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(54) Set for flask closure

(57) Set for flask closure, being this a spraying flask, comprising three parts, namely: a shoulder (1), a collar (18) and a lid (9), and meant to enclose a spraying valve, the shoulder (1) of the set leaning directly against the upper flask portion and solidarily linked to the collar (18) which is articulated to the lid (9) enclosing the spraying system valve, and which exhibits a rotation movement through a limited circle arch, so that when in the closed position, the aperture (38) of the spraying valve is covered, and when in the opened position, allows the valve operation; in which

the shoulder (1) has an oval section and a body (3) exhibiting a pendant peripheral skirt (2), and which is a convex surface, whose central portion is coincident with the neck (4), which exhibits a circular section extended upwards, which enlarges in its upper extremity to form the mouth (5) having a diameter relatively greater than one of the neck (4);

the collar (18) is constituted of a circular section ring, fitted inside the shoulder's mouth (5), being the upper rim of the collar (18) formed by two parts, (23) and (28), one lightly in relief in relation to the other, having the collar also an extension (22), exhibiting an arched form, with a trespassing hole (29), from whose extension (22), a rectilinear post (24) projects itself upwards, ending in a cylindrical portion (25) turned outside, with a central hole (29') coaxial in relation to the hole (29) of the extension (22), and the lid (9) is usually constituted of a cylindrical piece having a top (13) with a peripheral skirt (16), a lateral semi-surface (10) and an open base, and adjacent to the inner vertical edge of the lateral surface, can be found a post (11) exhibiting an elongated trespassing hole (15) coaxial in relation to the holes (29) and (29') of the collar (18), meant to house a

pin for lid (9) articulation in the collar (18), whose movement is limited by the part having the relief, that can be found in the rim of the collar (18).

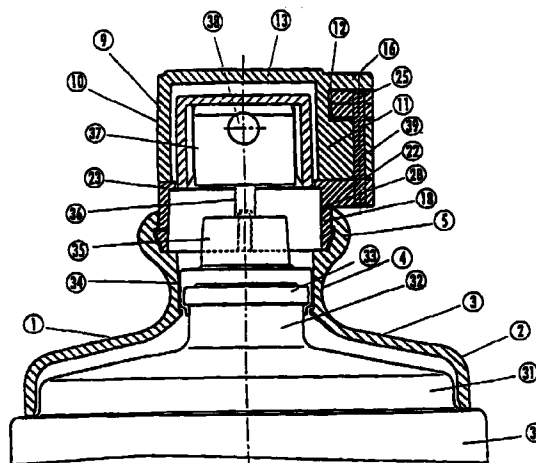


Fig. 16

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Description

[0001] The present invention relates to a set for flask closure, this being a spraying flask. Particularly, the present invention refers to a set comprising three parts, namely, a shoulder, a collar and a lid, designed to enclose an usual spraying valve and meant to be applied to a flask specially adapted to mach with this set.

[0002] The present invention refers to a set for spraying flask closure, for example, used to contain fragrances or similar products, and affords a great improvement, because the shoulder of the set leans directly against the upper flask portion and is solidarily linked to the collar, which is articulated to the lid enclosing the spraying system valve. This lid exhibits a rotation movement through a limited circle arc, so that when the lid is in its closed position it covers the spraying valve aperture, and, when in the opened position, allows valve operation.

[0003] The shoulder is usually constituted of an injected plastic piece, which usually exhibits the same shape as the upper portion of the flask. The shoulder has an oval section and a neck exhibiting a substantially circular section. The shoulder is adapted to lean against the corresponding portions (shoulder, neck and mouth) of the flask onto which it is applied.

[0004] The collar is a circular section piece which has one part of its wall inserted into the inner surface of the shoulder's mouth. Besides, the collar has an upright or vertical portion, which contains the pin responsible for the limited lid pivoting. The lid pivoting limitation is given by a step, in circle arc form, in the upper collar rim.

[0005] The lid is constituted of a cylindrical piece having a smooth circular covering and a partial lateral surface. Adjacent to one extremity of the partial lateral surface of the lid, exists a vertical portion which articulates with the corresponding upright portion of the collar. The lateral surface of the lid extends itself approximately through half of the covering circumference, and the lower rims of the partial lateral surface extremities will act as backstop for the lid pivoting. This means that when the lid is in its closed position, these lower rims of the outer edges of the partial lateral surface are going to strike against the corresponding outer faces of the semi-circular step of the collar.

[0006] The lid and collar articulation is obtained through a pin crossing the cylindrical sections of the lid and of the collar, being these extensions solidary to the corresponding vertical portions of the lid and of the collar.

[0007] An usual spraying valve, having a circular cylindrical body, and exhibiting a spraying aperture and a catching tube, is positioned in the inner space of the collar, so that, when the lid is in its closed position, the aperture will be covered by the mentioned partial lateral surface of this same lid.

[0008] The characteristic aspects of the present

invention will be evidenced by the following description and enclosed drawings. Those refer to the preferential version and illustrate the present invention without establishing any limits. According to the drawings:

Figure 1 represents a front top view of the shoulder, which is part of the set for spraying flask closure, according to the present invention.

Figure 2 represents a top plan view of the shoulder illustrated in figure 1.

Figure 3 represents a sectional top view across the plane corresponding to the larger axis of the shoulder illustrated in figure 2.

Figure 4 represents a sectional top view across the plane corresponding to the smaller axis of the shoulder illustrated in figure 2.

Figure 5 represents a front top view of the collar, which is part of the set for spraying flask closure, according to the present invention.

Figure 6 represents a lateral top view of the collar, in a 90° angle in relation to the top view illustrated in figure 6.

Figure 7 represents a top plan view of the collar illustrated in figure 5.

Figure 8 represents a bottom plan view of the collar illustrated in figure 5.

Figure 9 represents sectional top view across the plane crossing the horizontal axis of figure 7.

Figure 10 represents sectional top view across the plane crossing the vertical axis of figure 7.

Figure 11 represents a back top view of the lid, which is part of the set for spraying flask closure, according to the present invention.

Figure 12 represents a lateral top view of the articulated extremity of the lid illustrated in figure 11.

Figure 13 represents a sectional top view across the plane crossing the vertical axis of the lid illustrated in figure 12.

Figure 14 represents a top plan view of the lid illustrated in figure 11.

Figure 15 represents a bottom plan view of the lid illustrated in figure 11.

Figure 16 represents a sectional top view of the front part of the set for spraying flask closure in the assembled position.

Figure 17 represents a sectional top view of the lateral part of the set for spraying flask closure in the assembled position.

Figure 18 represents a top plan view, partially sectional, of the set for spraying flask closure in the assembled position.

[0009] Referring to the drawings, figures 1 to 4 represent the shoulder of the set for spraying flask closure according to the present invention. The shoulder, named generically 1, is a plastic piece exhibiting an approximately oval section, which is adapted to the upper portion of a flask. The shoulder 1 has a body 3

exhibiting a pendant peripheral skirt 2. The body 3 is a convex surface, whose central portion is coincident with the neck 4. This neck 4 exhibits a circular section extended upwards, which enlarges in its upper extremity to form the mouth 5. The diameter of the mouth 5 is relatively greater than diameter of the neck. The outer surface of the mouth 5 is constituted of a hoop bulged to the outside. The mouth 5 and the neck 4 are coaxial in relation to the shoulder's body 3. In the joint line between the inner surfaces of the shoulder's neck 4 and body 3, can be found projections 6, placed in equispaced manner, to facilitate the fitting of the shoulder in the corresponding flask mouth. In the junction between the inner surfaces of the shoulder's 1 neck 4 and mouth 5, can be found an inner peripheral flange 7. From this flange 7 on, diametrically opposed ribs 8 project themselves vertically upright, and are meant to fit themselves in the corresponding notches (to be described later on) of the collar.

[0010] Figures 5 to 10 are views representing the collar of the set for flask closure, according to the present invention. This collar is generally indicated by the reference number 18. The collar 18 is constituted of a circular section ring, having a lateral surface 19. The lower portion of this lateral surface 19 exhibits a peripheral, chamfered to the inner side, section 20 meant to facilitate the fitting inside the inner surface of the shoulder's mouth 5, and two diametrically opposed notches 21 meant to fit themselves into the ribs 8 of the inner surface of the shoulder's 1 mouth 5. In the other diametrically opposed positions of the outer surface, adjacent to the chamfered section 20, can be found two indentations 27 meant to facilitate the fixing of the collar 18 inside the inner surface of the shoulder 1. In the assembled position, as illustrated in figure 16, the outer surface of the collar 18 is introduced in the inner surface of the shoulder's 1 mouth 5, until above the vertical extension of the notches 21.

[0011] The upper rim of the collar 18 is formed by two parts. Namely, one part 23, which corresponds to less than a semi-circumference of the rim, and is slightly in relief in relation to the other part 28, which covers the remaining circumference of the upper rim of the collar. The thickness of part 28 is greater than that of part 23. The fact of part 23 be in relief in relation to part 28, makes the arc extremities of this part 23 act as a back-stop to limit the movement of the lid 9 articulated to the collar 18, as will be described later.

[0012] An extension 22, having an arched form, with a trespassing hole 29 in its semicircular portion, projects itself sideways to the outside as from one of the junctions between the parts 23 and 28 of the collar (the junction at the right side, when the set finds itself in the assembled and closed position). The hole 29 will act as one of the articulation extremities for a pin 39, which will be the pivoting element of the lid 9 in relation to the collar 18. From the extension 22, a rectilinear post 24 projects itself upwards. This post 24 has an indentation

26 in its inner surface, which ends in a cylindrical portion 25, turned outside, with a central hole 29' coaxial in relation to hole 29 of the extension 22.

[0013] Figures 11 to 15 describe the third part of the set for spraying flask closure, namely the lid 9, which is articulated to the collar 18. The lid 9 is usually constituted of a cylindrical piece having a top 13 with a peripheral skirt 16, a lateral semi-surface 10 having outer 10a and inner 10b vertical edges, a lower rim 10c and an open base. Adjacent to the inner vertical edge 10b, can be found a post 11, in whose upper part can be found an indenture 12 (meant to receive the cylindrical portion 25 of the collar 18). The upper part 14, exhibiting an arched form in plan view, has the same configuration and dimensions as the portion 22 of the collar 18. This part 14 has a blind hole (not illustrated) coaxial in relation to hole 29. This blind hole supports the other end of the articulation pin 39. Coaxial in relation to the hole in part 14 and holes 29 and 29' of the collar, the post 11 exhibits an elongated trespassing hole 15 to house the pin 39. Two vertical notches 17 can be found in the inner lateral surface of the lid 9, which help to retain the valve when the lid is in its closed position.

[0014] Figures 16 to 18 illustrate the assembled closure set onto a flask 30 having a shoulder 31, a neck 32 and a mouth 33. These are represented with the sole objective of illustrating the invention. This flask is provided with an usual spraying valve system (aerosol type) having an activation button 37, in which can be found the aperture 38 meant for product exit. This aperture is meant to be covered by the lid of the closure set, when this is in its closed position. The valve system comprises also a catching tube 39, which crosses a cylindrical or lightly conical portion 35, and an assembling ring 34 that can be found over the mouth 33 of the flask 30.

[0015] When the lid is in its opened position, the aperture 38 becomes free to spray the flask content. To change to the closed position, the lid 9 is rotated. The pivoting axis is the pin 39 housed in the described system, which is illustrated in the figures referring to the collar 18 and the lid 9. The lid should be rotated until the edges 10a and 10b strike against the step formed by the relief in part 23, of the upper peripheral rim of the collar 18.

[0016] As to exemplify the invention set, the pieces are made of polypropylene. The collar and the lid receive a metallic coating in silver color.

[0017] Although the invention has been described in its preferable configuration, it is evident that the above described elements can be substituted by others of equivalent function, with no changes in the inventive scope according to the enclosed claims.

Claims

1. Set for flask closure, being this a spraying flask, characterized by the fact of being constituted of

three parts, namely: a shoulder (1), a collar (18) and a lid (9), and meant to enclose a spraying valve, the shoulder (1) of the set leans directly against the upper flask portion and is solidarily linked to the collar (18), which is articulated to the lid (9), which encloses the spraying system valve, and exhibits a rotation movement through a limited circle arc, so that, when in the closed position, it covers the aperture (38) of the spraying valve, and when in the opened position, allows valve operation; in which

the shoulder (1) has an oval section and a body (3), exhibiting a pendant peripheral skirt (2), and which is a convex surface whose central portion is coincident with the neck (4) exhibiting a circular section extended upwards, which enlarges in its upper extremity to form the mouth (5), whose diameter is relatively greater than one of the neck (4);

the collar (18) is constituted of a circular section ring having a lateral surface (19), in whose lower portion can be found a peripheral, chamfered to the inner side, section (20) meant to facilitate the fitting into the inner surface of the shoulder's mouth (5), and two diametrically opposed notches (21) meant to fit themselves into ribs (8) of this inner surface of the shoulder's (1) mouth (5), being the upper rim of the collar (18) formed by two parts, namely, one part (23) corresponding to less than a semi-circumference of the rim and slightly in relief in relation to an other part (28), which covers the remaining circumference of the upper rim of the collar, and which has a greater thickness than part (23), the collar having also an extension (22), exhibiting an arched form, with a trespassing hole (29) in its semicircular portion, which projects itself sideways to the outside as from one of the junctions between the parts (23) and (28) of the rim of the collar, from this extension (22), a rectilinear post (24) projects itself upwards, and which has an indentation (26) in its inner surface, which ends in a cylindrical portion (25) turned outside, with a central hole (29') coaxial in relation to hole (29) of the extension (22);

the lid (9) is usually constituted of a cylindrical piece having a top (13) with a peripheral skin (16), a lateral semi-surface (10) having outer (10a) and inner (10b) vertical edges, a lower rim (10c) and an open base, so that adjacent to the inner vertical edge (10b) can be found a post (11), in whose upper part can be found an indenture (12) forming an upper part (14), exhibiting an arched form in plan view, having the same configuration and dimensions as the portion (22) of the collar (18), and in whose part (14) exists a hole, the post (11) having a

trespassing elongated hole (15), coaxial in relation to the hole of part (14), and to the holes (29) and (29') of the collar (18).

2. Set for flask closure according to claim 1, characterized by the fact that an articulation pin (39) has one end supported by the hole of part (14), and trespasses the holes (15) of the lid and (29') and (29) of the collar.
3. Set for flask closure according to claim 1, characterized by the fact that two vertical notches (17) can be found in the inner lateral surface of the lid (9), to help to retain a valve when the lid is in its closed position.
4. Set for flask closure according to claim 1, characterized by the fact that in diametrically opposed positions of the outer surface and adjacent to the chamfered section (20) of the collar (18), can be found two indentations (27) meant to facilitate the fixing of the collar (18) into the inner surface of the shoulder (1).
5. Set for flask closure according to claim 1, characterized by the fact that part (23) is in relief in relation to part (28) of the collar (18), and so the arc extremities of this part (23), constitute the backstops to limit the movement of the lid (9) articulated to the collar (18).

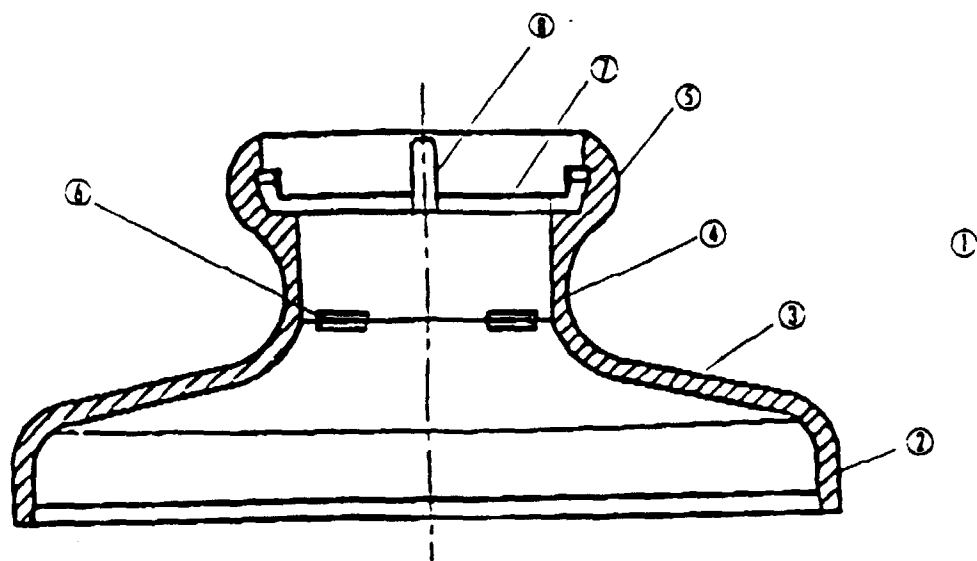


Fig.-3

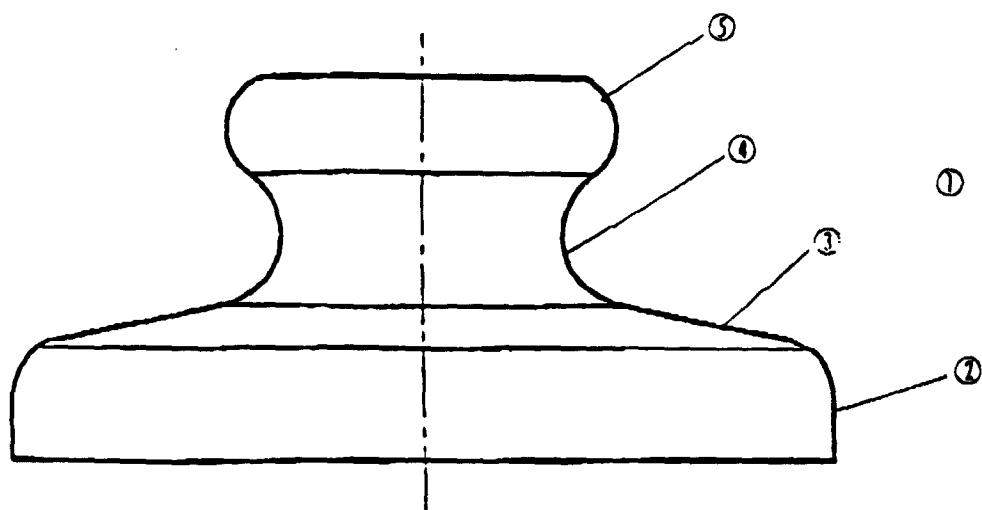


Fig.-1

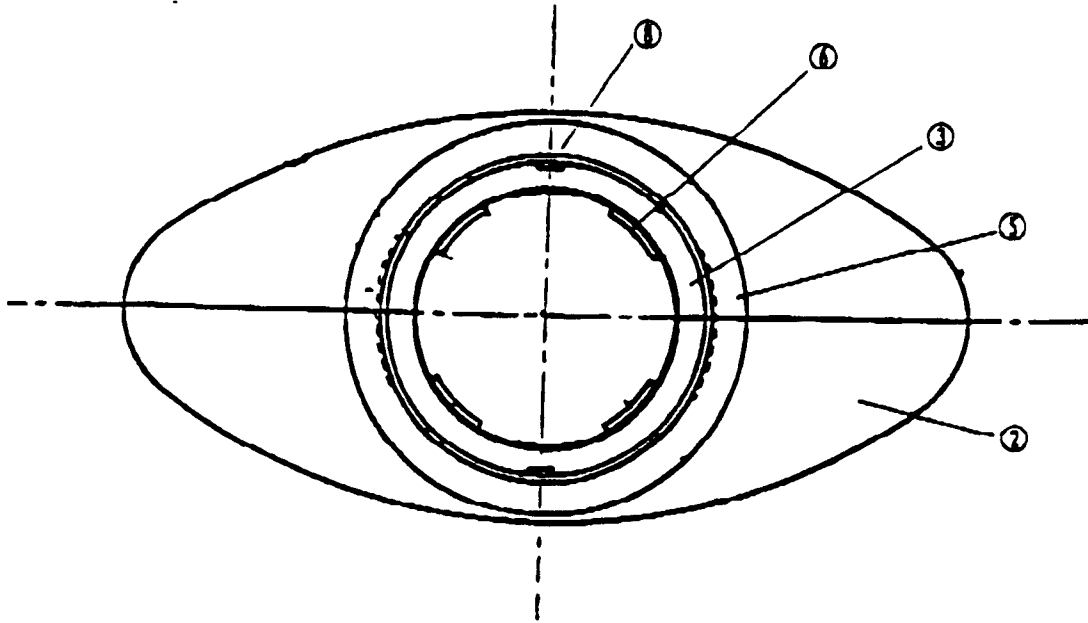


Fig.-2

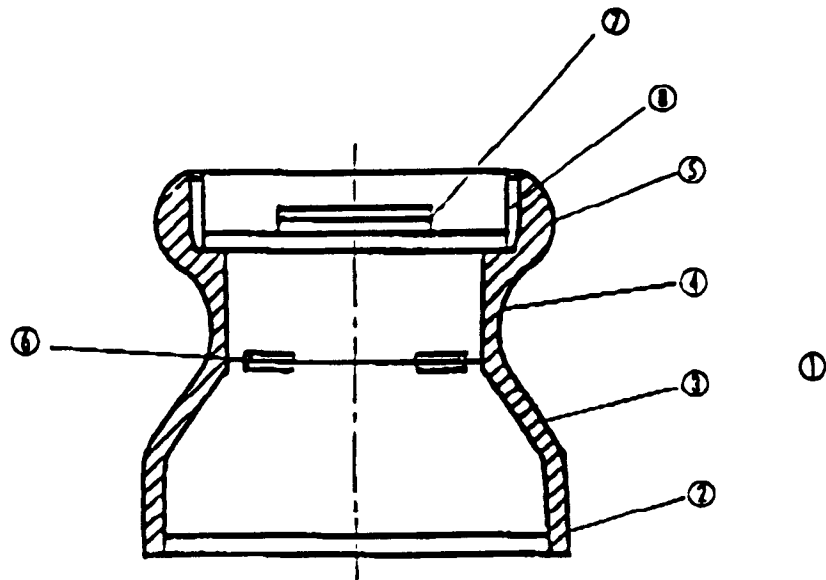


Fig.-4

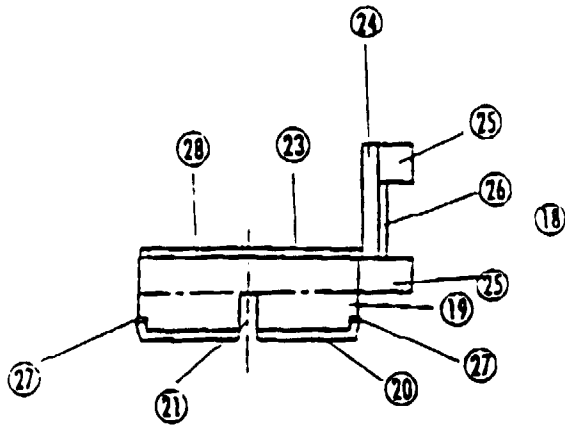


Fig.-5

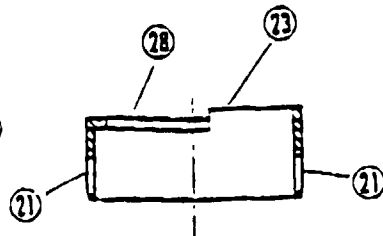


Fig.-10

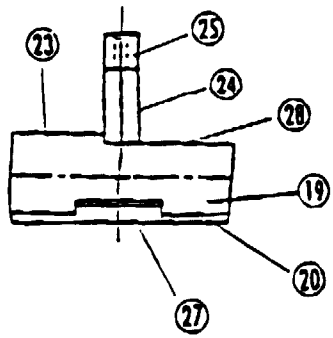


Fig.-6

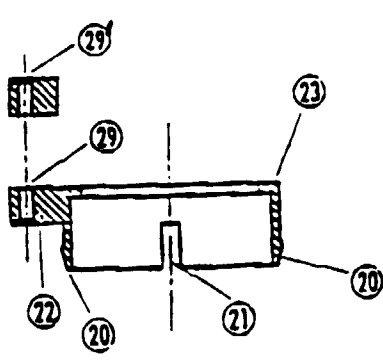


Fig.-9

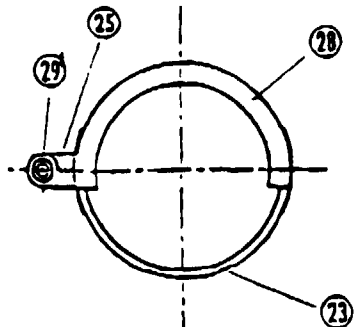


Fig.-7

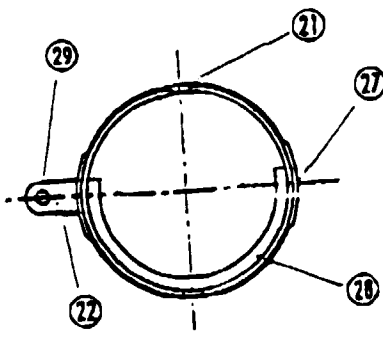


Fig.-8

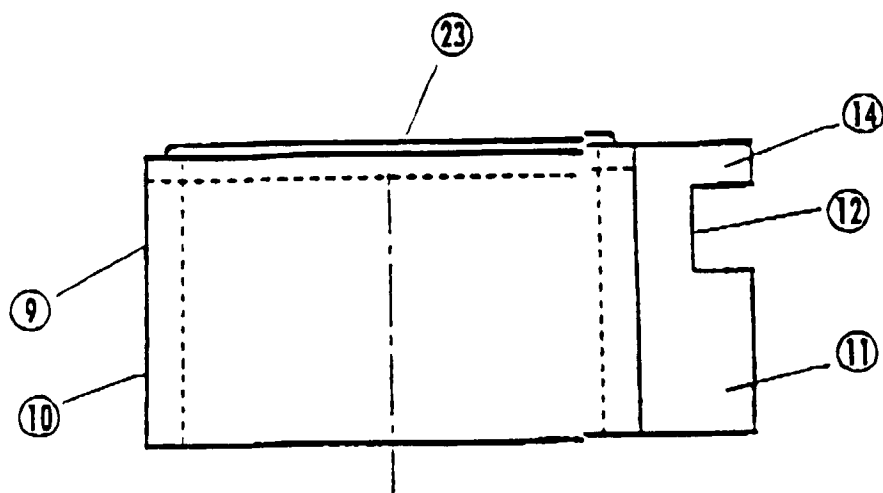


Fig.-11

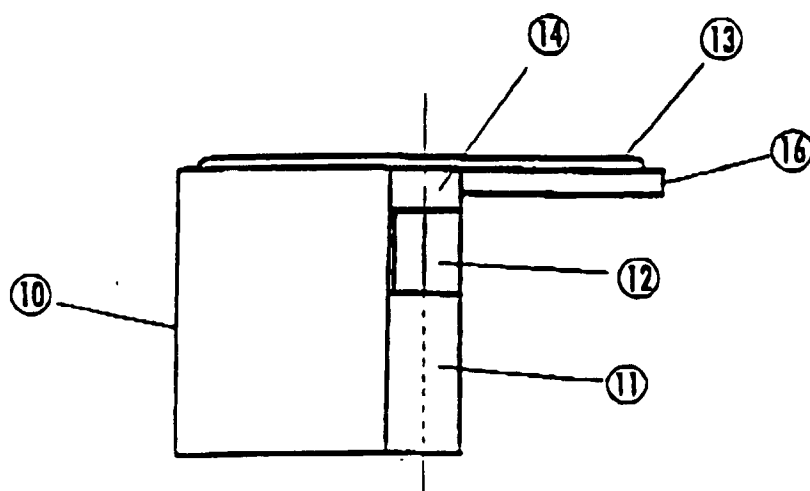


Fig.-12

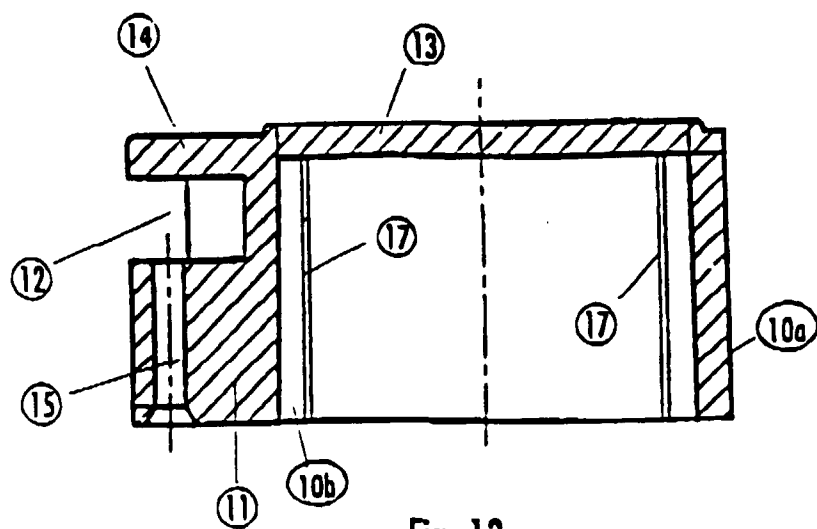


Fig.-13

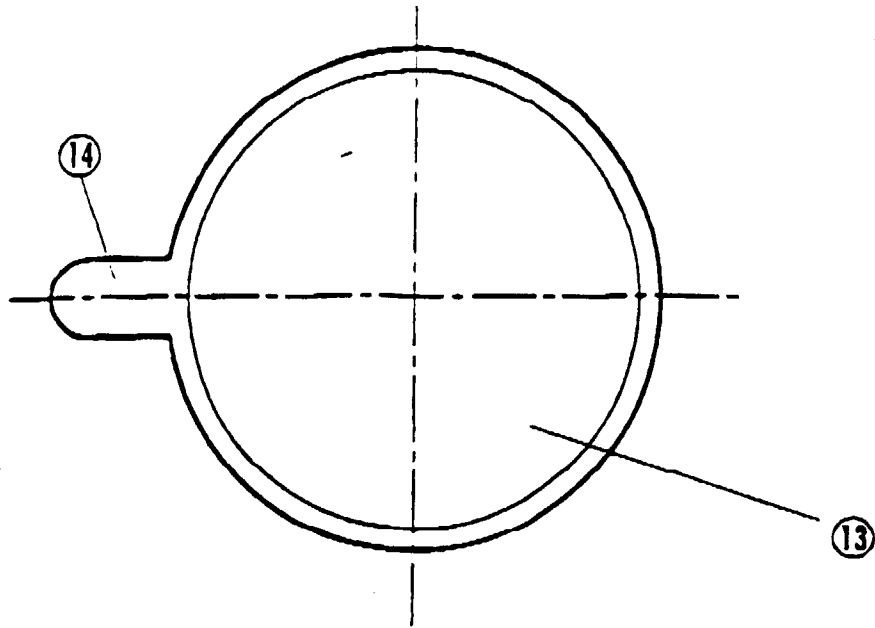


Fig.-14

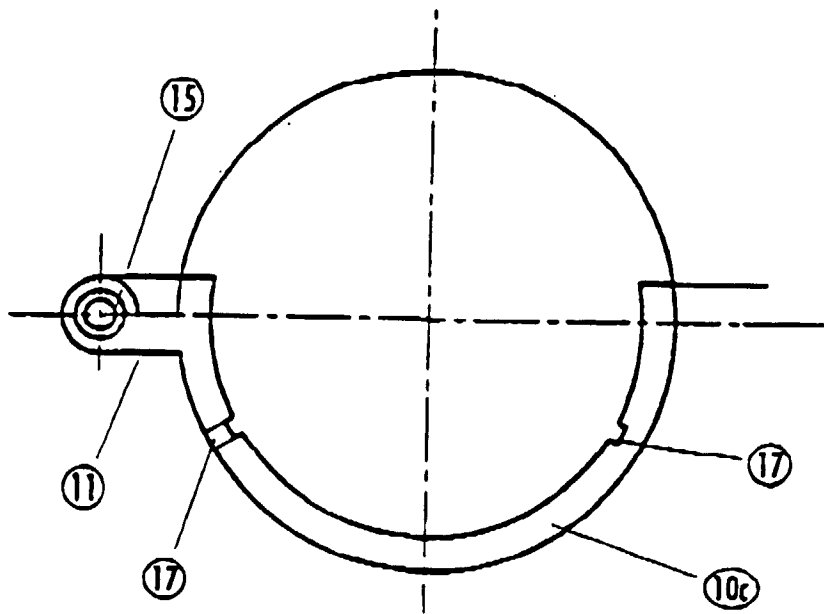


Fig.-15

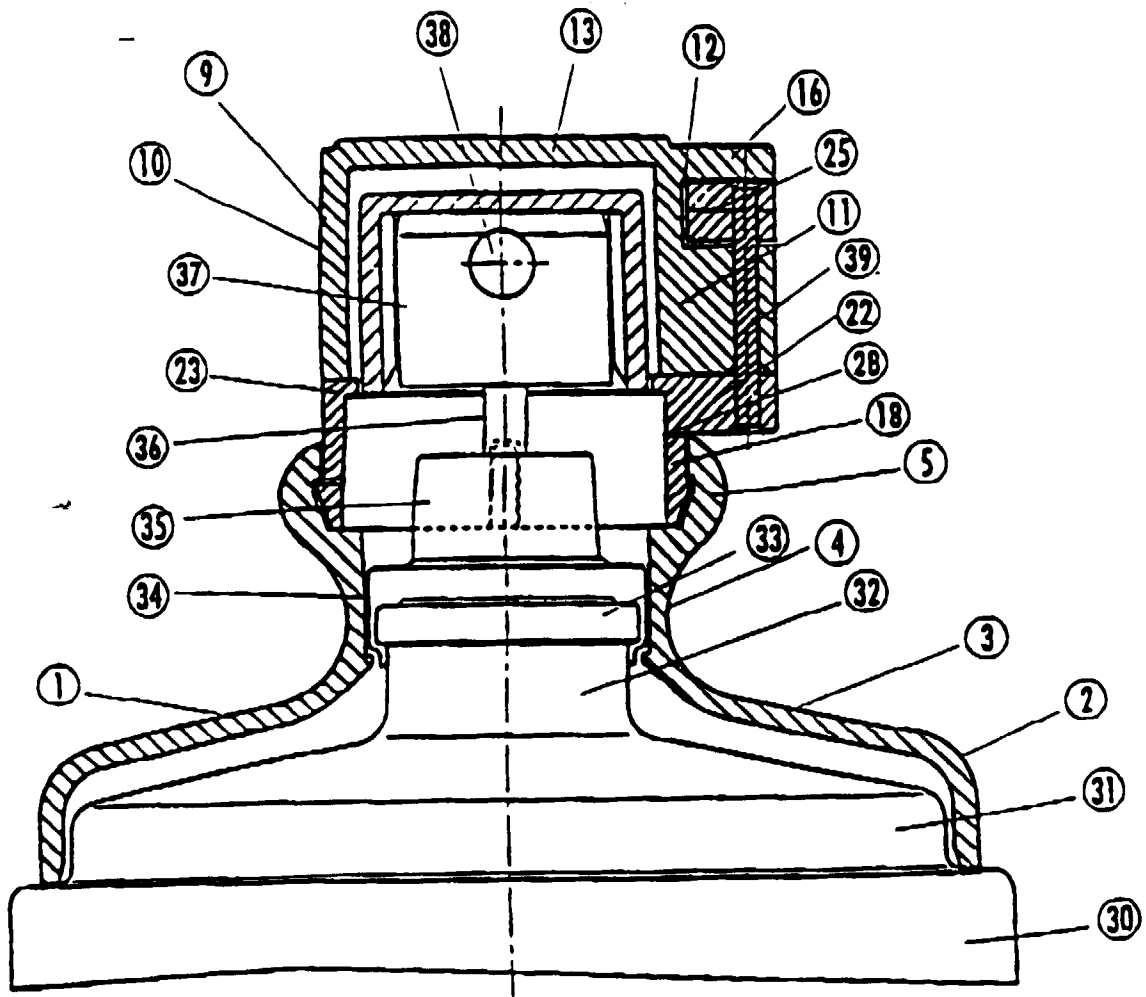


Fig.-16

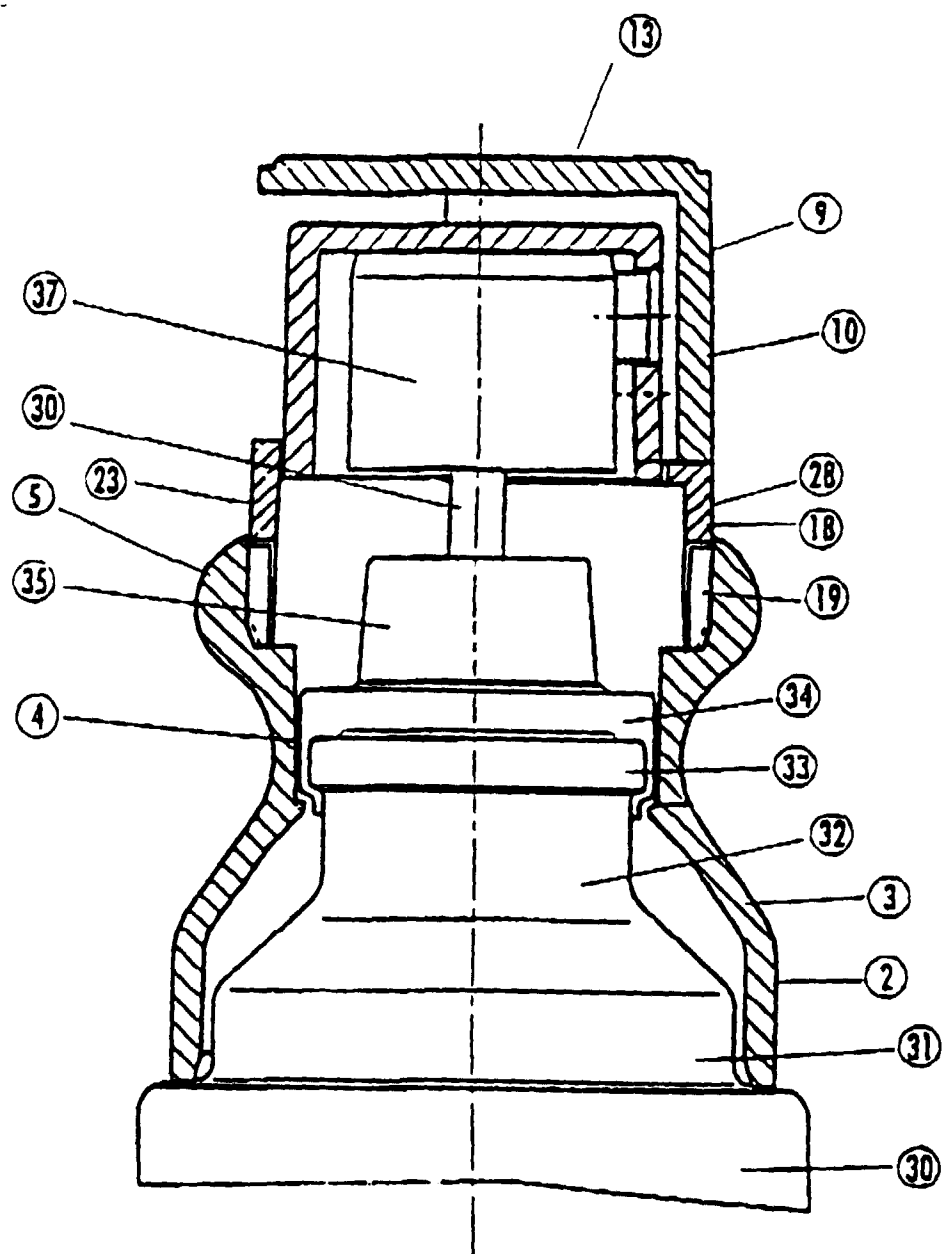


Fig.-17

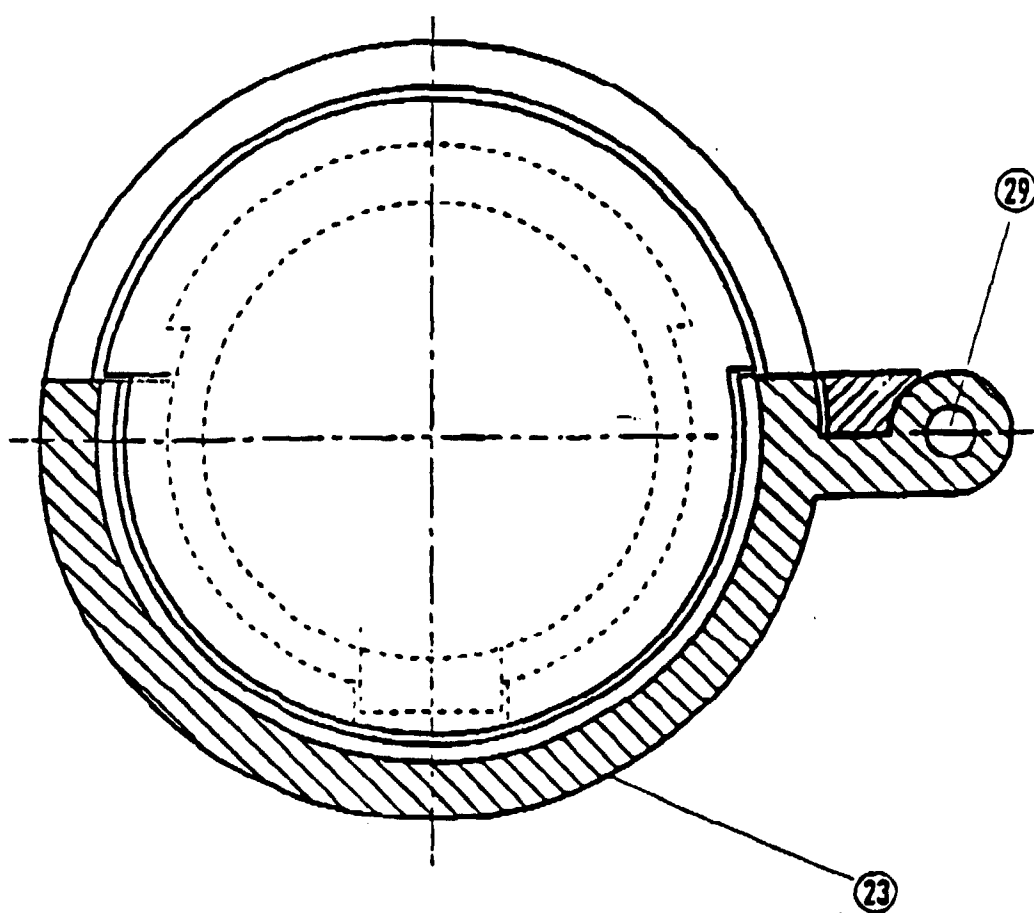


Fig.-18



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EUROPEAN SEARCH REPORT

Application Number
EP 98 10 8356

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US 3 904 088 A (MILBOURNE) 9 September 1975 * figures *	1	B65D83/14
A	EP 0 052 990 A (PEHR ET AL) 2 June 1982 * figures *	1	
A	FR 2 624 482 A (CCL INDUSTRIES) 16 June 1989 * figures *	1	
A	FR 2 489 783 A (L'OREAL) 12 March 1982 * figures *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B65D
Place of search		Date of completion of the search	Examiner
BERLIN		27 October 1998	Spettel, J
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EP 98 10 8356

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27-10-1998

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