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(54) Closure lid for open mouth containers

(57) A container lid (10) for engagement within an open mouth container (12) including upper and lower panels with the lower panel (18) including a peripheral upwardly directed flexible flange seal (30), the upper panel (20) being upwardly convex and, in cooperation with positioning posts (34) on the lower panel, being selectively downwardly flexed toward the lower panel for an outward movement of the peripheral edge of the upper panel (20) against the flange seal (30) by an enhanced fulcrum action of the upper panel (20) about a fulcrum (24) extending upward from the lower panel in closely spaced inward relation to the flange seal.

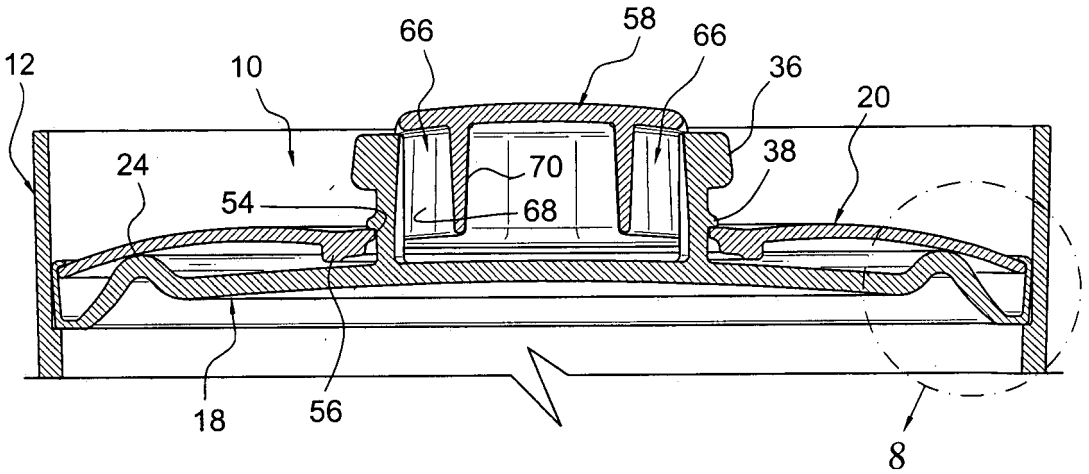

FIG. 7

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Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to closure lids for open-mouth food containers and the like. Such lids are known in the prior art and generally include provision for a manipulation of the lid relative to the container to provide for a positive sealing of the lid to the container. This usually involved a rather elaborate manipulation of selected lid components relative to each other in a manner not readily apparent or easily effected. In addition, in many instances, in order to produce a positive seal, the open-mouth area of the container must itself be uniquely configured to accommodate the specific closure lid.

SUMMARY OF THE INVENTION

[0002] It is an object of the present invention to provide an improved closure lid.

[0003] The preferred lid engaging the interior surface of a container inward of the open mouth thereof, functions both as a closure easily inserted within the container and removed therefrom, and as a lid intimately sealed to the container wall. The nature of the contents of the container will determine the manner of use of the closure lid. The closure lid, regardless of its manner of use, will assume the same position within the container seated on a shallow interior shoulder formed as a part of the container wall.

[0004] It is significant that insertion of the preferred closure lid within the container requires no manipulation of the lid components relative to each other. Rather, the lid is merely inserted into the container onto the positioning shoulder. When a positive seal is to be effected, the user need only downwardly flex the upwardly domed upper panel or member, normally utilizing a central knob thereon, to engage and outwardly urge a peripheral seal integral with the lower panel or member. The upper panel will automatically lock in its downwardly flexed seal-providing position and be retained in this position until manually released by simple finger pressure. Upon release, the upper panel, through the elastic memory thereof, will upwardly unflex or move to its normal or at rest upwardly domed position and thus release the seal pressure.

[0005] Structurally, the closure lid of the preferred embodiment is simply and economically formed of only two components, preferably molded of appropriate synthetic resinous materials. The components comprise upper and lower panels uniquely engaged for operation as a unitary assembly and, as desired, easily disassembled for cleaning or related purposes.

[0006] The lower panel preferably includes an outer peripheral area having an upwardly projecting rib and, outward spaced therefrom at the extreme periphery of the lower panel, an upwardly extending sealing flange. The lower panel, between the generally parallel rib and edge flange is preferably depressed or forms a groove below the level of the central area of the lower panel with the rib and flange extending generally to the same height above the central area. The sealing flange preferably has a greater degree of elastic flexibility relative to the remainder of the lower panel including the rib for an outward flexing thereof into engagement with the container wall, as shall be explained subsequently.

[0007] The lower panel is preferably completed by a pair of laterally spaced upwardly extending positioning posts centrally thereon. These posts are elastically flexible toward each other upon the application of physical pressure, and, upon release of such pressure, return to their original positions due to an inherent elastic memory.

[0008] The upper panel preferably has a greater degree of elastic or resilient flexibility than the lower panel and is upwardly domed or convex for selective downward flexing toward the lower panel upon downward pressure thereon. The upper panel, through inherent elastic memory, will, upon release, return to its upper convex position.

[0009] The two positioning posts on the lower panel are preferably upwardly received through a central opening in the upper panel. This upper panel opening has or defines opposed locking edges which, in the upper or unflexed position of the upper panel, engage below outwardly projecting upper lugs on the opposed positioning posts. The outer peripheral edge portion of the upper panel preferably engages on the lower panel rib with the extreme outer peripheral edge of the upper panel positioned adjacent the lower panel flange seal below a retaining lip on this flange. In this manner, the upper and lower panels are assembled to define the closure lid of the invention.

[0010] In order to achieve and maintain the desired sealing action, the positioning posts preferably include a pair of lower locking lugs, one on each post, spaced below the upper lugs. A downward pressure on the upper panel will move, through a snap action, the locking edges below the lower lugs with the edges locking below the lower lugs and retaining the upper panel in a downwardly flexed sealing position relative to the lower panel. This downward movement of the upper panel will cause a corresponding fulcrum movement of the outer edge of the upper panel about the rib on the lower panel and an outward spreading of the peripheral edge of the upper panel against the flange seal, in conjunction with a slight upward shifting thereof against the retaining lip, to produce the desired outward flexing of the flange seal into engagement with the container wall. When release of the sealing effect is desired, one need merely move the posts laterally inward toward each other to release the lower locking lugs with the elastic memory of the upper panel upwardly moving the panel to its initial convex configuration with a corresponding retraction of the sealing pressure on the flange seal. The upper and lower panels will remain assembled as the upper panel locking edges seat below the upper post lugs.

[0011] In order to facilitate a handling of the lid and manipulation of the upper panel, an upwardly directed

knob can be formed about the central opening in the upper panel and about the upwardly projecting posts received therethrough. The peripheral wall of the knob can include opposed access openings aligned with the locking edges of the upper panel for movement of and access to the post lugs therethrough as they cooperate with the panel locking edges. The knob also preferably includes downwardly opening chambers aligned with each knob wall opening to accommodate the two posts. These chambers preferably have an inner wall which assists in alignment of the posts with the knob and locking edges of the upper panel as the panels are assembled, and also prevents excess inward lateral distortion or movement of the posts as the posts are manipulated.

[0012] According to a first aspect of the present invention, there is provided a container lid adapted to peripherally engage and seal to the interior surface of a container wall, said lid comprising a lower seal panel and an upper control panel, said lower panel having a continuous peripheral upwardly directed seal, said upper panel being upwardly convex and having a peripheral pressure edge immediately inward of and generally coextensive with said seal whereby selective outward movement of said pressure edge of said upper panel will engage and outwardly move said seal for sealing engagement with a container wall, said convex upper panel being downwardly flexible relative to said lower panel between an upper position with minimal engagement between the pressure edge and seal, and a lower flexed sealing position wherein the pressure edge is outwardly moved to effect outward movement of said seal into sealing engagement with a container wall, and means for releasably locking said upper panel in said sealing position.

[0013] Preferably, said seal comprises a seal flange having a lower edge joined to said lower panel and an upper edge vertically spaced above said lower edge.

[0014] Conveniently, said lower panel includes an upwardly directed fulcrum inward of and generally paralleling said peripheral seal in closely spaced relation thereto, said upper panel overlying said fulcrum whereby downward pressure on said convex upper panel centrally thereof inward of said fulcrum will effect an upward movement of said pressure edge in conjunction with an outward movement thereof against said seal flange.

[0015] Advantageously, said seal flange includes a laterally inwardly directed retaining lip along the upper edge thereof, said pressure edge of said upper panel engaging said seal flange below said retaining lip, said retaining lip retaining said pressure edge engagement with said seal flange.

[0016] Preferably, the upper panel in the upper position thereof, generally seats on the fulcrum with the seal edge positioned below and generally adjacent the seal flange retaining lip.

[0017] Advantageously, said lower panel and flange seal are of a unitary molded construction with said flange seal being resiliently flexible, said lower panel, inward of said flange seal, being generally greater rigidity relative to said flange seal.

[0018] Conveniently, said means for releasably locking said upper panel in said sealing position comprises post means on and extending upward from said lower panel generally centrally thereof, an aligned opening in said upper panel receiving said post means therethrough, said upper panel being vertically adjustable on said post means toward said lower panel upon downward flexing of said upper panel, and cooperating latch means on said post means and said upper panel for releasably retaining said upper panel downwardly flexed toward said lower panel.

[0019] Preferably, said post means extends above said upper panel and includes means for retaining said upper panel to said lower panel in the upper unflexed position of said upper panel.

[0020] Advantageously, said post means comprises a pair of laterally spaced posts, said posts being resiliently flexible laterally from an unflexed position toward each other upon application of inwardly directed physical pressure on said posts, said posts having elastic memory and returning to their unflexed position upon release of said physical pressure.

[0021] Conveniently, said latch means comprises a latching lug on and extending outward from each post at an intermediate position thereon, said latch means further comprising opposed locking edges defined by said upper panel opening and aligned with said posts for engagement below said latching lugs upon downward flexing of said upper panel and inward flexing of said posts to allow movement of said locking edges below said latching lugs.

[0022] Preferably, said means for retaining said upper panel in the unflexed position includes outwardly projecting retaining lugs on said positioning posts in upward spaced relation to said latching lugs.

[0023] Advantageously, the container lid includes a handling knob extending upward from said upper panel and having a peripheral wall about said upper panel opening and said posts received therethrough, said peripheral wall having opposed access openings therein aligned with said locking edges of said upper panel and said posts for physical access to said posts for manipulation thereof.

[0024] Conveniently, said knob includes a downwardly opening chamber receiving each post, each chamber having an inner wall generally paralleling the corresponding access opening for a housing of the corresponding post therebetween.

[0025] Advantageously, said means for releasably locking said upper panel in said sealing position comprises post means on and extending upward from said lower panel generally centrally thereof, an aligned opening in said upper panel receiving said post means therethrough, said upper panel being vertically adjustable on said post means toward said lower panel upon downward flexing of said upper panel, and cooperating latch means on said post means and said upper panel for releasably

retaining said upper panel downwardly flexed toward said lower panel.

[0026] Preferably, said post means comprises a pair of laterally spaced posts, said posts being resiliently flexible laterally from an unflexed position toward each other upon application of inwardly directed physical pressure on said posts, said posts having elastic memory and returning to their unflexed position upon release of said physical pressure.

[0027] Conveniently, said latch means comprises a latching lug on and extending outward from each post at an intermediate position thereon, said latch means further comprising opposed locking edges defined by said upper panel opening and aligned with said posts for engagement below said latching lugs upon downward flexing of said upper panel and inward flexing of said posts to allow movement of said locking edges below said latching lugs.

[0028] Advantageously, the container lid includes a handling knob extending upward from said upper panel with a peripheral wall about said upper panel opening and said posts received therethrough, said peripheral wall having opposed access openings therein aligned with said locking edges of said upper panel and said posts for physical access to said post for manipulation thereof, said knob including a downwardly opening chamber receiving each post, each chamber having an inner wall generally paralleling the corresponding access opening for a housing of the corresponding post therebetween.

[0029] According to another aspect of the present invention, there is provided a container lid comprising a lower panel and an upper panel, said lower panel having a continuous peripheral upwardly directed flange seal defined about the peripheral edge thereof, said upper panel being upwardly convex and having a peripheral pressure edge immediately inward of said flange seal, an upwardly directed fulcrum on said lower panel in inwardly spaced relation to said flange seal, said upper panel overlying said fulcrum inward of said flange seal whereby downward flexing of said upper panel centrally inward of said fulcrum produces an upward and outward biasing of the pressure edge of the upper panel against said flange seal for an outward sealing movement thereof.

[0030] Preferably, the container further includes means for releasably locking said upper panel in said sealing position, said means comprising post means on and extending upward from said lower panel generally centrally thereof, an aligned opening in said upper panel receiving said post means therethrough, said upper panel being vertically adjustable on said post means toward said lower panel upon downward flexing of said upper panel, and cooperating latch means on said post means and said upper panel for releasably retaining said upper panel downwardly flexed toward said lower panel.

[0031] Conveniently, said latch means comprises at least one latching lug on and extending outward from said post means at an intermediate position thereon, said latch means further comprising a locking edge defined by said upper panel opening and aligned with said post means for engagement below said latching lug upon downward flexing of said upper panel and movement of said locking edge below said latching lug, and means for retaining said upper panel on said post means upon release of said latch means including an outwardly projecting lug on said post means in upward spaced relation to said latching lug and selectively engaged by said upper panel locking edge.

[0032] As will be appreciated, in the preferred embodiment, the lid and container inner wall are circular, the application of the features of invention to other configurations is also considered feasible and within the skill of the artisan.

[0033] Further objects and features of the invention will become apparent from the detailed description of the invention following hereinafter.

[0034] So that the invention may be more readily understood, and so that further features thereof may be appreciated, embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings, in which :-

Figure 1 is an exploded perspective view of an open-mouth container and the closure lid of the invention aligned for reception therein;

Figure 2 is an exploded perspective view of the two components of the closure lid and a container therebelow;

Figure 3 is a bottom perspective view of the upper panel of the closure lid;

Figure 4 is a perspective view of the closure lid received within the container and in locked sealing position therein;

Figure 5 is a cross-sectional view of the lid received within a container prior to engagement of the peripheral seal;

Figure 6 is an enlarged cross-sectional detail of the area indicated in Figure 5;

Figure 7 is a cross-sectional view similar to Figure 5 with the lid in its locked position;

Figure 8 is an enlarged cross-sectional detail of the area indicated in Figure 7; and

Figure 9 is an enlarged sectional view further illustrating the locked position of the lid within the container.

DESCRIPTION OF PREFERRED EMBODIMENTS

[0035] Referring now more specifically to the drawings, Figure 1 illustrates the closure lid 10 and an underlying associate container 12. As noted, the container 12 is open mouthed and includes an inwardly directed peripheral support shoulder 14 on the inner wall surface thereof. The shoulder 14 is spaced downwardly from the upper edge 16 of the container wall for a telescopic reception of the lid 10 within the container into supported

engagement on the shoulder 14; note for example Figures 5 and 6.

[0036] As noted, in the illustrated preferred embodiment, the closure lid 10 is circular and engageable within a corresponding cylindrical container 12. Further, and as seen in Figure 2 and the various cross-sectional details, the lid 10 need be comprised of only two members, a lower seal panel 18 and an upper control panel 20, each molded of an appropriate synthetic resinous material.

[0037] The lower panel 18 includes a central portion 22 which is slightly upwardly convex with a peripherally continuous rib 24 about the outer extremity thereof. The lower panel 18, beyond the rib 24 extends, as a portion of the outer side of the rib 24, downwardly and slightly outwardly below the general level of the central area 22 and then turns laterally outward to define a base 28 which seats on the container shoulder 14. A peripheral vertically extending sealing flange 30, integrally formed with the outer edge of the peripheral base 28, extends to a height slightly less than the upper extremity of the rib 24 and terminates in a laterally inwardly directed lip or bead 32.

[0038] The lower panel sealing flange 30 has a greater degree of flexible resiliency for a lateral outward flexing thereof into engagement with a container wall upon the application of pressure thereto in a manner to be explained subsequently. This flange also incorporates a substantial degree of elastic memory so as to return to an original position upon release of pressure. As illustrated, this increased flexibility can be achieved by a molding of the flange of a lesser thickness than the remainder of the relatively stiffer lower panel.

[0039] The lower panel 18 further includes a pair of laterally spaced upstanding positioning posts 34 centrally of the panel. Each post 34 includes an upper outwardly projecting retaining lug 36 and, downwardly spaced therefrom, an outwardly projecting locking lug 38. The upper lug 36 defines a lower retaining ledge 40. A similar downwardly directed retaining ledge 42 is provided by the lower lug 38. The lower lug 38 also includes an upper sloping camming surface 44.

[0040] The posts 34 have a degree of flexibility and an elastic memory which allows the posts to be laterally flexed toward each other for an inward retraction of the lugs and, upon release of pressure on the posts, an automatic returning of the posts and lugs outwardly to their original position. This resilient flexibility can be enhanced by a narrowing of the posts, as at 46, between the panel body itself and the upwardly positioned lower locking lug 38. As noted in Figure 2 in particular, a rigidifying rib 48 can be provided on the upper surface of the central area 22 of the lower panel 18 along arcs between and to both sides of the posts 34.

[0041] Turning now to the upper panel 20, this panel is upwardly domed or convex to a relatively greater degree than the central area of the lower panel 18 and includes an outer peripheral seal-biasing edge 50. A central opening 52 is provided through the top panel 20 and is of a size to receive the positioning posts 34 of the lower panel upwardly therethrough upon a slight inward flexing of the posts toward each other. Opposed edge portions 54 of the opening 52 are adapted to align with the positioning posts 34 and selectively engage below the positioning and retaining lugs 36 and 38 thereon. These opening edge portions 54 define locking edges and are rigidified by an underlying reinforcing rib 56 integrally depending from the undersurface of the top panel 20 about and slightly outward of the opening 52 defined therein and the locking edges 54 defined by the opening.

[0042] A handling knob 58, integral with the top panel 20, surrounds and extends upward from the top panel opening 52. The peripheral wall 60 of the knob 58 is discontinuous at the locking edges 54 to outwardly expose the positioning posts therethrough. The top 62 of the knob will also be slightly recessed, as at 64, in alignment with the wall openings for ensuring free manual access to the positioning posts. It will also be noted that the knob 58 of the upper panel 20 has a pair of downwardly opening chambers 66 therein formed inwardly of the wall 60 openings. Each chamber includes opposed side walls 68 and an inner wall 70. These chambers 66 receive the positioning posts, stabilize the posts relative to the upper panel 20 and assure proper alignment thereof with the locking edges 54.

[0043] Noting Figure 5 in particular, in assembling the two components of the lid 10, the upper panel 20 is positioned to receive the positioning posts 34 through the opening 52. This will involve a slight resilient inward flexing of the posts relative to each other so as to move the upper positioning lugs 34 through the opening and engage the opposed locking edges 54 immediately therebelow upon release of the inward pressure on the positioning posts. At the same time, or subsequent thereto, the peripheral edge 50 of the upper panel is peripherally engaged with or positioned closely adjacent to the inner face of the lower panel sealing flange 30 below the upper retaining lip 32 thereon. The arc of the upper panel 20 is such as to, in this assembled position, seat on the upwardly projecting rib 24 on the lower panel which defines a fulcrum. The closure lid thus assembled is adapted to freely enter the open mouth of the container and seat, in a generally non-sealing relationship, on the container shoulder 14, providing an effective closure in those instances wherein a positive seal is not required. This non-sealing relationship will be noted in the enlarged detail of Figure 6.

[0044] When a sealed relationship is desired, the top panel 20, preferably through direct pressure on the upwardly projecting knob 58, is downwardly flexed at the central area thereof to the sealing position. This will move the locking edges of the opening in the top panel along the upper camming surfaces 44 of the lower lugs 38, causing a corresponding slight inward flexing of the positioning posts, until the locking edges 54 snap below the lower lugs 38. The posts 34, through the elastic memory thereof, will then move outwardly to retain the locking edges in their lowermost position. The actual movement

of the locking edges 54 below the lower retaining lugs 38 can, if so desired, be effected by a slight manual inward pressure on the positioning lugs 36 of the positioning posts as downward pressure is applied to the knob. The sealed position of the closure lid will be noted in Figures 7 and 9.

[0045] With continued reference to these figures and the detail of Figure 8, it will be noted that as the upper panel 20 is centrally downwardly flexed and locked into position, the outer edge portion thereof will tend to outwardly spread and slightly upwardly move about the fulcrum defined by the rib 24 so as to outwardly flex the upper portion of the peripheral flange seal 30 with the edge 50 of the upper panel being retained against the flange seal by the upper retaining lip 32 on the flange seal 30. The provision of the fulcrum rib 24 provides for a positive and controlled outward movement of the upper panel peripheral pressure edge 50 to ensure a positive sealing action through a unique single action manipulation of the upper panel downwardly relative to the lower panel.

[0046] When the seal of the lid is to be released, one need merely physically inwardly move the positioning posts 34 toward each other by engagement against the relatively wider and thicker upper lugs 36 until the locking edges 54 of the upper panel are released from the lower lugs 38. The elastic memory of the upper panel 20 will then automatically upwardly move the central portion of the upper panel and the locking edges thereon upwardly until the edges engage, in an unflexed condition, below the deeper upper positioning lugs 36. This movement will at the same time inwardly draw the peripheral pressure edge 50 of the upper panel away from the flange seal 32 and release the seal from the peripheral container wall for free withdrawal of the lid from the container.

[0047] The foregoing is considered illustrative of the principles of the invention. As modifications and changes may occur to those skilled in the art, it is not desired to limit the invention to the exact construction and manner of use as shown and described. Rather, all suitable modifications and equivalents may be resorted to as falling within the scope of the invention as claimed.

[0048] When used in this specification and claims, the terms "comprises" and "comprising" and variations thereof mean that the specified features, steps or integers are included. The terms are not to be interpreted to exclude the presence of other features, steps or components.

[0049] The features disclosed in the foregoing description, or the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, as appropriate, may, separately, or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

Claims

1. A container lid adapted to peripherally engage and seal to the interior surface of a container wall, said lid comprising a lower seal panel and an upper control panel, said lower panel having a continuous peripheral upwardly directed seal, said upper panel being upwardly convex and having a peripheral pressure edge immediately inward of and generally coextensive with said seal whereby selective outward movement of said pressure edge of said upper panel will engage and outwardly move said seal for sealing engagement with a container wall, said convex upper panel being downwardly flexible relative to said lower panel between an upper position with minimal engagement between the pressure edge and seal, and a lower flexed sealing position wherein the pressure edge is outwardly moved to effect outward movement of said seal into sealing engagement with a container wall, and means for releasably locking said upper panel in said sealing position.

2. The container lid of claim 1 wherein said seal comprises a seal flange having a lower edge joined to said lower panel and an upper edge vertically spaced above said lower edge.

3. The container lid of claim 2 wherein said lower panel includes an upwardly directed fulcrum inward of and generally paralleling said peripheral seal in closely spaced relation thereto, said upper panel overlying said fulcrum whereby downward pressure on said convex upper panel centrally thereof inward of said fulcrum will effect an upward movement of said pressure edge in conjunction with an outward movement thereof against said seal flange.

4. The container lid of claim 3 wherein said seal flange includes a laterally inwardly directed retaining lip along the upper edge thereof, said pressure edge of said upper panel engaging said seal flange below said retaining lip, said retaining lip retaining said pressure edge engagement with said seal flange.

5. The container lid of claim 4 wherein the upper panel in the upper position thereof, generally seats on the fulcrum with the seal edge positioned below and generally adjacent the seal flange retaining lip.

6. The container lid of claim 5 wherein said lower panel and flange seal are of a unitary molded construction with said flange seal being resiliently flexible, said lower panel, inward of said flange seal, being generally greater rigidity relative to said flange seal.

7. The container lid of claim 6 wherein said means for releasably locking said upper panel in said sealing position comprises post means on and extending up-

ward from said lower panel generally centrally thereof, an aligned opening in said upper panel receiving said post means therethrough, said upper panel being vertically adjustable on said post means toward said lower panel upon downward flexing of said upper panel, and cooperating latch means on said post means and said upper panel for releasably retaining said upper panel downwardly flexed toward said lower panel.

8. The container lid of claim 7 wherein said post means extends above said upper panel and includes means for retaining said upper panel to said lower panel in the upper unflexed position of said upper panel.

9. The container lid of claim 8 wherein said post means comprises a pair of laterally spaced posts, said posts being resiliently flexible laterally from an unflexed position toward each other upon application of inwardly directed physical pressure on said posts, said posts having elastic memory and returning to their unflexed position upon release of said physical pressure.

10. The container lid of claim 9 wherein said latch means comprises a latching lug on and extending outward from each post at an intermediate position thereon, said latch means further comprising opposed locking edges defined by said upper panel opening and aligned with said posts for engagement below said latching lugs upon downward flexing of said upper panel and inward flexing of said posts to allow movement of said locking edges below said latching lugs.

11. The container lid of claim 10 wherein said means for retaining said upper panel in the unflexed position includes outwardly projecting retaining lugs on said positioning posts in upward spaced relation to said latching lugs.

12. The container lid of claim 11 including a handling knob extending upward from said upper panel and having a peripheral wall about said upper panel opening and said posts received therethrough, said peripheral wall having opposed access openings therein aligned with said locking edges of said upper panel and said posts for physical access to said posts for manipulation thereof.

13. The container lid of claim 12 wherein said knob includes a downwardly opening chamber receiving each post, each chamber having an inner wall generally paralleling the corresponding access opening for a housing of the corresponding post therebetween.

14. The container lid of claim 3 wherein said means for releasably locking said upper panel in said sealing position comprises post means on and extending upward from said lower panel generally centrally thereof, an aligned opening in said upper panel receiving said post means therethrough, said upper panel being vertically adjustable on said post means toward said lower panel upon downward flexing of said upper panel, and cooperating latch means on said post means and said upper panel for releasably retaining said upper panel downwardly flexed toward said lower panel.

15. The container lid of claim 14 wherein said post means comprises a pair of laterally spaced posts, said posts being resiliently flexible laterally from an unflexed position toward each other upon application of inwardly directed physical pressure on said posts, said posts having elastic memory and returning to their unflexed position upon release of said physical pressure.

16. The container lid of claim 15 wherein said latch means comprises a latching lug on and extending outward from each post at an intermediate position thereon, said latch means further comprising opposed locking edges defined by said upper panel opening and aligned with said posts for engagement below said latching lugs upon downward flexing of said upper panel and inward flexing of said posts to allow movement of said locking edges below said latching lugs.

17. The container lid of claim 16 including a handling knob extending upward from said upper panel with a peripheral wall about said upper panel opening and said posts received therethrough, said peripheral wall having opposed access openings therein aligned with said locking edges of said upper panel and said posts for physical access to said post for manipulation thereof, said knob including a downwardly opening chamber receiving each post, each chamber having an inner wall generally paralleling the corresponding access opening for a housing of the corresponding post therebetween.

18. A container lid comprising a lower panel and an upper panel, said lower panel having a continuous peripheral upwardly directed flange seal defined about the peripheral edge thereof, said upper panel being upwardly convex and having a peripheral pressure edge immediately inward of said flange seal, an upwardly directed fulcrum on said lower panel in inwardly spaced relation to said flange seal, said upper panel overlying said fulcrum inward of said flange seal whereby downward flexing of said upper panel centrally inward of said fulcrum produces an upward and outward biasing of the pressure edge of the upper panel against said flange seal for an outward sealing movement thereof.

19. The container lid of claim 18 including means for releasably locking said upper panel in said sealing position, said means comprising post means on and extending upward from said lower panel generally centrally thereof, an aligned opening in said upper panel receiving said post means therethrough, said upper panel being vertically adjustable on said post means toward said lower panel upon downward flexing of said upper panel, and cooperating latch means on said post means and said upper panel for releasably retaining said upper panel downwardly flexed toward said lower panel.

20. A container lid in accord with claim 19 wherein said latch means comprises at least one latching lug on and extending outward from said post means at an intermediate position thereon, said latch means further comprising a locking edge defined by said upper panel opening and aligned with said post means for engagement below said latching lug upon downward flexing of said upper panel and movement of said locking edge below said latching lug, and means for retaining said upper panel on said post means upon release of said latch means including an outwardly projecting lug on said post means in upward spaced relation to said latching lug and selectively engaged by said upper panel locking edge.

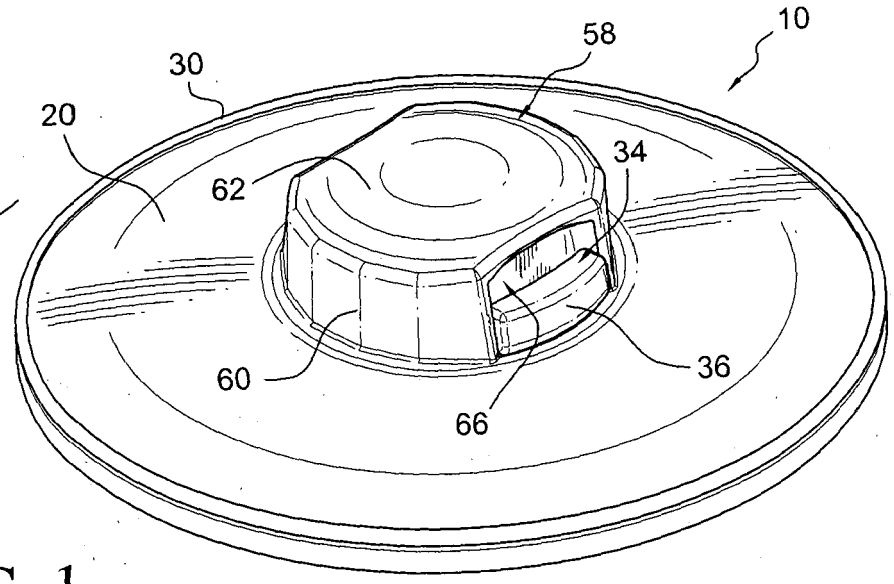
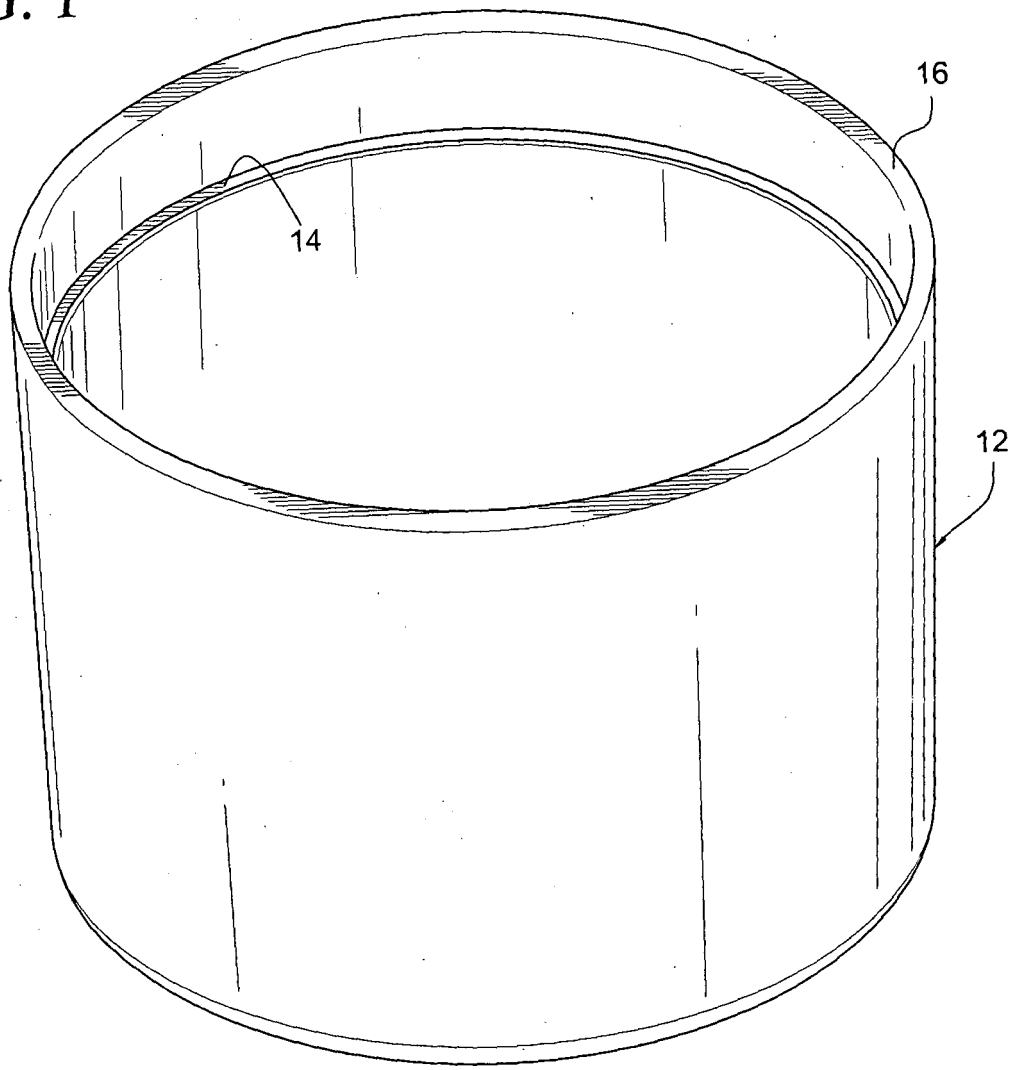


FIG. 1



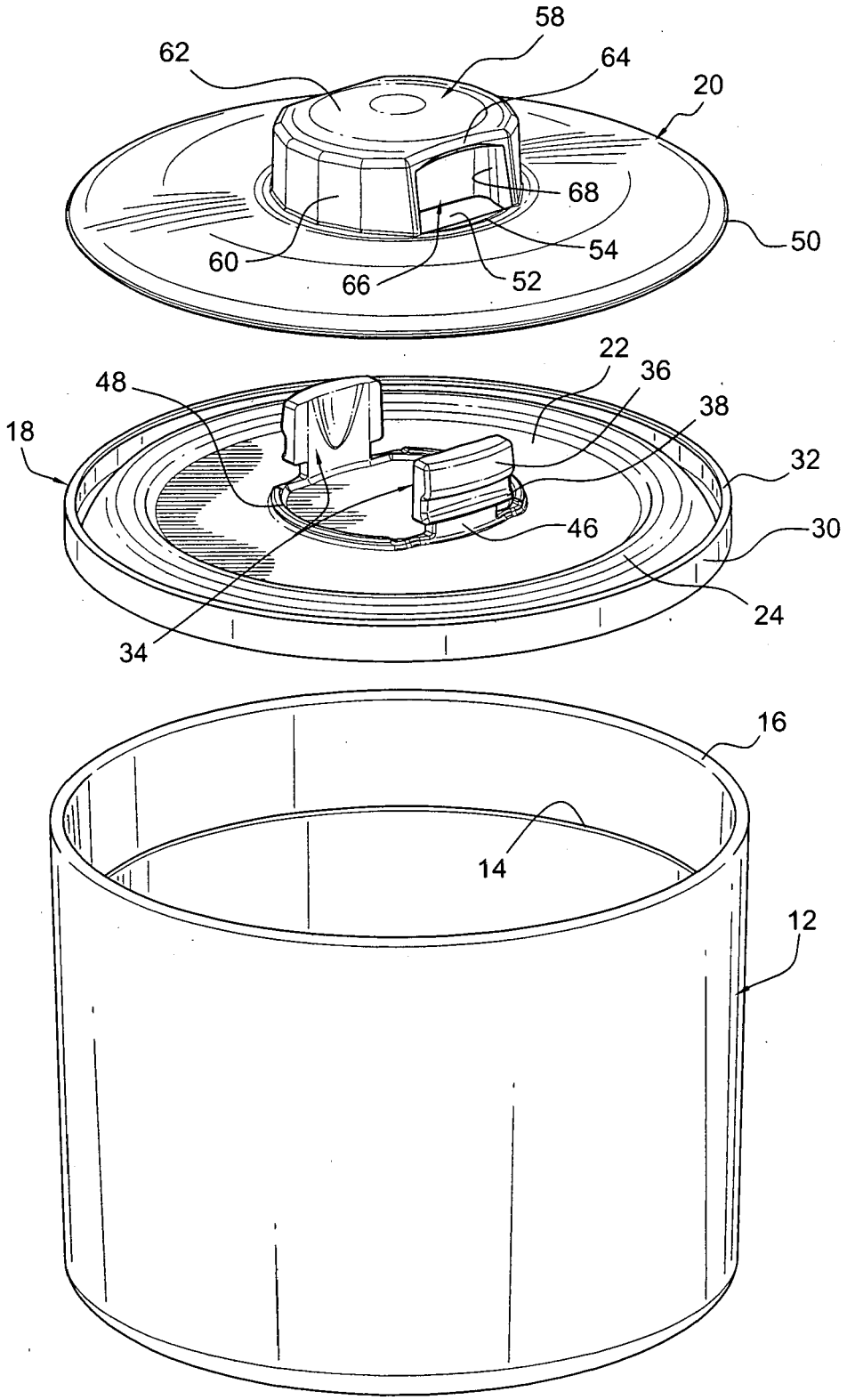


FIG. 2

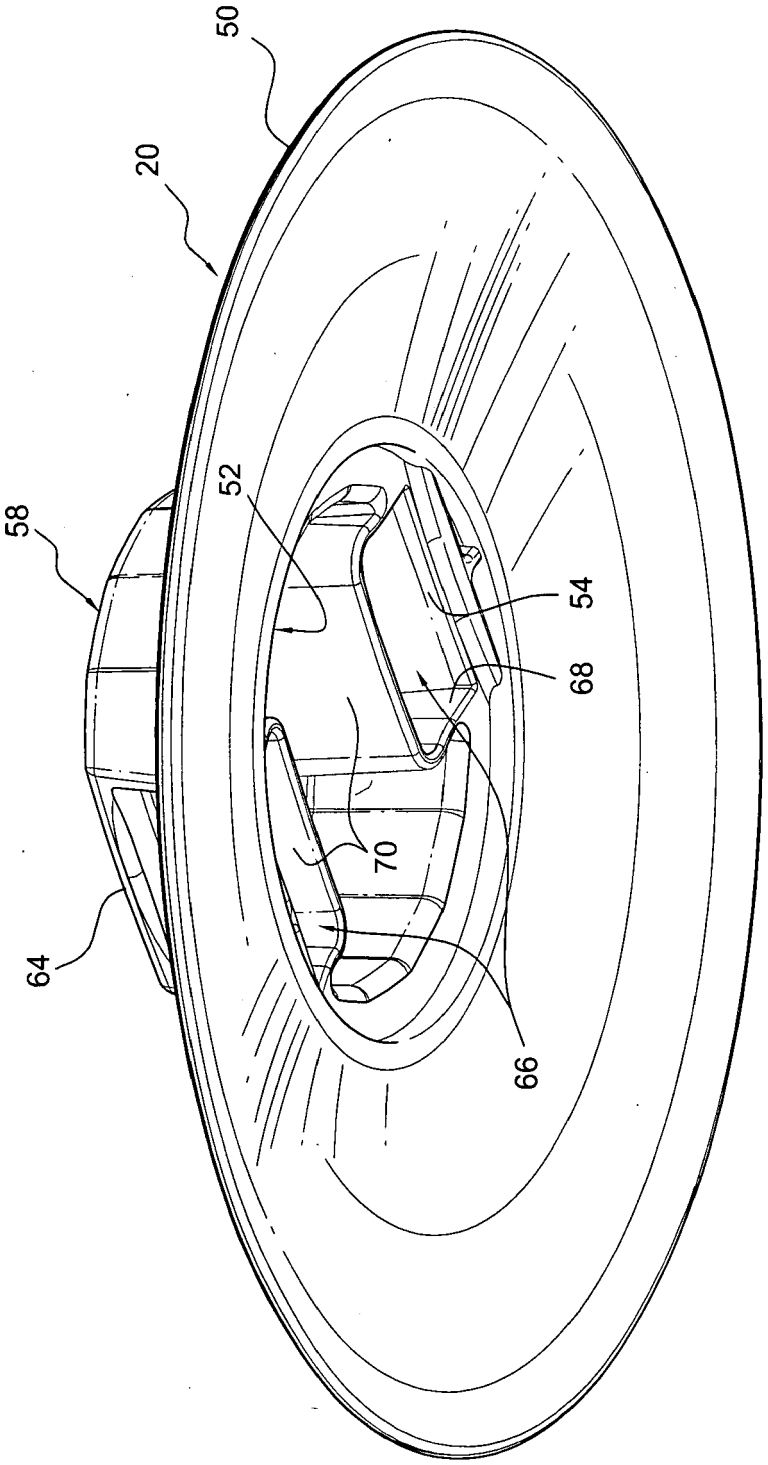


FIG. 3

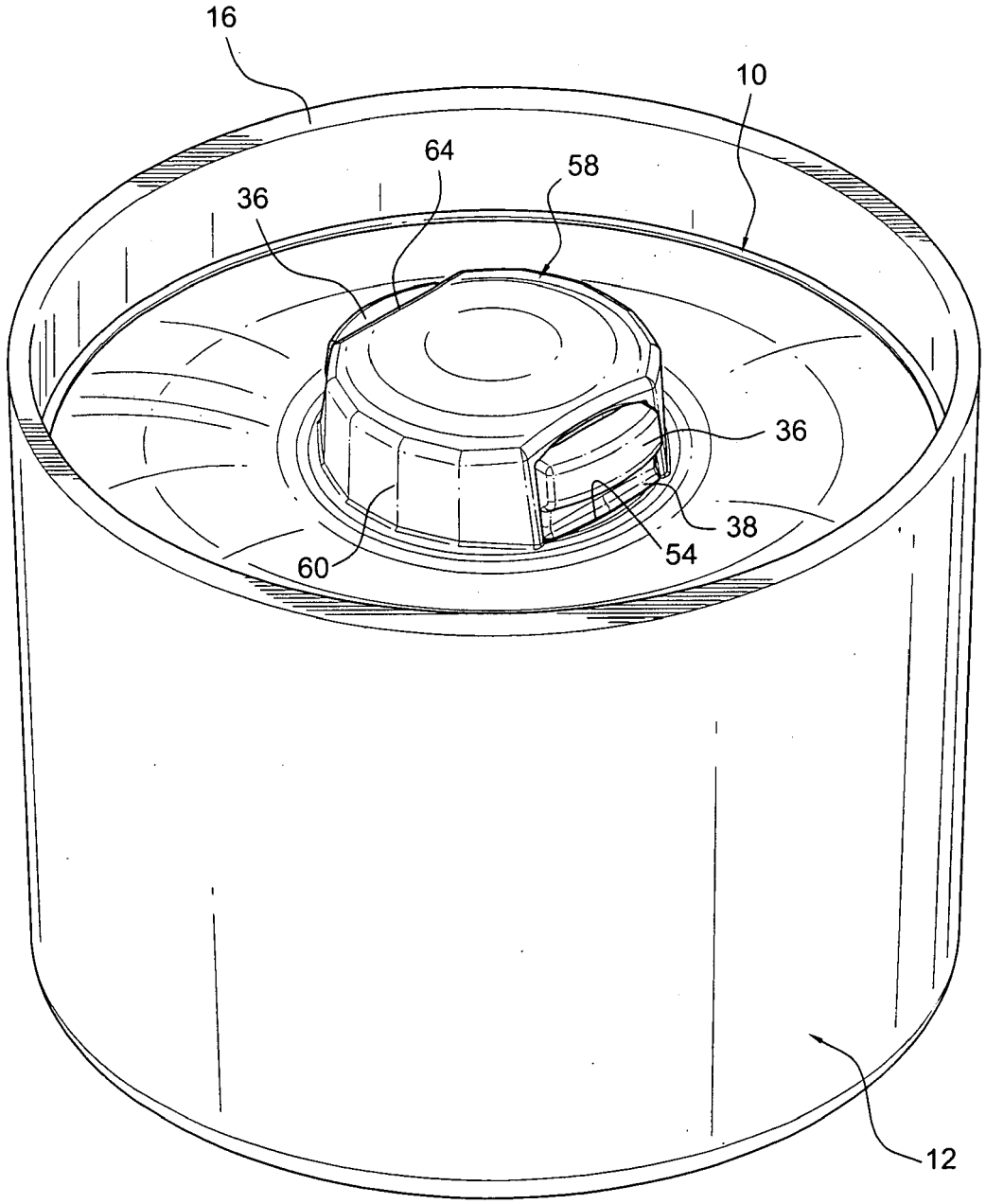


FIG. 4

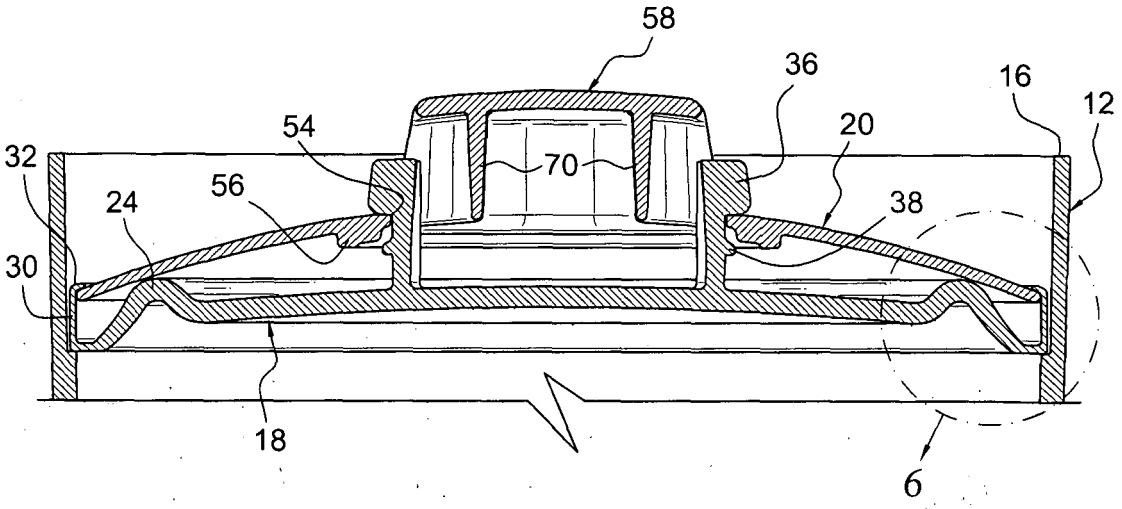
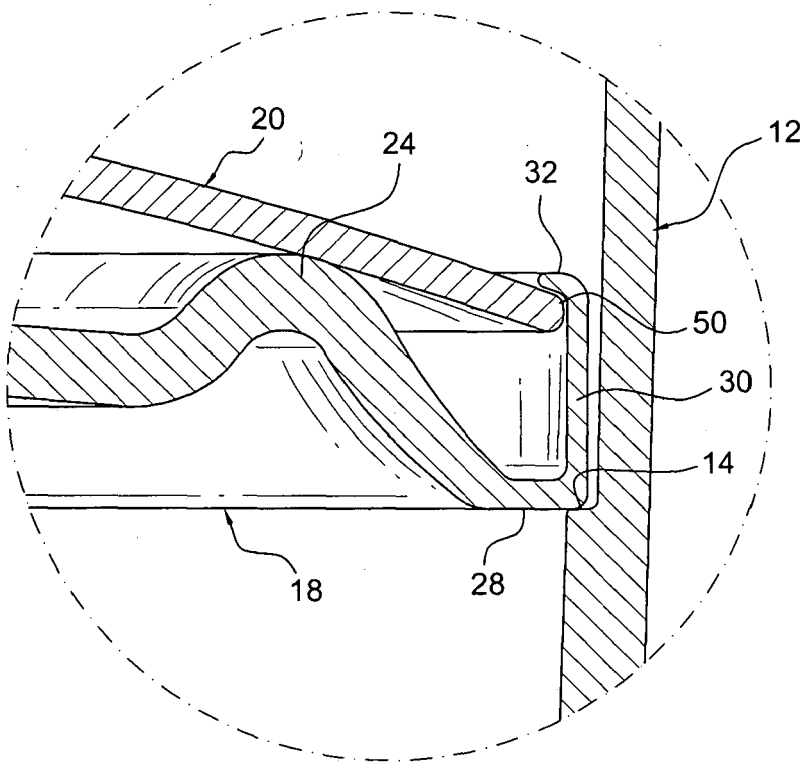


FIG. 5

FIG. 6



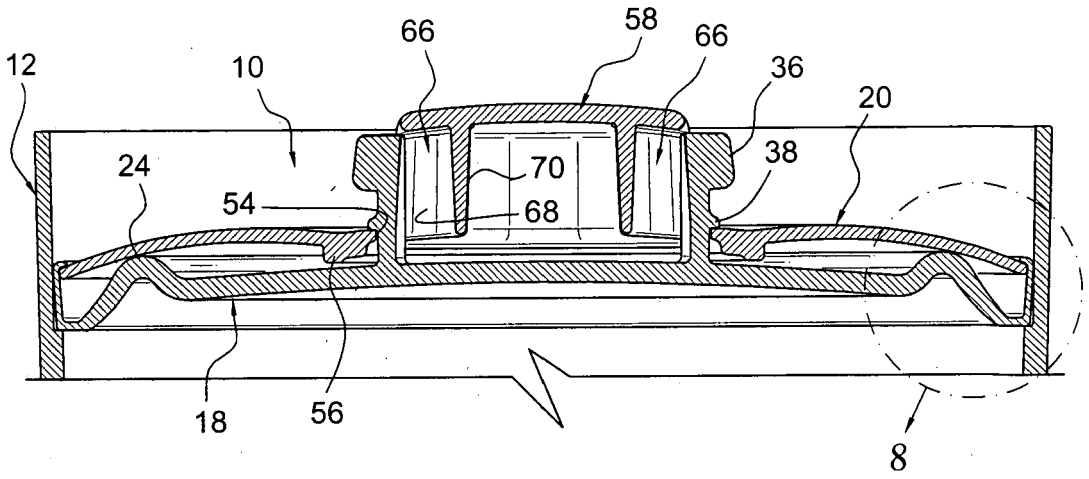
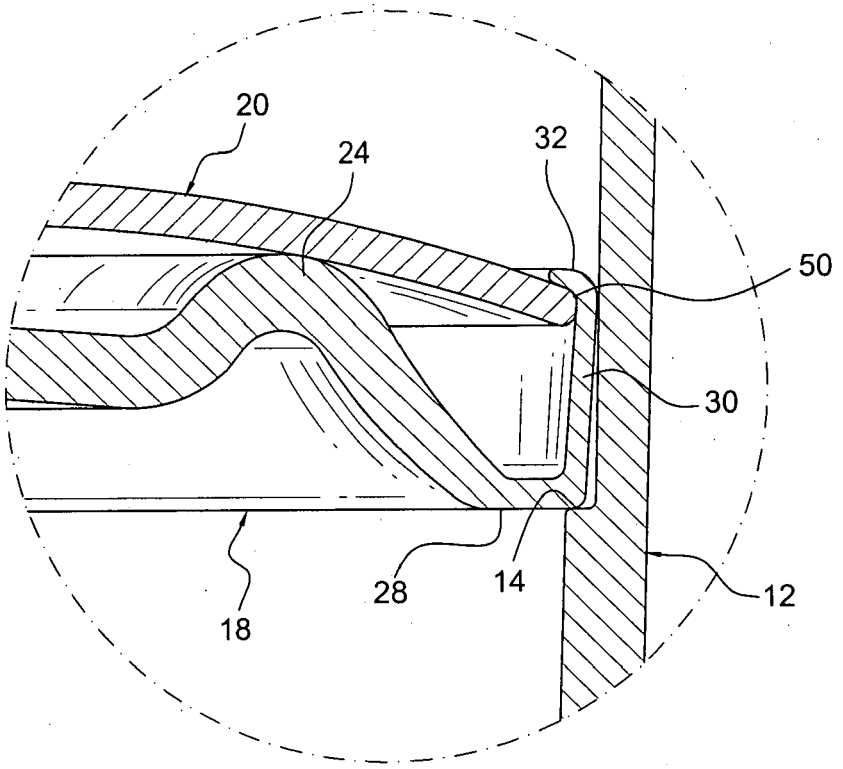


FIG. 7

FIG. 8



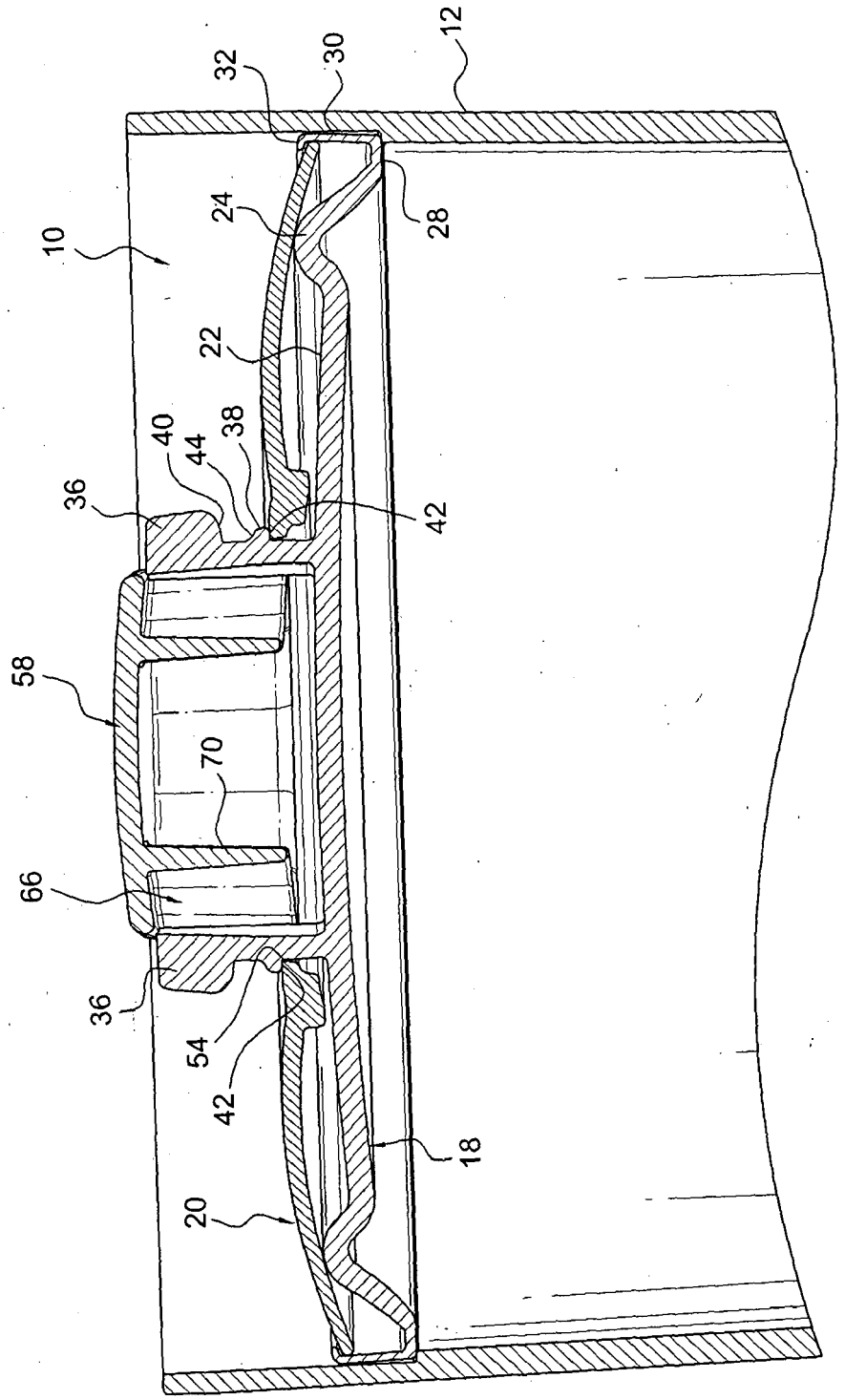


FIG. 9

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Application Number
EP 07 01 4322

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Place of search	Date of completion of the search	Examiner
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