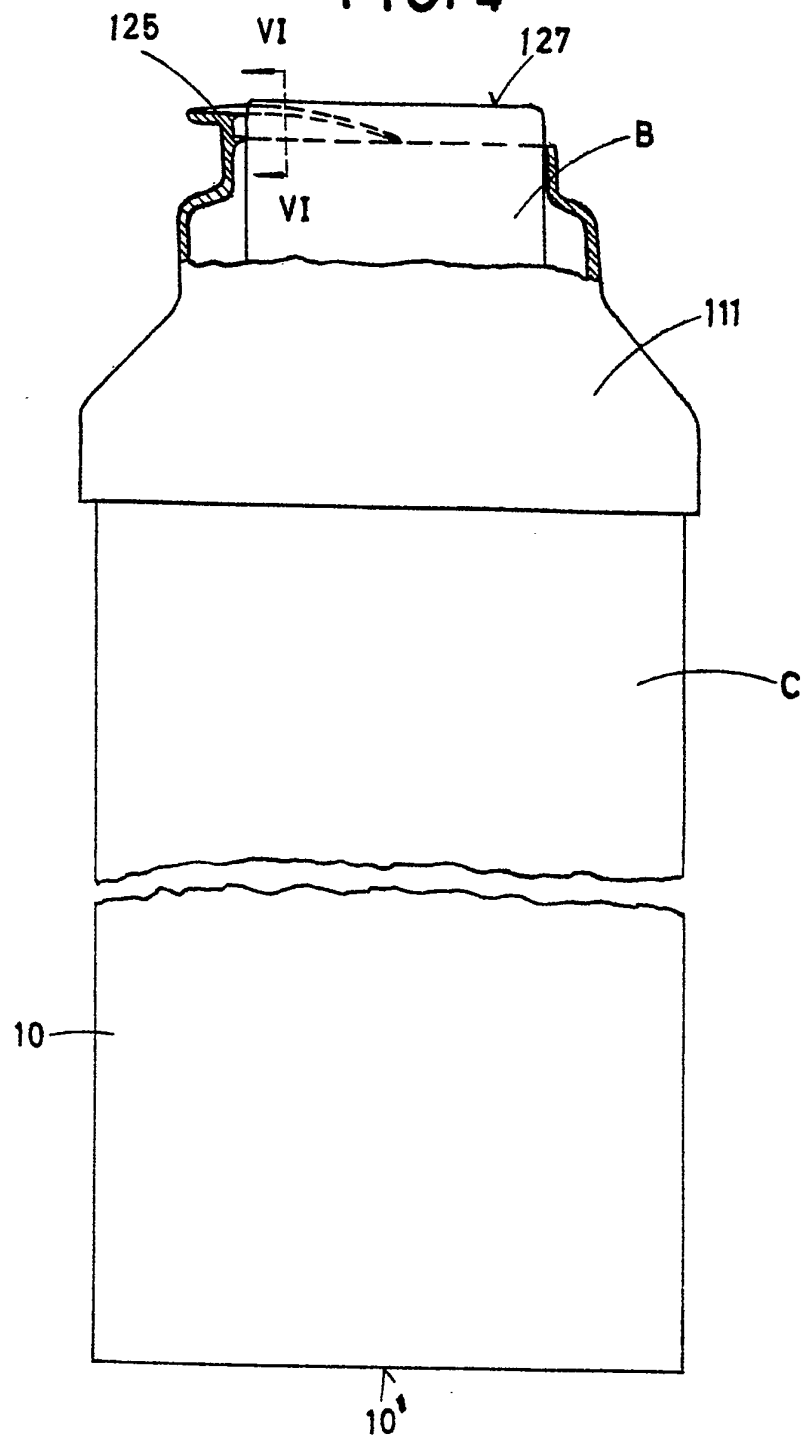


FIG. 5

B

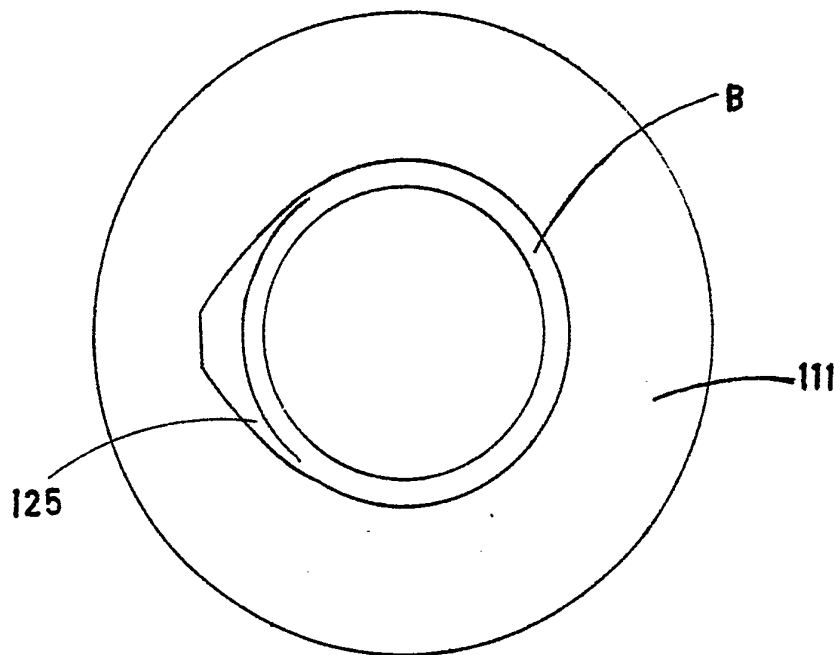
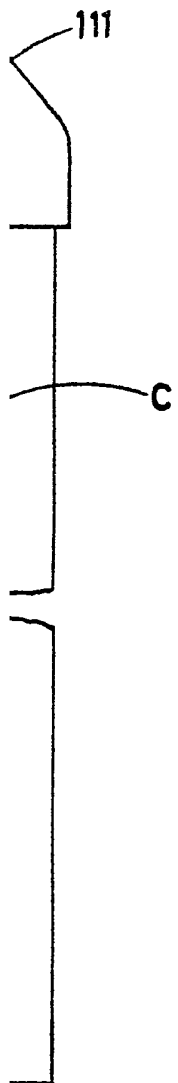


FIG. 6

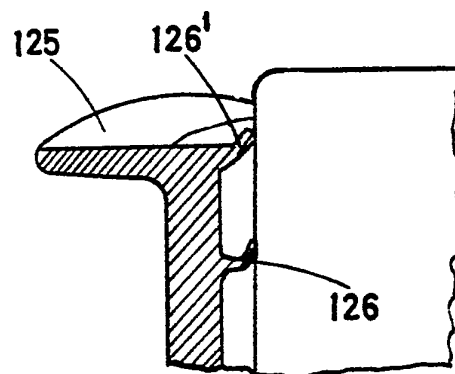


FIG. 4

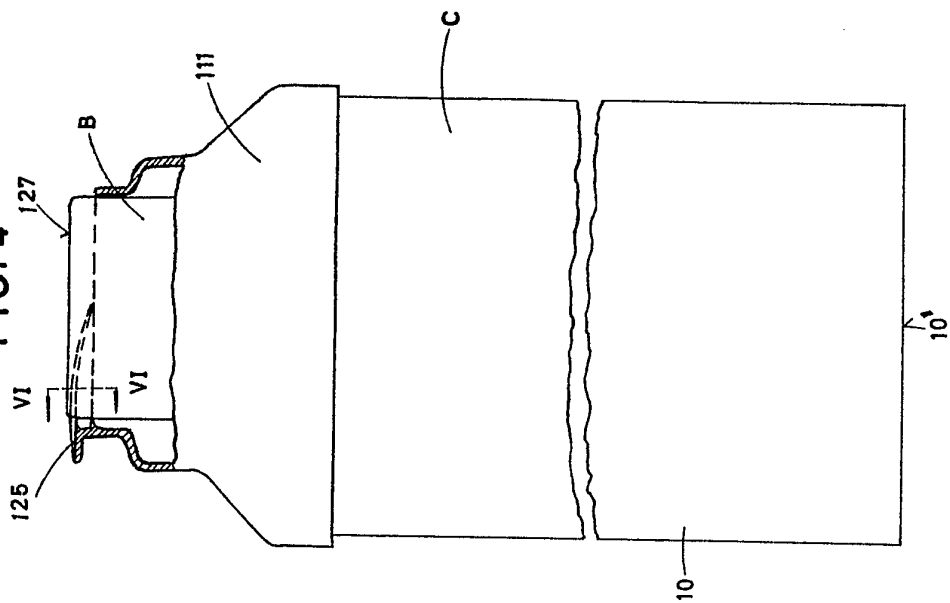


FIG. 5

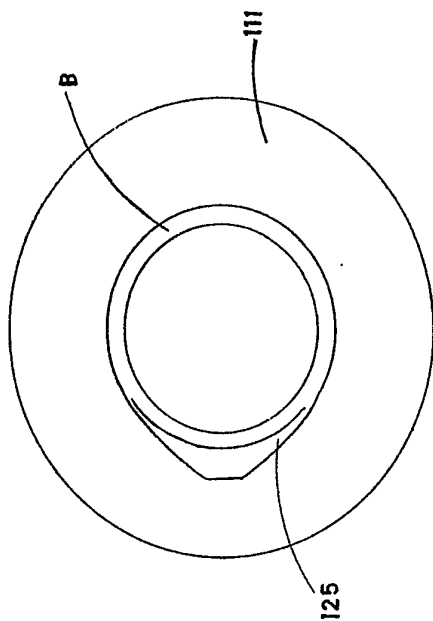
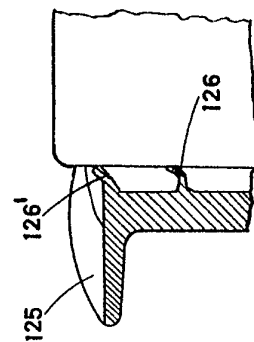


FIG. 6



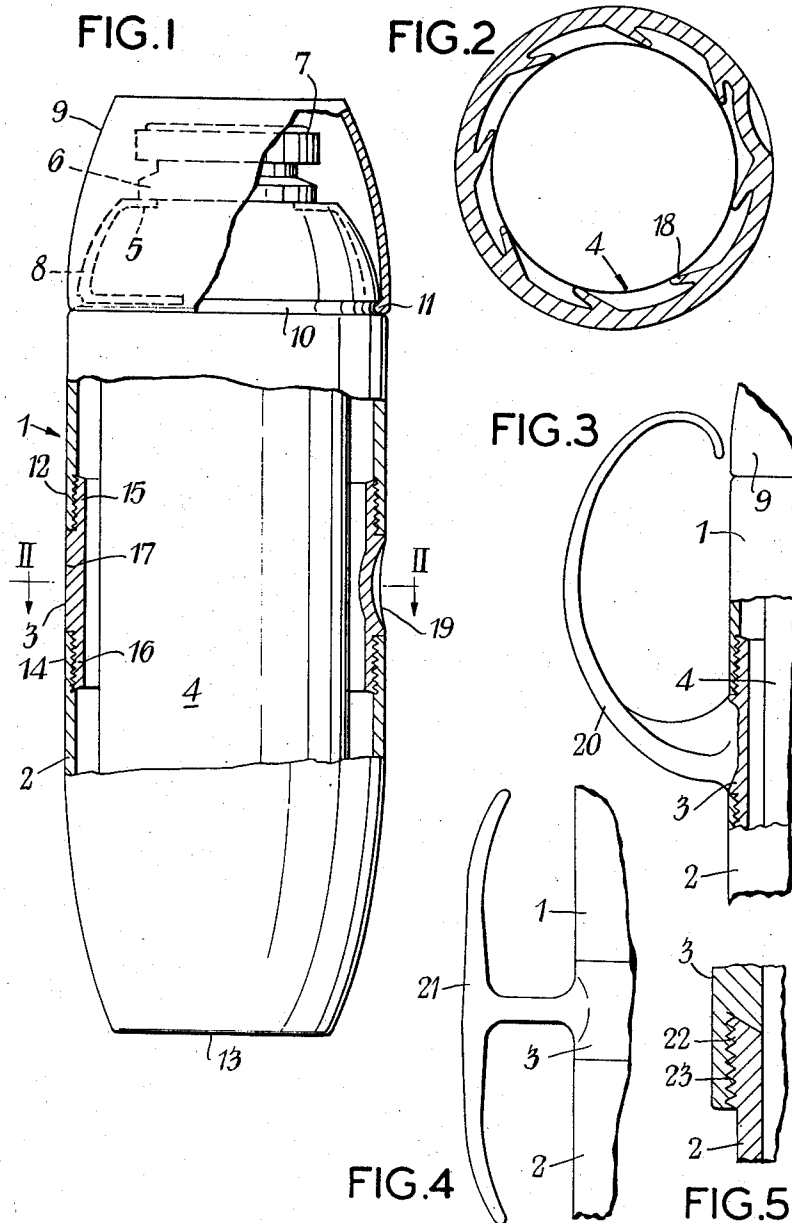
Feb. 5, 1963

L. LESLIE-SMITH
VACUUM CONTAINERS

3,076,575

Filed May 17, 1961

3 Sheets-Sheet 1



Laurance Leslie-Smith INVENTOR

BY Johnson & Kline
Attys.

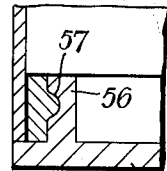
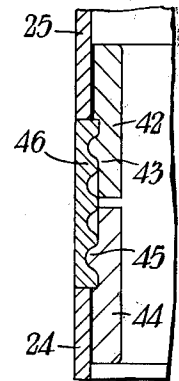
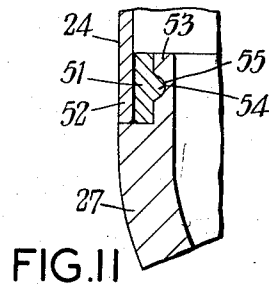
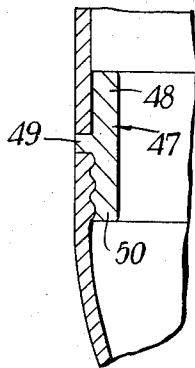
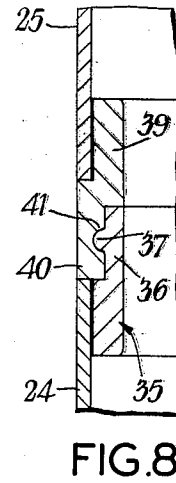
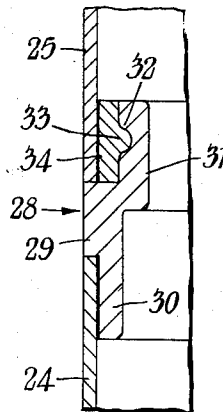
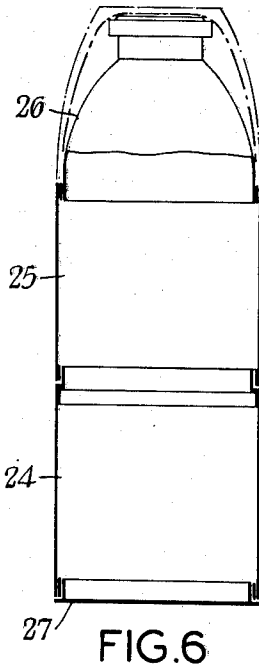
Feb. 5, 1963

L. LESLIE-SMITH
VACUUM CONTAINERS

3,076,575

Filed May 17, 1961

3 Sheets-Sheet 2



Laurance Leslie-Smith INVENTOR

BY Johnson & Kline
Attys

Feb. 5, 1963

L. LESLIE-SMITH
VACUUM CONTAINERS

3,076,575

Filed May 17, 1961

3 Sheets-Sheet 3

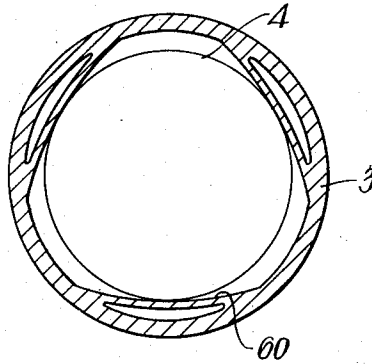


FIG. 13.

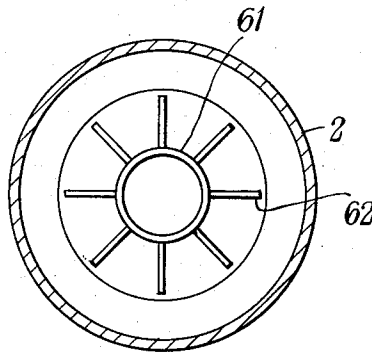


FIG. 14.

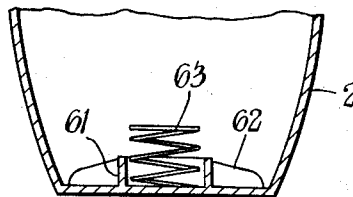


FIG. 15.

Lawrence Leslie-Smith INVENTOR

BY *Johnson + Kline*
attys.

1

3,076,575

VACUUM CONTAINERS

Laurance Leslie-Smith, Grosvenor Gardens House, Grosvenor Gardens, London SW. 1, England

Filed May 17, 1961, Ser. No. 110,709

Claims priority, application Great Britain May 19, 1960
5 Claims. (Cl. 215-13)

The present invention relates to vacuum flasks and more particularly to the canisters which contain the vacuum flask or bottle.

A popular form of container or canister for holding the vacuum flask or bottle is normally made up from a cylindrical portion frequently made of metal and a shoulder portion which connects the canister with the neck or mouth of the vacuum flask or bottle either directly by means of a washer or other form of annular member, or by means of what is known as a pouring lip member the lower end of which engages the opening of the shoulder and the upper end of which lies closely adjacent and around the neck of the flask and extends upwardly to form a pouring lip, the pouring lip member serving to hold and locate the mouth of the bottle or flask.

Other forms of canister are known in which the pouring lip and the shoulder portions are formed integrally. Such constructions are convenient particularly when the canister is wholly or partially formed of metal.

Vacuum flasks in the form of jugs have also been made in which the containing jug portion is of a plastic material usually thermo-setting plastic in which the two or more sections comprising the containing jug have been screwed together. This has been accomplished by screwing the two sections directly together and usually the threaded portions of the jug carrying the threads are thickened to accommodate the thread and provide the desirable flush finish. Furthermore, the canister itself is thicker in section than necessary.

When plastics, and in particular thermoplastics, are moulded to form relatively thin wall mouldings (hereinafter referred to as "thin walled moulding") for example, of the order of $\frac{3}{4000}$ to $\frac{8}{4000}$ of an inch thick, it is disadvantageous for technical reasons to form on that moulding thickened areas, for example thickened annular portions on the marginal edges for taking screw threading or the like.

An object of the present invention is to provide a construction of canister for receiving a vacuum flask bottle and made of a thin walled moulding from a plastic for example polystyrene.

According to the present invention there is provided a canister for a vacuum flask, the canister including two or more thin walled body members of a plastic material which are axially positioned to form the canister, the said members being connected at each joint therebetween by a coupling or joint arrangement which serves to connect the two or more body members in substantially fixed axial arrangement.

For a better understanding of the invention and to show how to carry the same into effect reference will now be made to the accompanying drawings in which:

FIGURE 1 is a part sectional view of a first constructional form of a canister suitable for a vacuum flask;

FIGURE 2 is a section taken on the line II-II of FIGURE 1;

FIGURE 3 is a fragmentary part section of a canister having a first embodiment of a handle construction;

FIGURE 4 schematically illustrates a second embodiment of a handle construction for a canister;

FIGURE 5 is a section of a fragmentary portion to an enlarged scale of a modified joint between two body members of a canister of FIGURE 1;

2

FIGURE 6 schematically illustrates a canister formed from more than two body members;

FIGURES 7 to 12 each illustrate a constructional form of a joint between two body members;

FIGURE 13 is a section taken on the line II-II of FIGURE 1 showing an alternative construction of locating means for the vacuum bottle;

FIGURES 14 and 15 show in plan and section respectively details of one form of construction of the lower end of the body.

The canister includes two main body members, an upper body member 1 and a lower body member 2 of substantially the same length. As shown in FIGURE 1 the members 1 and 2 are connected in axial relationship by a jointing or coupling member 3. The upper and lower members 1 and 2 are formed by thin walled mouldings of a plastic material such as polypropylene, polythene or polystyrene. The dimensions of the members 1, 2 and 3 are chosen so that a vacuum bottle or flask 4 can be located therein.

The upper body member 1 is provided with an inwardly directed flange 5 which acts as a locating member for a pouring lip unit 6 for the canister. This pouring lip unit can include sealing rings or skirts for providing a fluid tight joint between the flask 4 and the upper member 1.

The unit 6 is adapted to receive a stopper 7. Conveniently, the construction of the stopper and the lip unit can be in accordance with the complete specification of pending U.S.A. patent application No. 706,321. Alternatively, the upper end of the upper member 1 can be provided with screw threads (not shown) into which a suitable stopper can be screwed.

The upper member 1 is profiled as at 8 so as to take a cap 9 which is usable as a cup. The cap 9 can be secured to the canister, for example, as a push fit, as a snap-on or spring-on fit or by means of a screw threaded jointing member (not shown) which is secured to the upper member 1. Preferably the cap 9 is a thin walled plastic moulding.

In the embodiment shown in FIGURE 1 a spring-on fit is used, in the form of a rib and slot connection. The connection includes a peripheral shallow groove or recess 10 formed on the member 1, and a group of three inwardly directed ribs 11 formed on the inside of the mouth of the cap 9. Conveniently, the ribs 11 are equi-angularly arranged around the mouth of the cap and are so positioned that they snap into the recess 10 as soon as they align therewith upon stowing the cap.

The bottom of the member 1 is threaded as at 12. The bottom end of the lower member 2 is closed-in to form an integral bottom 13 to the canister, whilst the other end thereof is threaded as at 14. If desired, the lower end of the lower member 2 could be profiled so as to be capable of receiving a further cap (not shown) which may if desired be used to carry a commodity such as milk in a bottle and/or sugar.

The threaded ends 12 and 14 of the members 1 and 2 are intended to engage complementary threaded portions 15 and 16 provided on the member 3. The coupling member 3 is provided with a thickened central portion 17 which lies between the ends 12 and 14 of the members 1 and 2, thereby to provide a flush fitting decorative centre band which also reinforces the member 3. The member 3 is provided with internal substantially radially or tangentially directed lugs 18 or the like which are adapted to locate and to support resiliently the flask 4 relative to the canister members 1, 2 and 3. The member 3 can be made from strip material which is subsequently deformed into annular form.

It will be seen that the two members 1 and 2 can be connected and disconnected by a normal screw action

3

without it being necessary to provide expensive mouldings having edges of increased thickness in order to accommodate the screw threading. In other words the screw threading is formed in the same thickness of wall as the remainder of the moulding.

The above described construction lends itself to the production of a canister having pleasing curved profiles and at the same time permits the introduction of a reinforcement midway along the canister for supporting the flask 4 at one of its most fragile parts.

The coupling member 3 can be conveniently adapted so that it carries or constitutes means for holding the canister. FIGURE 3 illustrates a first embodiment of a handle 20 integrally moulded onto the member 3. If desired the handle 20 may be sprung or may carry a spring finger (not shown) which engages with the cap 9 to lock same in its stowed position. Conveniently, the cap can be provided with a projection (not shown) which is engaged by the handle.

Alternatively, the handle may after assembly of the coupling member and the body member be secured permanently or detachably to one body member. Conveniently, the handle member may be flexibly resilient so as to be temporarily deformed to enter an engaging member in the body.

A T-shaped handle 21 is shown in FIGURE 4, the handle 21 being moulded integrally with the member 3.

A finger groove 19 is provided in the central band 17 of the member shown in FIGURE 1. Alternatively, the band 17 can be knurled to provide the finger grip.

The members 1 and 2 can be provided if desired with external threads 22 which are engaged by complementary internally threaded parts 23 on the member 3. This is shown in FIGURE 5.

The canister can be formed from more than two members coupled together by a coupling member. A canister construction including two cylindrical thin walled body members 24 and 25, a thin walled shaped top member 26 and a cylindrical base member 27 which are connected together by coupling members is shown in FIGURE 6.

Various constructions of couplings between the body members or other members of the canister are shown in FIGURES 7 to 12.

The coupling shown in FIGURE 7 comprises two parts, one part including a coupling member 28 having an intermediate body 29 and two oppositely extending cylindrical flanges 30 and 31. The flange 30 is permanently bonded by cementing welding or the like to one of the body members, for example member 24 of the canister. The other flange 31 is provided with a peripheral recess 32 which is intended to be engaged by a peripheral annular rib 33 projecting from the inner face of an annular member 34 which forms the other part of the coupling and which is permanently bonded to a further thin walled body member, for example the body member 25. The engagement of the rib 33 in the recess 32 provides a snap-in or spring-on screw joint which locks the two parts of the joint together. It will be noted that the intermediate body 29 provides an external surface which is flush with the outer surfaces of the canister body members 25 and 24.

The joint shown in FIGURE 8 is a two part joint which includes the snap-in or spring-on feature of the joint of FIGURE 7. The joint of FIGURE 8 includes a first part formed by an annular element 35 permanently bonded by welding, cementing or the like to a canister body member such as member 25, the element 35 having an upstanding flange 36 with an outwardly directed rib 37. The other part of the joint includes an annular element 38 having a body portion 39 which is permanently bonded to a canister body member such as the member 24, and a flange 40 which extends in prolongation of the body member to which it is bonded. A circumscribing recess 41 is formed in the flange 40, the

4

recess 41 being so positioned that it can be engaged by the rib 37 to form a snap or spring-on joint between the two parts of the joint. The external diameter of the flange 40 is such that the external surface of the flange is flush with the outer surfaces of the canister body members.

The joint shown in FIGURE 9 includes a cylindrical joint element 42 permanently bonded by welding, cementing or the like to a thin walled body member of a canister so that a portion 43 of the element extends in prolongation of the canister member, the portion 43 being externally threaded, a second joint element 44 permanently connected by welding, cementing or the like to a further thin walled canister body member so that a portion of the element extends in prolongation of the further body member, the portion 45 being externally threaded, and a coupling member 46 which is internally threaded so as to be engageable with the threads on the portions 43 and 45. The coupling member 46 is dimensioned so as to provide a flush finish with the exterior of the canister body members.

The joint shown in FIGURE 10 includes a cylindrical coupling element 47 having a flange 48 which is permanently bonded by welding, cementing or the like to the inside of the lower end of a canister body member, for example the member 25. The element 47 has a radially directed rib 49 which aligns with the end face of the member 25, and a threaded portion 50 which extends in prolongation of the member 25. The end of the canister member which is to be attached to the member 25 is internally threaded so as to be engageable with the threaded portion 50. The joint shown in FIGURE 10 is particularly suitable for the joint between the top canister member 26 and the member 25.

FIGURES 11 and 12 illustrate joints which are particularly suitable for attaching the base member 27 to the cylindrical body member 24. The joint of FIGURE 11 has an annular member 51 cemented or otherwise secured to the lower inner marginal portion 52 of the member 24. The member 51 is provided with an inwardly radially directed peripheral rib 53. The outer marginal portion of the base member 27 is cut-away to provide an annular flange 54 which extends in prolongation of the remainder of the base member 27. A circumferential recess 55 is formed in the flange 53, the recess 55 being intended to be engaged by the rib 53 in the manner of a snap-on or spring-on connection.

When the base member 27 is formed by a flat plate, the base member is provided with an integral upstanding cylindrical flange 56 which has formed therein a peripheral recess 57. An internally fitting cylindrical coupling element 58 is welded, cemented or otherwise secured to the lowermost end of the canister member 24. The element 58 has an inwardly directed peripheral rib 59 which is intended to engage with the recess 57 provided in the flange 56, so as to produce a spring-on screw connection.

The coupling members shown in FIGURES 7, 8, 9 and 10 can be adapted to provide handles or other means for facilitating the handling of the canister.

Referring to FIGURE 13 there is shown an alternative method of locating the flask 4. In this construction instead of having the radial or inclined fins 18 as described in FIGURE 2 the member 3 is moulded to provide a number of members 60 extending as chords across the internal wall of the coupling member 3. Preferably these chords are so arranged that they lie slightly within the circle described by the section of the flask 4 so that when the flask 4 is introduced into the assembled casing the members 60 are forced outwardly and thereby firmly and resiliently grip the flask 4. In that the vacuum flasks differ very slightly in diameter from sample to sample or batch to batch this arrangement ensures that even a flask of the minimum tolerance is securely gripped by the chord members 60. Whilst in the drawing there is shown

5

three chord members it will be realized that any suitable number of chord members may be moulded into the coupling member. Alternatively, the chord members may be formed separately and mounted into the coupling member 3 by an adhesive or by any other suitable means. Alternatively, or in addition the chord members or indeed the fin members 18 can be provided in any other part of the casing. For example, the chord members 60 can in addition be mounted inside the shoulder portion of the body so as to grip and assist in centralising the neck portion of the flask. If desired these or similar locating means may be positioned as an alternative or in addition in the lower end of the body. However, it is preferred to locate these members on the coupling member for ease of manufacture and also because when a vacuum flask is accidentally dropped the flask itself is more apt to break in the middle than elsewhere if it falls on its side and resilient support over the intermediate portion would tend to avoid this breakage.

Referring to FIGURES 14 and 15 there is shown a method of reinforcing the thin wall moulding of the lower member and at the same time providing locating means for receiving the member normally provided for supporting the bottom of the flask. Integrally moulded in the floor of the lower member is a cylindrical flange 61 provided with reinforcing ribs 62 radially extending therefrom and terminating substantially at the junction of the wall with the floor. This provides a reinforcement of the base of the casing against fracture due to accidental impact or undue axial pressure. In addition the cylindrical flange 61 serves the purpose of locating a spring element 63 which receives the lower end of the flask and spring loads the flask against the upper end of the casing.

What I claim is:

1. A canister for a vacuum flask, the said canister comprising at least two thin walled hollow body members formed of a plastic, and an annular coupling member engageable with each of two adjacent body members, means for securing the annular coupling member to one body member, means for securing the coupling member to the other body member to thereby secure the adjacent body members together in substantially fixed axial relationship, the said coupling member having a wall thickness substantially greater than the wall thickness of the body members; and inwardly directed locating elements

6

formed on the inner surface of said coupling member for resiliently engaging the peripheral surface of a vacuum bottle positioned in said canister thereby to locate and resiliently support the bottle intermediate its length.

2. A canister for a vacuum flask, the said canister comprising two thin walled hollow body members and an annular coupling member engageable with each of the two body members, means for securing the annular coupling member to one body member, means for securing the coupling member to the other body member to thereby secure the body members together in substantially fixed axial relationship, the said coupling member having a wall thickness substantially greater than the wall thickness of the body members; an outer and an inner peripheral surface on said coupling member, the said outer peripheral surface lying between and substantially flush with the outer peripheral surfaces of the body members, and the inner surface being formed with inwardly directed locating elements for resiliently engaging the peripheral surface of a vacuum bottle positioned in the canister thereby to locate and resiliently support the bottle intermediate its length.

3. A canister as claimed in claim 2, in which the coupling member is provided with a carrying handle extending from said outer peripheral surface of the coupling member.

4. A canister as claimed in claim 2, in which the said locating elements comprise resilient fins extending inwardly of and spaced around the inner peripheral surface of the coupling member.

5. A canister as claimed in claim 2, in which the said locating elements comprise a plurality of members extending chord-wise across the inner periphery of the coupling member.

References Cited in the file of this patent

UNITED STATES PATENTS

1,218,036	Altenberg	Mar. 6, 1917
2,484,309	Noeth	Oct. 11, 1949
2,493,380	Bailey	Jan. 3, 1950
2,954,888	Bramming	Oct. 4, 1960

FOREIGN PATENTS

1,149,650	France	Dec. 30, 1957
1,202,424	France	Jan. 11, 1960

PATENT SPECIFICATION

DRAWINGS ATTACHED

866,264



Date of filing Complete Specification: Aug. 1, 1957.

Application Date: Feb. 12, 1957.

No. 4777/57.

Complete Specification Published: April 26, 1961.

Index at acceptance:—Class 64(2), 11.

International Classification:—F25d.

COMPLETE SPECIFICATION

Improvements in or relating to Vacuum Flasks

We, THE BRITISH VACUUM FLASK COMPANY LIMITED, a British Company of 21, Copthall Avenue, London, E.C.2, and MAURICE ALBERT HASSID, a British Subject of 14, Lees Place, London, W.1, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed to be particularly described in and by the following statement:—

10 This invention is concerned with improvements in or relating to vacuum flasks. It has been proposed to provide a vacuum flask in which a vacuum jacketed vessel (hereinafter called a 'refill') which may have parallel sides 15 up to the mouth or may be of reduced internal and external dimensions at the neighbourhood of the mouth, is retained in a cylindrical container by means of an annular shoulder threaded into the container and engaging the 20 refill. It is an object of the present invention to provide an improved construction of shoulder, which will be robust, yet simple.

According to the present invention there is provided a vacuum flask comprising a container, a refill received by the container, and a 25 shoulder which is releasably secured to the container and serves to retain the refill in the container, the shoulder and the container being releasably secured by a mating recess and projection which are engageable with and releasable from each other by deformation of a resiliently deformable part of the shoulder, wherein 30 the shoulder may be linearly assembled to the container with the refill therein in response to the application of a linear axial force upon the 35 shoulder and the container.

According to a further feature of the present invention there is provided a vacuum flask comprising a container closed at one end and 40 open at the other end, a refill received through that open end into the container, and a one piece shoulder directly coupled to the container and serving to retain the refill in the container, the end of the shoulder remote from the closed 45 end of the container and the open end of the refill lying adjacent one another, the shoulder

and the container being coupled by a mating projection and recess which are engageable with and releasable from each other by deformation of a resiliently deformable part of the shoulder, wherein the shoulder may be linearly assembled to the container with the refill therein in response to the application of a linear axial force upon the shoulder and the container.

According to yet a further feature of the present invention there is provided a vacuum flask comprising a container, a refill received by the container, and a shoulder serving to retain the refill in the container, the shoulder including a hook-like portion defining a recess engaged by a radially projecting enlargement of the container wall, the shoulder in the region of the hook-like projection being resiliently deformable for enabling the hook-like portion and the radially projecting enlargement to be engaged with and released from one another, wherein the shoulder may be linearly assembled to the container with the refill therein in response to the application of a linear axial force upon the shoulder and the container.

According to the present invention there is further provided a vacuum flask comprising a container closed at one end and open at the other, a refill received in the container through the open end, and a one piece shoulder directly coupled to the container and serving to retain the refill in the container, the end of the shoulder remote from the closed end of the container and the open end of the refill lying adjacent one another, the shoulder being coupled to the container by a hook-like portion on the shoulder defining a recess in which engages a radially projecting enlargement of the container wall, the shoulder in the region of the hook-like portion being resiliently deformable for enabling the shoulder and the container to be engaged with and released from each other, wherein the shoulder may be linearly assembled to the container with the refill therein in response to the application of a linear axial force upon the shoulder and the container.

[Price 3s. 6d.]

Price 4s 6d.

The container projection or enlargement is preferably formed by a bead. This may be a strip spun over with the end of the container or for example the edge of a threaded insert such for example as described and shown in our copending application No. 33152/54, (Patent No. 789,884). Alternatively the container may be formed with an integral bead.

The shoulder is preferably formed so as to make sealing engagement on the lip of the refill and additionally around the neck of the refill, in the manner for example as described and shown in the complete specification of our copending application No. 29374/56 (Serial No. 866,263).

In order that the present invention may be well understood there will now be described one embodiment thereof, given by way of example only, reference being had to the accompanying drawing in which,

Figure 1 is a cross section through a shoulder; and Figure 2 is a cross section through a part of the shoulder when in position upon a container and a refill.

Referring firstly to Figure 2 there is shown a refill 1 located in a cylindrical container 2 by a shoulder 3 on which is a cup 4. Any suitable form of stopper diagrammatically shown at 5 closes the mouth of the refill.

The container comprises a sheet metal drum and at that end engaged by the shoulder it is spun overtogether with a strip 6 so that at the lip the container wall projects radially at the local enlargement. The shoulder is a resiliently deformable one piece moulding of synthetic resin material such as polythene and at its lower part includes a recess 7 which receives the enlarged lip of the container.

The recess is defined by a hook-like flange 8 having an inwardly and upwardly inclined end face 9 to assist in moving the container lip into the recess. A register 14 is provided on the shoulder to locate in the inside of the container. Also the flange is disposed sufficiently far from the end of the shoulder for the end 10 of the shoulder to project and form an aid in centering the shoulder on the container during assembly. This projecting end 10 is joined to the shoulder register 14 by a tapered lead 15 which further assists centralisation of the shoulder during assembly. The hook-like flange, when the shoulder is secured on the container completely covers the lip of the container and thereby prevents ingress or liquid of foreign matter between the shoulder and the container and protects the lip against oxidation. The free end of the flange 8 is locally enlarged, there being an inwardly directed rib 8a which will bear against and conform with the surface of the container to provide a seal to prevent liquid reaching the rolled over edge of the container, e.g. during washing down of the flask.

To remove the shoulder the hook-like flange is provided upon its outer edge with steps 16

which provide a purchase for pressing the hook-like flange off the container for example with the tips of the thumbs.

The upper part of the shoulder is formed in any convenient manner for engaging the refill and preferably is constructed to provide a downwardly projecting apex 11 which will seat on the lip of the refill and the shoulder is also formed at the top so as to engage the outside of the refill at 12. The shoulder shown is formed at its upper part as described in the complete specification of our copending application No. 29374/56 (Serial No. 866,263).

Intermediate the hook-like flange and the top of the shoulder the external surface is suitably shaped to engage the mouth of the cup 4. In the present embodiment a generally cylindrical smooth surface 17 is provided, which may increase progressively in diameter towards the hook-like flange to provide a taper of for example $\frac{1}{2}^\circ$. This surface will engage the mouth of the cup which may be internally threaded but in the embodiment illustrated the cup is shown having projections 18 which are formed by an interrupted single thread. Thus a cup may be used which may equally be used with a shoulder having an externally cup-receiving surface. Alternatively, the cup may have a smooth interior in which case projections are provided on the shoulder. The projections prevent an air tight seal being formed between the shoulder and the cup, thereby facilitating location and removal of the cup.

To assemble the vacuum flask, the refill is placed in the container, the shoulder is placed over the neck of the refill and is centred by the projecting end 10 in the mouth of the container, and linear axial pressure is applied to the shoulder. The hook-like flange will then resiliently deform to allow the enlargement at the lip of the container to enter the recess 7 in the shoulder when the flange will spring back to engage the container wall below the projection and so retain the projection in the recess. There is thus provided an interlock by which the shoulder may be linearly assembled to the container with the refill therein in response to the application of a linear axial force.

WHAT WE CLAIM IS:—

1. A vacuum flask comprising a container, a refill received by the container, and a shoulder which is releasably secured to the container and serves to retain the refill in the container, the shoulder and the container being releasably secured by a mating recess and projection which are engageable with and releasable from each other by deformation of a resiliently deformable part of the shoulder, wherein the shoulder may be linearly assembled to the container with the refill therein in response to the application of a linear axial force upon the shoulder and the container.

2. A vacuum flask comprising a container closed at one end and open at the other end,

- a refill received through that open end into the container, and a one piece shoulder directly coupled to the container and serving to retain the refill in the container, the end of the shoulder remote from the closed end of the container and the open end of the refill lying adjacent one another, the shoulder and the container being coupled by a mating projection and recess which are engageable with and releasable from each other by deformation of a resiliently deformable part of the shoulder, wherein the shoulder may be linearly assembled to the container with the refill therein in response to the application of a linear axial force upon the shoulder and the container.
3. A vacuum flask comprising a container, a refill received by the container, and a shoulder serving to retain the refill in the container, the shoulder including a hook-like portion defining a recess engaged by a radially projecting enlargement of the container wall, the shoulder in the region of the hook-like projecting being resiliently deformable for enabling the hook-like portion and the radially projecting enlargement to be engaged with and released from one another, wherein the shoulder may be linearly assembled to the container with the refill therein in response to the application of a linear axial force upon the shoulder and the container.
4. A vacuum flask comprising a container closed at one end open at the other, a refill received in the container through the open end, and a one piece shoulder directly coupled to the container and serving to retain the refill in the container, the end of the shoulder remote from the closed end of the container and the open end of the refill lying adjacent one another, the shoulder being coupled to the container by a hook-line portion on the shoulder defining a recess in which engages a radially projecting enlargement of the container wall, the shoulder in the region of the hook-like portion being resiliently deformable for enabling the shoulder and the container to be engaged with and released from each other, wherein the shoulder may be linearly assembled to the container with the refill therein in response to the application of a linear axial force upon the shoulder and the container.
5. A vacuum flask according to claim 4 in which the enlargement of the container wall is integral with the container.
6. A vacuum flask according to claim 5 in which the enlargement comprises a spun over bead.
7. A vacuum flask according to any of claims 4 to 6 in which the shoulder makes sealing engagement with the refill adjacent the open end of the refill.
8. A vacuum flask according to any of claims 4 to 7 in which a part of the shoulder between its ends makes sealing engagement around the exterior of the refill.
9. A vacuum flask according to any of claims 3 to 8 in which the face of the hook-like portion which is presented to the container upon assembly is inclined to assist entry of the enlargement into the recess.
10. A vacuum flask according to any of claims 3 to 9 in which the hook-like portion projects radially outwardly from the shoulder.
11. A vacuum flask according to claim 10 in which the hook-like portion has a shaped external surface to afford purchase when urging the shoulder from the container.
12. A vacuum flask according to claim 10 or Claim 11 in which a radially outwardly directed face within the hook-like portion increases in diameter in the direction of the recess.
13. A vacuum flask according to any of claims 3 to 12 in which a radially outwardly directed face of the shoulder makes sealing engagement with the internal surface of the container.
14. A vacuum flask according to any of claims 3 to 13 in which the hook-like portion makes sealing engagement with the external surface of the container.
15. A vacuum flask according to any of claims 3 to 14 in which the shoulder projects beyond the hook-line portion in the direction of the closed end of the container to form an annulus for centering the shoulder during assembly.
16. A vacuum flask according to any of the preceding claims in which the shoulder makes direct sealing engagement with the refill.
17. A vacuum flask according to any of the preceding claims in which the shoulder defines a pouring lip.
18. A vacuum flask according to any of the preceding claims including an external surface on the shoulder for receiving as a push fit the mouth of a cup or the like.
19. A vacuum flask substantially as herein described with reference to the accompanying drawing.
- A. A. THORNTON & CO.,
Chartered Patent Agents,
Napier House, 24—27 High Holborn,
London, W.C.1.
Agents for the Applicants.

PROVISIONAL SPECIFICATION

Improvements in or relating to Vacuum Flasks

We, THE BRITISH VACUUM FLASK COMPANY LIMITED, a British Company of 21, Copthall Avenue, London, E.C. 2, and MAURICE ALBERT HASSID, a British Subject of 14, Lees Place, London, W.1, do hereby declare the invention to be described in the following statement:—

This invention is concerned with improvements in or relating to containers, and more particularly containers for vacuum jacketed flasks.

Features and advantages of the present invention will appear from the following description of one embodiment, given by way of example only, reference being had to the accompanying drawing in which,

Figure 1 is a cross section through a shoulder, and

Figure 2 is a section through the upper part of a vacuum jacketed flask mounted in a canister.

In Figure 2, there is shown a vacuum jacketed flask 1, located in a canister 2 where it is retained by a shoulder 3, a drinking cup 4 being located on the shoulder. Any suitable form of stopper indicated diagrammatically at 5 may be used for sealing the flask. The canister may be formed with an integral bead, or it may be made of metal and be provided with an outwardly directed flange 6 at its upper periphery.

The shoulder is a single component and is moulded from any suitable material such for example as polythene or polyvinyl chloride and clips on to the flange 6, as will hereinafter

appear.

Referring to Figure 1, the shoulder is illustrated in its normal condition before location on the canister. The inside surface of the shoulder is over its major part of arcuate form and the lower part of the inner surface is preferably tapered outwardly to approximately 1° taper. The outer surface of the shoulder at the lower part, defines a cavity 7 of which the cross section corresponds substantially to the cross section of the lip of the canister and above this the outer surface defines a generally cylindrical portion 8 for receiving a cup.

At the upper part, the shoulder is formed so as to provide two sealing surfaces 10 and a pouring lip 9 as described in our co-pending application No. 29374/56 (Serial No. 866,263).

On assembly, when the flask has been placed in the canister, the shoulder is pushed down on to the canister which causes the flange on the canister to engage in the cavity 7. The cup may be of any suitable kind, but at present we prefer to have a cup having an interrupted thread or spaced projections 13 so that the interior of the cup is always open to atmosphere.

Alternatively, projections may be provided on the part 8 of the shoulder in which case, a cup having a smooth inner surface may be provided.

A. A. THORNTON & CO.,
Chartered Patent Agents,
Napier House, 24—27, High Holborn,
London, W.C.1.
For the Applicants.

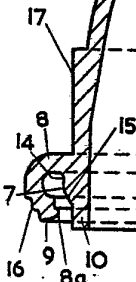


FIG. 1

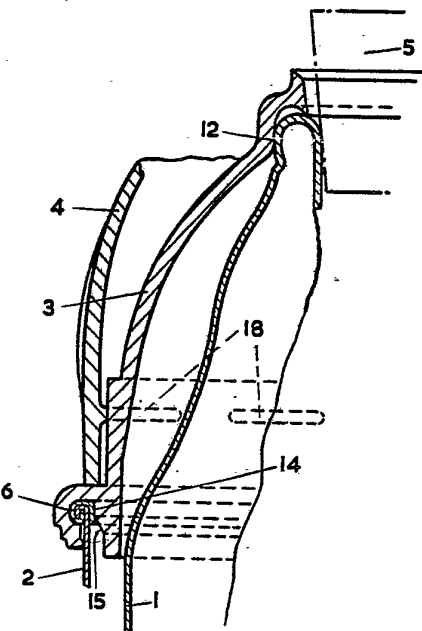


FIG.2

866264

PROVISIONAL SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*

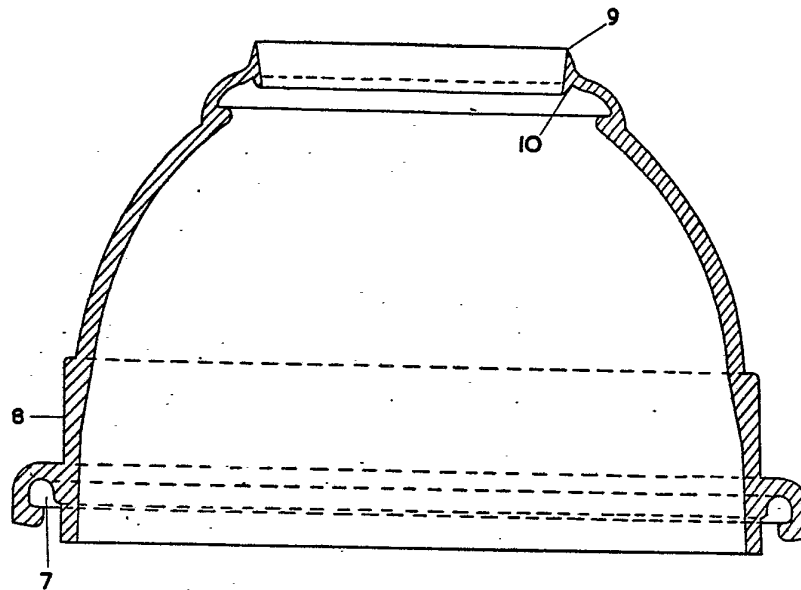


FIG. 1

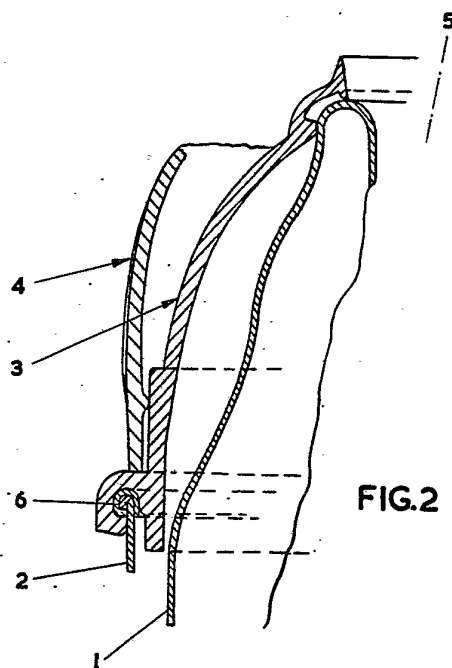


FIG. 2

Search history

Search 1: TAC=(asa and triple and botella) (Results 0)
Search 2: TAC=(asa and botella) (Results 237)
Search 3: (2) AND IPC=(B65 OR B67) (Results 168)
Search 4: TAC=(asa and botella and plastic*) (Results 73)
Search 5: (4) AND PD>1994 (Results 61)
Search 6: FT=(ground road and coar) (Results 0)
Search 7: TAC=(ground road and coat) (Results 0)
Search 8: TAC=(ground rod and coat) (Results 3)
Search 9: TAC=(ground rod) (Results 953)
Search 10: TAC=(ground rod and aluminium) (Results 6)
Search 11: TAC=(ground rod and sleeve) (Results 83)
Search 12: FT=(varilla polo a tierra) (Results 0)
Search 13: FT=(varilla puesta a tierra) (Results 1)
Search 14: FT=(ground rod and aluminium) (Results 39)
Search 15: FT=(thermo and ampoule) (Results 1631)
Search 16: FT=(thermo and flask and ampoule) (Results 502)
Search 17: FT=(isolated container and ampoule) (Results 1)
Search 18: FT=(vacuum and (flask or bottle)) (Results 100000)
Search 19: FT=(vacuum and (flask or bottle) and recess) (Results 6581)
Search 20: FT=(vacuum and (flask or bottle) and recess and protuberances) (Results 145)
Search 21: FT=(vacuum (flask or bottle) and recess and protuberances) (Results 569)
Search 22: FT=(vacuum flask and recess and protuberances) (Results 2)
Search 23: FT=(vacuum flask and (rib or protuberance) and (slot or groove or recess)) (Results 51)
Search 24: FT=(vacuum flask and (rib or protuberance) and (slot or groove or recess) and seal) (Results 30)
Search 25: FT=(vacuum flask and (rib or protuberance) and (slot or groove or recess) and (seal or ring)) (Results 41)
Search 26: FT=(vacuum flask and (rib or protuberance) and (slot or groove or recess) and (seal or ring)) (Results 41)

Title: Gaseous electric discharge lamp device

Abstract: Source: GB392796A [Class 39 (i).] To maintain the vapour pressure within a discharge tube such as a lamp, the heat is conserved by means of a surrounding doublewalled envelope, the space between the walls of which is completely or partially exhausted. A lamp 1, Fig. 1, comprises a filling of sodium and rare gas, an incandescent cathode 2, and anodes 3. It is cemented into a cap 4 which is secured to a bayonet socket 6 and carries pins 5 contacting with resilient terminals 8 in the socket. A cap 11 cemented to the doublewalled envelope 9 is secured by means of a bayonet joint to an extension 13 of the socket 6. In a modification, the lamp contacts are plugged into bushes in a holder 14, Fig. 2, which is secured to a post 18 through the casing 17 of a transformer supplying the heating and discharge currents. The envelope 9 is secured to the casing 17 through a cap 15 of artificial resin. The transformer serves to heat the lamp. A reflector placed over the envelope is secured to the casing 17 or to the post 18. In a further modification, a lamp for use with alternating current comprises interconnected cathodes 20, 21, Fig. 3, and anodes 22, 23 and is heated by a resistance 25 which is connected in series with the tube. The envelope 9 is closed by asbestos 26 and is provided with a reflector 24 and is coated with a copper film which is transparent to yellow sodium rays but reflects the heat rays.

Classifications:

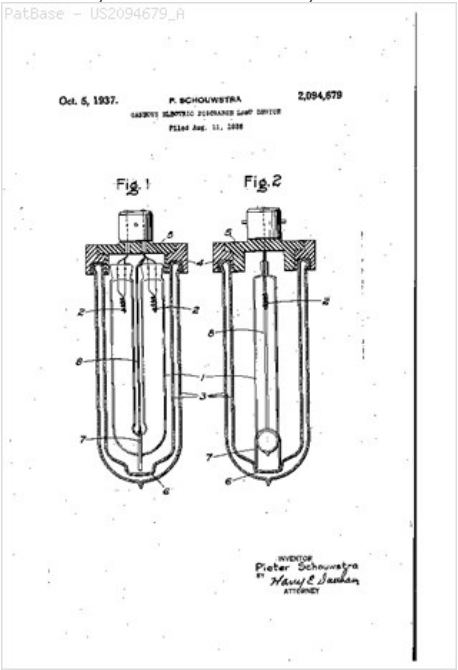
International (IPC 8-9): H01J61/34 H01J61/54 H01J61/74 (Advanced/Invention);
H01J61/00 H01J61/34 H01J61/54 (Core/Invention)

International (IPC 1-7): B21B31/32 H01J61/34 H01J61/54 H01J61/74

CPC: H01J61/34 H01J61/547 H01J61/74

European: H01J61/34 H01J61/54C H01J61/74

US: 215/12.1 220/2.1R 220/560.04 220/592.27 313/1 313/25 313/252 313/27 313/292 313/312 313/43 313/594 362/263 362/264



Family:

Publication number	Publication date	Application number	Application date
BE390343 A	19320923		00000000
DE652752 A	19371108	DE1932N034068	19320810
DE655301 A	19380113	DE1935N038536D	19350827
FR47656 E	19370616		00000000
FR741891 A	19330222		00000000
GB392796 A	19330525	GB19320024529	19320902
GB401240 A	19331109	GB19330019741	19330712
GB457740 A	19361204	GB19360015801	19360605
NL45860 C	00000000		00000000
US2056648 A	19361006	US19330663792	19330331
US2094679 A	19371005	US19360095415	19360811

Priority:

DE1935N038536 19350827 US19360095415 19360811

Assignee(s): (std): GEN ELECTRIC ; PHILIPS NV ; PHILIPS PATENTVERWALTUNG

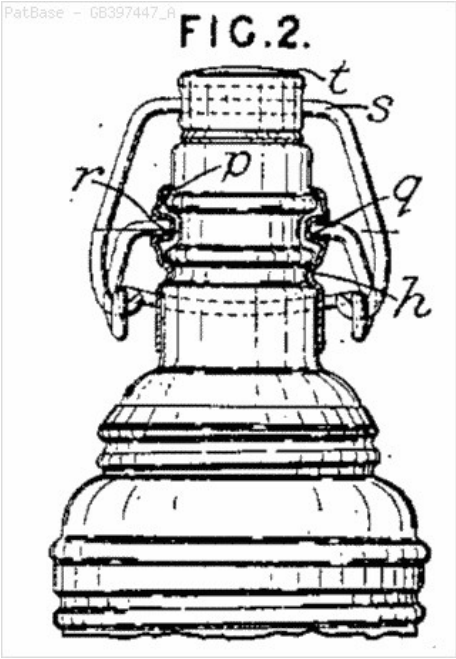
Assignee(s): PHILIPS PATENTVERWALTUNG G M B H ; GENERAL ELECTRIC COMPANY ; N V PHILIPS GLOEILAMPENFABRIEKEN

Inventor(s): (std): BOL CORNELIS ; CORNELIS BOL ; DORGELO EDUARD G ; DORGELO EDUARD GERARDUS ; PIETER SCHOUWSTRA ; SCHOUWSTRA PIETER ; UYTERHOEVEN WILLEM

Title: Improvements in closures of vacuum-jacketed flasks

Abstract: Source: GB397447A 16306. [Class 125 (iii).] A closure for a vacuum flask is provided by spinning a sheet-metal sleeve into grooves in the neck of the flask and mounting on the sleeve a pivoted bail carrying a stopper to close the mouth of the flask. As shown, a rubber ring p is inserted between the upper edge of the sleeve and the flask neck, and recesses q in the sleeve form a housing for the ends of toggle pivots r which carry a bail s passing through a stopper t. In a modification the pivots are attached to a metal ring engaging in one of the spun grooves of the sleeve.

Classifications:
International (IPC 8-9): A47J41/00 (Advanced/Invention);
A47J41/00 (Core/Invention)
International (IPC 1-7): B65D45/06
CPC: A47J41/0011
European: A47J41/00C1



Family:

Publication number	Publication date	Application number	Application date
GB397447 A	19330824	GB19330016306	19330606

Priority:

GB19330016306 19330606

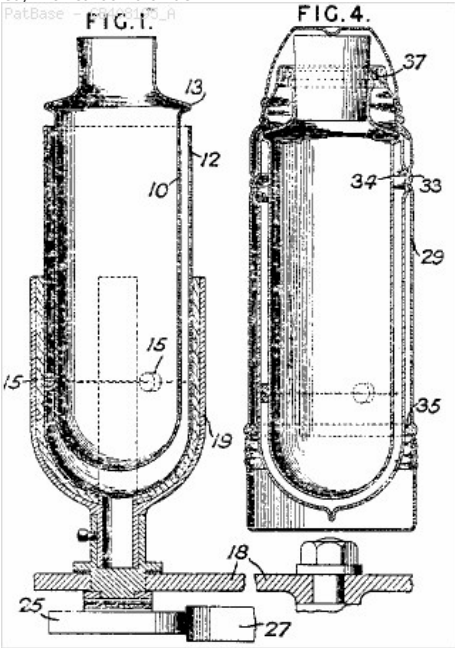
Assignee(s): (std): ARTHUR MITTELBACH ; RUDOLF MITTELBACH

Title: Improvements in double-walled vacuum bottles and methods of making them

Abstract: Source: GB408195A 18355. Void [Abridged as open to inspection under Sect. 91 of the Acts, July 16, 1932]. [Class 29.] A **vacuum flask** comprises inner and outer glass vessels 10, 12, the inner one being provided with asbestos spacers 15 and formed with a shoulder 13 which, when the vessels are assembled, rests upon and is fused to the upper edge of the outer vessel. The assembled vessels are supported in an asbestos-lined cup 19 mounted on a plate 18 rotated through gearing 25, 27, and are fused together by a stationary burner. If desired, the cup may be fixed and the burner rotated. The flask is enclosed in a casing 29, Fig. 4, of sheet metal or moulded composition, the casing and the outer vessel being formed with interengaging screw threads 33, 34 separated by a thin rubber or fabric band. Rubber **sealing rings** 35, 37 are provided between the flask and the casing and the space between them insulated, if desired, with carbon dioxide.

Classifications:

International (IPC 8-9): A47J41/02 (Advanced/Invention);
A47J41/00 (Core/Invention)
CPC: A47J41/024
European: A47J41/02G3



Family:

Publication number	Publication date	Application number	Application date
GB408195 A	19340405	GB19320018355	19320629

Priority:

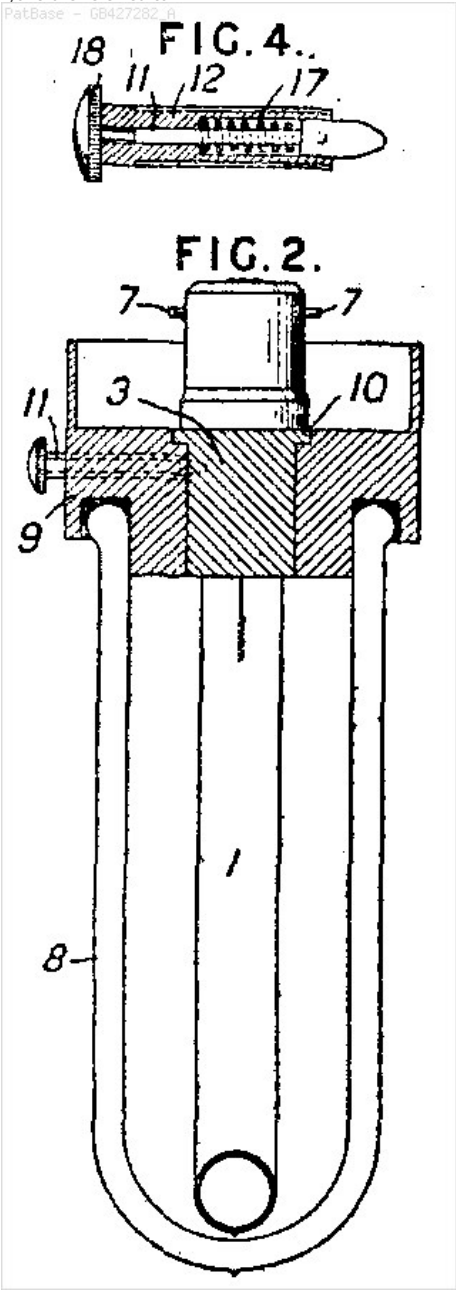
GB19320018355 19320629

Assignee(s): (std): ADOLPH ALEXANDER THOMAS

Title: Improvements in or relating to electric discharge tubes

Abstract: Source: GB427282A [Class 39 (i)] A lamp or other device containing the vapour of a difficultly vaporizable metal is surrounded by a doublewalled envelope which is itself exhausted, and this envelope is detachably secured to the cap of the device. In one form, Fig. 2, a U-shaped lamp 1 is surrounded by a **vacuum-flask** type envelope 8 which is furnished with a cap 9 cemented on. The cap 3 of the lamp engages with the cap 9 at a shoulder 10, and the caps are detachably secured together by means of a pin 11. The pin 11 slides in a cylinder 12, Fig. 4, screwed into the cap 9, and is pressed into the cap 3 by means of a spring 17. Wings on the knob 18, fitting normally in a saw-cut, hold the pin clear of the cap 3 when it is withdrawn and turned slightly. Specifications 392,796 and 414,018 are referred to.

Classifications:
International (IPC 8-9): H01J5/54 H01J61/34 (Advanced/Invention);
H01J5/00 H01J61/34 (Core/Invention)
International (IPC 1-7): H01J61/74
CPC: H01J5/54 H01J61/34
European: H01J5/54 H01J61/34



Family:

Publication number	Publication date	Application number	Application date
BE405687 A	00000000		00000000
FR779637 A	19350410		19341013
GB427282 A	19350418	GB19340028440	19341004

Priority:

19331019

Assignee(s): (std): PHILIPS NV

Assignee(s): N V PHILIPS GLOEILAMPENFABRIEKEN

Title: **Vacuum flask**

Abstract: Source: GB747678A 747,678. Vacuum-jacketed vessels. ALADDIN INDUSTRIES, Inc. July 3, 1953 [July 9, 1952], No. 18535/53. Class 64(2). [Also in Group XVII] In a **vacuum flask** an annular member, e.g. of rubber, has one portion formed as a **sealing** gasket 29 of rectangular cross section for resting against the inwardlyturned lip 24 of the casing collar 15 of the flask while the remaining portion is pressed into seating engagement at its inner edge 31 with the inner glass vessel 11 to provide an outwardly-flaring pouring lip 30.

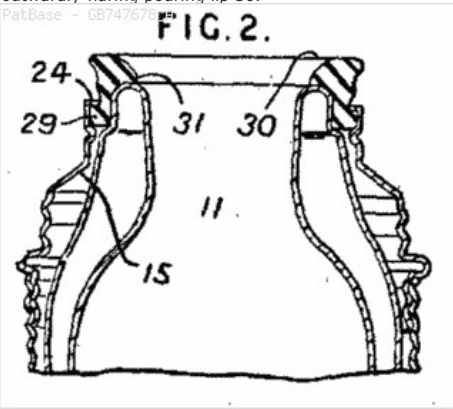
Classifications:

International (IPC 8-9): A47J41/02 (Advanced/Invention);
A47J41/00 (Core/Invention)

International (IPC 1-7): A47J41/02

CPC: A47J41/02

European: A47J41/02



Family:

Publication number	Publication date	Application number	Application date
GB747678 A	19560411	GB19530018535	19530703

Priority:

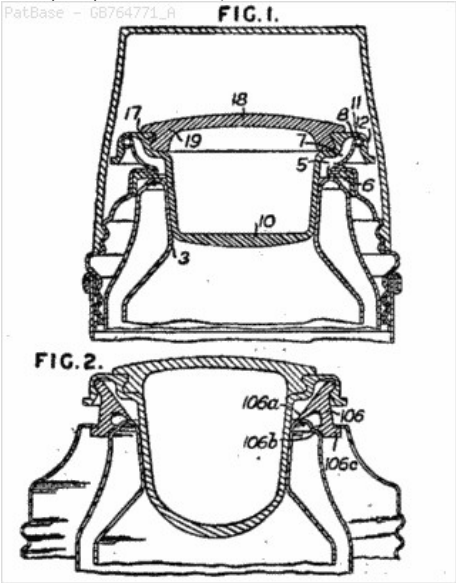
19520709

Assignee(s): (std): ALADDIN IND INC

Title: Improvements in or relating to closures for vacuum flasks or the like

Abstract: Source: GB764771A 764,771. Stoppers; portable containers. THERMOS (1925), Ltd. Jan. 18, 1955 [Jan. 25, 1954], No. 1502/55. Classes 66 and 125(3). A closure for a vacuum flask or like container, is of polyethylene, rubber or other elastic material, has a hollow plug portion 10 with a flange 11 terminating in a depending rim 12 to form a groove which receives the periphery of a ring member 7 forming a pouring lip with beaded edge 8, a sealing gasket 6 being interposed between the flange 5 of the outer casing and the neck 3 of the flask. A cap member 18 has a bead or rib 19 engaging a groove in the outer wall 17 of the plug 10. The hollow space in the closure forms insulation space or may be used to contain sugar, cream, salt, pepper c. or other flavouring or seasoning agent to be used with the contents of the flask or separately. In a modification, Fig. 2, the ring member 106 forms a pouring lip and has flanges 106a, 106b, 106c to form seals with the flask and outer casing. In further modifications the plug 10 has sealing ribs thereon or is bulbous in shape. Specification 738,772 is referred to.

Classifications:
International (IPC 8-9): A47J41/00 (Advanced/Invention);
A47J41/00 (Core/Invention)
International (IPC 1-7): B65D39/00 B65D39/04 B65D41/28 B65D85/72
CPC: A47J41/0011
European: A47J41/00C1



Family:

Publication number	Publication date	Application number	Application date
GB764771 A	19570102	GB19550001502	19550118

Priority:

19540125

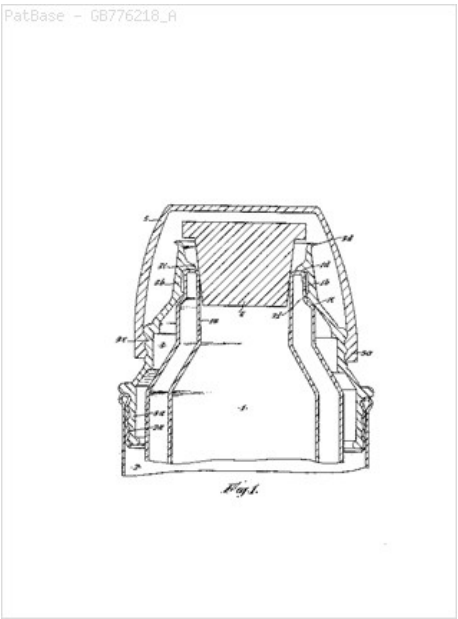
Assignee(s): (std): THERMOS 1925 LTD

Assignee(s): THERMOS 1925 LIMITED

Title: Improvements in or relating to **vacuum flasks**

Abstract: Source: GB776218A 776,218. **Vacuum flasks**; stoppers. THERMOS (1925), Ltd. June 15, 1955, No. 17253/55. Classes 66 and 125(3). A canister shoulder 3 for a **vacuum flask** or vacuum jar is of resilient plastic material e.g. polythene having a pouring lip 3d at its upper end and a threaded portion 3a at its lower end for engagement with the canister 2, the shoulder 3 being shaped at 3c so that it forms a liquid tight **seal** with the refill 1. A cup 5 and the shoulder 3 have interengaging means 3g, 5b. The stopper may be a conventional cork or it may be formed from two pieces of plastics material 4a, 4b, having a portion 4c, that may be sprung into position over the lip 3d. Alternatively the plastic stopper may be adapted to be sprung or threaded into the inner surface of the shoulder 3. The shoulder 3 may have one or more readily deformable internal flanges 3f to accommodate refills 1 of varying tolerances. Specifications 738,772, 764,771, 765,063 and 769,661 [Group XIII] are referred to.

Classifications:
International (IPC 8-9): A47J41/02 B65D43/10 (Advanced/Invention);
A47J41/00 B65D43/08 (Core/Invention)
International (IPC 1-7): B65D43/10
CPC: A47J41/02
European: A47J41/02



Family:

Publication number	Publication date	Application number	Application date
GB776218 A	19570605	GB19550017253	19550615

Priority:
GB19550017253 19550615
Assignee(s): (std): THERMOS 1925 LTD
Assignee(s): THERMOS 1925 LIMITED
Inventor(s): (std): LORD FRANCIS ERNEST

Title: Closure for vacuum-insulated containers

Abstract: Source: US2830722A (Claim 1) 1. A closure for an open mouth of a container comprising a unitary body of resilient and locally-distortable material including a hollow stopper portion, an upper wall connected to the upper or outer end of the hollow stopper portion and extending outwardly in a generally horizontal direction and then in a generally longitudinal direction away from the stopper portion, an annular tiange extending generally horizontally-outwardly from the upper or outer edge of said longitudinally-extending portion and adapted to overlie the end of the container surrounding the open mouth thereof, a peripheral rim depending from the outer edge of the annular tiange and spaced from said longitudinally-extending portion to provide an annular **groove** to receive the edge of the container surrounding the open mouth thereof, an annular bead extending inwardly from the inner surface of said peripheral rim intermediate the longitudinal length thereof, the side of the bead adjacent the free edge of the peripheral rim forming a generally frusto-conical portion diverging in the direction of the free edge of the peripheral rim to facilitate the insertion of the edge of the container surrounding the open mouth into said **groove**, the hollow stopper having an opening surrounded by said longitudinally-extending portion leading to the interior of the stopper, and a closure for said opening.

Classifications:

International (IPC 8-9): A47J41/00 (Advanced/Invention);

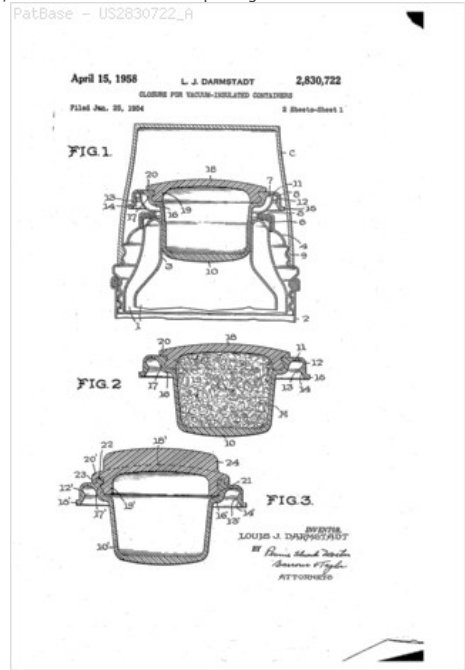
A47J41/00 (Core/Invention)

International (IPC 1-7): A47J41/02

CPC: A47J41/0011

European: A47J41/00C1

US: 215/12.1 215/320 215/321



Family:

Publication number	Publication date	Application number	Application date
US2830722 A	19580415	US19540405841	19540125

Priority:

US19540405841 19540125

Assignee(s): (std): AMERICAN THERMOS PRODUCTS COMP

Assignee(s): THE AMERICAN THERMOS PRODUCTS COMPANY

Inventor(s): (std): DARMSTADT LOUIS J

Title: Improvements in or relating to insulating vessels

Abstract: Source: GB850502A 850,502. Vacuum - jacketed vessels. KRBS, K. Aug. 29, 1958 [Feb. 27, 1958], No. 27839/58. Class 64(2) [Also in Group XVII] A double-walled glass vessel B such as a **vacuum flask** is supported in a polyethylene casing 10 by **ribs** 17 which are inclined to the radial direction, line **ribs** may be inclined alternately to the right and to the left of that direction. Instead of being longitudinal as shown, the **ribs** may be helical. They may be separate from the casing 10. As shown they are tapered at the top and formed with a shoulder 19 at the bottom. The casing 10 is formed with an upper ridge 14 about which fits a complementarily-formed **groove** of a polyethylene shoulder 11, or the shoulder may have the ridge and the casing have the **groove**. On the shoulder a cup E of polyethylene or transparent synthetic resin is a push fit, the surface 23 receiving the cup being channelled or ribbed to allow air flow. The stopper of the glass vessel B has a cover portion 26 which snaps into position on a body portion 25 bearing flexible **ribs** for **sealing** and containing a body 28 of foamed polystyrene or polyurethane. In Fig. 4 the shoulder 111 is formed with a **sealing rib** 126 and a pouring lip 125 associated with a second **sealing rib** 126¹.

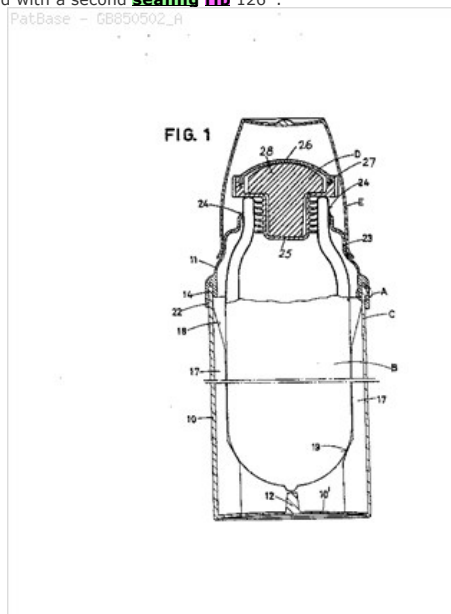
Classifications:

International (IPC 8-9): A47J41/02 (Advanced/Invention); A47J41/00 (Core/Invention)

International (IPC 1-7): A47J41/02

CPC: A47J41/02

European: A47J41/02



Family:

Publication number	Publication date	Application number	Application date
GB850502 A	19601005	GB19580027839	19580829

Priority:

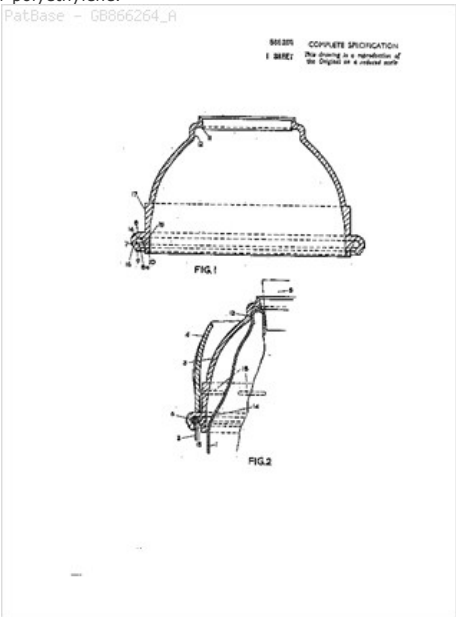
19580227

Assignee(s): (std): KARL KREBS

Title: Improvements in or relating to **vacuum flasks**

Abstract: Source: GB866264A 866,264. Vacuum-jacketed vessels. BRITISH **VACUUM FLASK** CO. Ltd., and HASSID, M. A. Aug. 1, 1957 [Feb. 12, 1957], No. 4777/57. Class 64(2) The resilient shoulder 3 of a **vacuum flask** is formed of polyethylene with a hook-like flange 8 at the bottom for engaging the beaded edge of the casing 2. The top is formed with a lip and to engage and retain the vacuum-jacketed vessel 1 as shown here and as described in Specification 866,263. A cup 4 is mounted on the shoulder as described in that Specification. The bead on the casing edge may be integral or formed by a strip 6 spun over as shown here or formed by the edge of a threaded insert as described in Specification 789,884. The bottom face 9 of the flange 8 is upwardly and inwardly inclined to facilitate location when pushing the shoulder into position and it terminates at a bead 8a which provides a **seal**. Steps 16 provide purchase when the shoulder is to be removed. The Provisional Specification describes also a shoulder, formed as shown in Fig. 1, of polyvinyl chloride or polyethylene.

Classifications:
International (IPC 8-9): A47J41/02 (Advanced/Invention);
A47J41/00 (Core/Invention)
International (IPC 1-7): A47J41/02
CPC: A47J41/02
European: A47J41/02



Family:

Publication number	Publication date	Application number	Application date
GB866264 A	19610426	GB19570004777	19570212

Priority:

GB19570004777 19570212

Assignee(s): (std): BRITISH VACUUM FLASK COMPANY L ; MAURICE ALBERT HASSID

Assignee(s): THE BRITISH VACUUM FLASK COMPANY LIMITED ; BRITISH VACUUM FLASK CO L