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P. S. VAN BAARN
CLOSURE CONSTRUCTION

3,155,285

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3 Sheets-Sheet 1

Fig. 1.

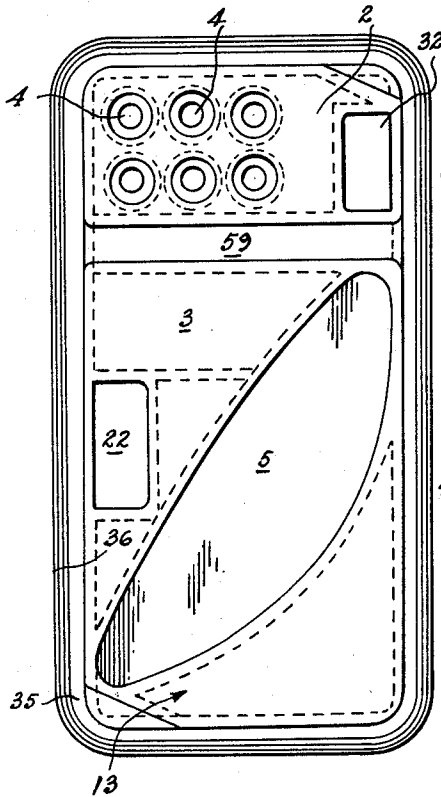


Fig. 2.

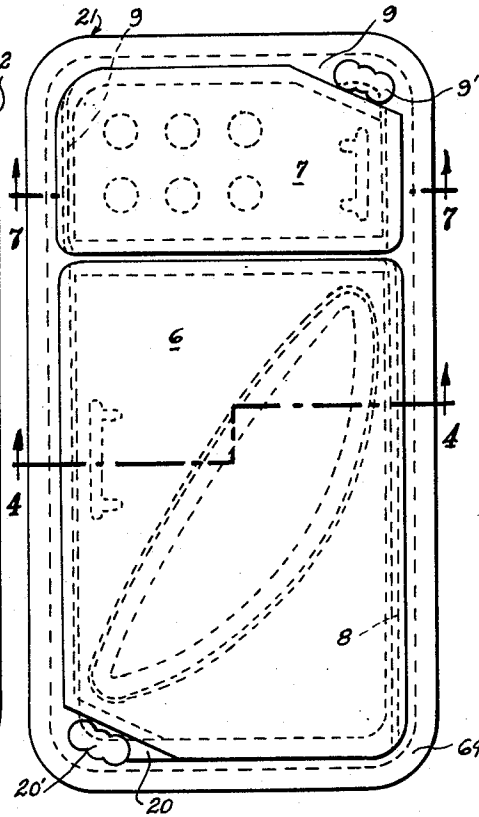
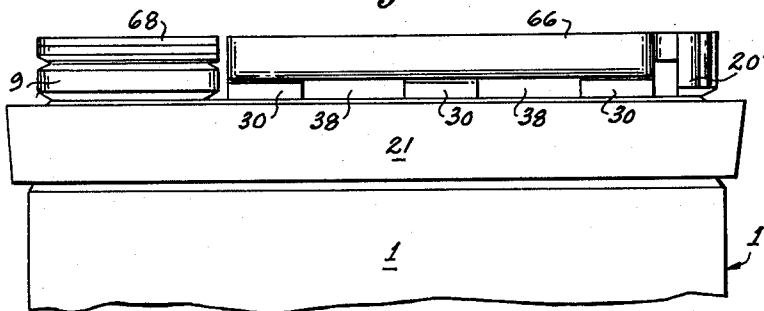


Fig. 3.



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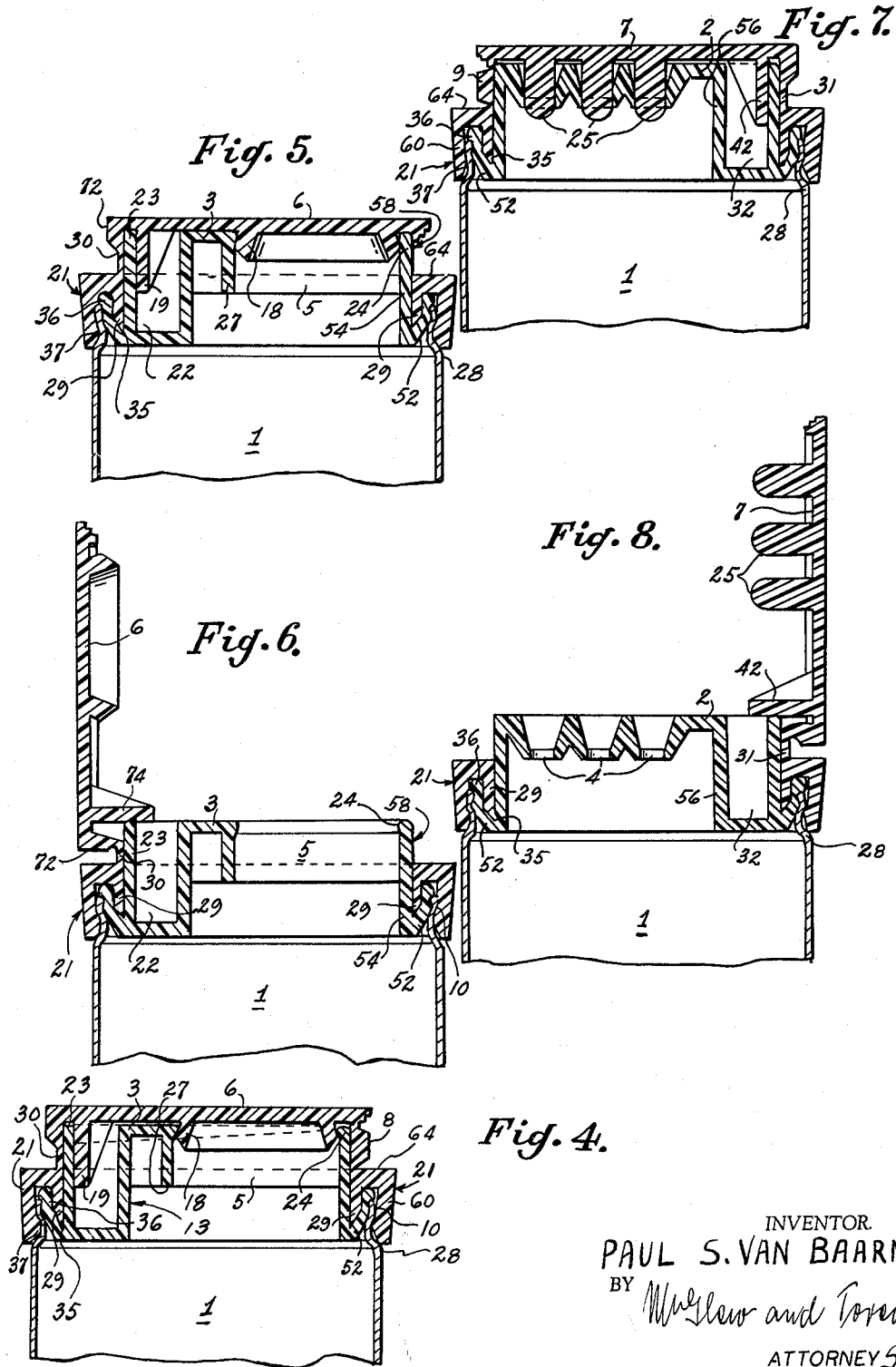
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CLOSURE CONSTRUCTION

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12 Claims. (Cl. 222-153)

This invention relates in general to container closure structures and closure elements therefor, and in particular to a new and useful closure construction for a container having an encircling rim comprising a plug portion adapted to be snap-fitted onto the container and a covering lid portion including a skirt adapted to embrace the outside of the container level having severable tear strips arranged at two distinct locations for uncovering two separated hinged lid portions, one of which includes projections which are adapted to be seated into associated openings defined in one portion of the plug and the other of which includes an elongated stopper element which is adapted to be seated in an elongated opening defined in the other portion of the plug.

The present invention has particular application for use with containers which are designed to hold powdered or comminuted material such as condiments for cooking, for example, salt, seasoning, flour, sugar, etc.

With containers of this sort it has been known to provide closure elements which include a plug and closure lid combination wherein the outer closure lid includes a severable tear strip and in which the outer closure lid is adapted to be snap-fitted to the outside of the container. An example of such a construction is described in co-pending application Serial No. 107,957, Patent No. 3,131,824 filed by the present applicant, for example.

The present invention is an improvement over prior art constructions, particularly in the provision of a plug element which includes two distinct portions one of which is provided with a plurality of openings through which the material in the container may be dispensed such as by dusting or dispensing by shaking the material of the container over an area. The other portion of the plug includes an elongated or wide area opening which is advantageously shaped in the form of the cross-section of a spoon, for example, to permit a measuring spoon, spoon, or similar device to be inserted into this portion for dispensing the material on the spoon. The cover element which is associated with the plug on the container includes a skirt portion which is adapted to be permanently snapped over the container rim for securing thereto and immediately above this skirt portion there is provided rupturable material defining separate tear strips associated with lids for the respective distinct areas of the plug element. The construction is such that one of the tear strip elements may be pulled away to unfasten a single lid. The lid is hinged about the skirt portion of the closure lid and may be swung upwardly and downwardly about the hinge to open and close a distinct area of the plug element. In a preferred embodiment one of the closure lid elements which is released by removing the tear strip includes an elongated plug projection on the interior face which is adapted to extend into and close the elongated opening defined in the plug element. The other of the closure lid portions which is released includes a plurality of projection elements which are adapted to be fitted into a corresponding number of openings defined in the plug

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element to insure that these elements are tightly sealed and that any granular material which may have become lodged therearound is removed.

Accordingly, it is an object of this invention to provide a cover closing device and closure construction which comprises means for selectively opening one of two dispensing areas and including a hinged cover or lid element for each area which is adapted to be pivoted about an end for opening and closing the respective area.

A further object of the invention is to provide an improved closure element.

A further object of the invention is to provide a closure device which includes a closure plug adapted to be press-fitted onto a container, the plug including at least two portions thereon one of which includes an opening of a relatively large size, the other of which includes a plurality of small size openings for the dispensing of the material from the container.

A further object of the invention is to provide a closure device which includes a plug element of a plastic or similar material which is adapted to be snap-fitted over the container lid into sealing engagement therewith and which includes two distinct areas or portions defined thereon, one of which has an opening of a configuration of the cross-section of a spoon or similar measuring instrument, the other of which has a plurality of perforations thereon.

A further object of the invention is to provide a closure construction for a container which includes an outer closure element adapted to be press-fitted over the container, said outer closure element including a skirt portion for connection to the container, at least two separate tear strip portions above said skirt portion, at least two separate lid portions over the corresponding areas of said tear strip portions and connected thereto, said tear strip portion being severable to permit selective opening of a respective lid portion.

A further object of the invention is to provide a container closure including a combination of a plug element adapted to be press-fitted onto a container having an encircling rim, said plug element including an area defined thereon with an enlarged opening for inserting an instrument such as a spoon into the container for the removal of material therefrom, and a second area defined thereon with a plurality of perforations therein for permitting the sprinkling of the material out of the container through the openings, in combination with a closure lid including a skirt portion adapted to be pressed over the plug portion and onto the container in sealing engagement with said container and including two separable lid portions serving respective areas having tear strip means for selectively freeing a portion thereof from the closure lid, the free portion being pivotal about a remaining portion to open and close the underlying area of said plug.

A further object of the invention is to provide a closure construction which includes a plug and outer closure lid elements wherein the outer closure lid element includes means extending into the plug for guiding the movement of a closure lid portion which is defined by removing a tear strip element located between the lid portion and the closure lid.

A further object of the invention is to provide a closure device which is simple in design, rugged in construction and economical to manufacture.

The various features of novelty which characterize the invention are pointed out with particularity in the claims

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annexed to and forming a part of this specification. For a better understanding of the invention, its operating advantages and specific objects attained by its use, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated and described the preferred embodiment of the invention.

In the drawings:

FIG. 1 is a top plan view of the plug portion of the closure device constructed in accordance with the invention;

FIG. 2 is a top plan view of the complete closure with the lid portion shown closed constructed in accordance with the invention;

FIG. 3 is a fragmentary side elevation of the upper portion of a container indicating a closure construction in accordance with the invention;

FIG. 4 is a section taken on the line 4—4 of FIG. 2;

FIG. 5 is a section similar to FIG. 4 but indicating a portion of the tear strip or guarantee strip partly removed;

FIG. 6 is a view similar to FIG. 4 but with one of the closure lid portions indicated in an open position;

FIG. 7 is a section taken on the line 7—7 of FIG. 2;

FIG. 8 is a view similar to FIG. 7 but with the other of the closure lid portions indicated in an open position; and

FIG. 9 is a perspective view of the complete container with the plug thereon but with the outer closure element shown removed.

Referring to the drawings in particular, the invention embodied therein includes a container generally designed 1 having a recessed ledge portion forming an annular shoulder 28 and having an upper rim 10 formed around the open top of the container. The rectangular opening defined by the rim 10 is closed in accordance with the invention by means of a closure construction comprising a plug element generally designated 13 and an outer closure lid assembly generally designated 21.

In accordance with the invention the plug element 13 includes an annular oblique encircling wall portion 52 (FIGS. 4-7) which joins an outer bead or ledge portion 36 to form a ledge formation. The plug is inserted into the container opening by positioning the oblique wall 52 centrally within the rim 10 and by pressing the plug downwardly onto the container to force the wall 52 to move inwardly into locking engagement with the interior of the rim 10 and to cause the ledge portion 36 to fit directly over the top edge of the rim.

The plug includes an inner annular vertical wall 54 which is connected to the lower end of the oblique wall 52 and defines therewith on the opposite exterior side an internal annular groove 35. Flat top walls 2 and 3 are joined to the sides and ends of respective portions of the encircling wall 54 but they are separated by a flat bridging wall 59 which is recessed downwardly therefrom and connected to the respective raised flat walls by vertical walls 54 and 56. The flat walls 2 and 3 thus define two distinct dispensing portions or areas of the plug 13.

The flat wall 3 defines a large rectangular portion which includes a large sized aperture or opening 5 advantageously shaped in the form of a cross-section of a spoon or similar measuring instrument. The purpose of the opening 5 is to permit entry of the spoon or other measuring instrument into the container for the removal of the granulated or similar material therefrom. In addition, the area includes a cavity 22 of rectangular outline which defines a guideway for a closure lid element of the closure lid assembly 21 in a manner to be described more fully hereinafter. A flange 27 extends downwardly from the opening 5 to provide guiding means and reinforcement of the plug element at such location. The cavity 22 is defined by suitable walls which extend downwardly from the associated top wall 3.

The other portion of the plug element 13 includes the wall 2 defining a somewhat smaller rectangular area than

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the area 3 and this area is provided with a plurality of openings 4 which include annular depending walls which reinforce the area around the openings and provide guideways for the insertion of plug elements of a closure lid portion of the closure lid assembly 21. In addition, this portion also includes a rectangular cavity 32 defined by walls which extend downwardly from the wall 2 which is provided as a guideway for a projecting tab on the associated closure lid element of the closure assembly 21.

The other element of the closure construction includes the closure lid assembly 21. Both it and the closure plug are advantageously made of a molded plastic which may be snap-fitted together in respect to each other and in respect to the container with which it is to be employed. The outer closure lid element 21 includes an encircling skirt portion 60 which includes an inwardly extending annular rim or bead 37 which fits directly below the rim 10 of the container and locks the outer closure lid assembly 21 to the container in a snap fit or press fit manner. The closure lid assembly further includes an upper annular flat wall 64 which extends inwardly from the encircling wall 60. An inner skirt wall 29 extends downwardly from the inner end of the flat wall 64 and defines a cavity between it and the wall 60 for the reception of upper end of the oblique side wall 52 of the plug element and also of the rim 10 of the container. Closure lid elements 6 and 7 are supported above the flat ledge portion 64 by means of supporting hinge elements 30 and 31 for the closure lid elements 6 and 7, respectively. In addition, they are also supported by tear strips or guarantee strip elements 20 and 9 for the closure lid elements 6 and 7, respectively. As indicated in FIG. 3 tear strip element 20 may be grasped at a thumb strip portion 20' to pull away the complete tear strip 20 around one end and a rear edge of the closure lid portion 6 thereby freeing the remaining portion so that it may be hinged upwardly about the hinge elements 30.

Similarly, tear strip element 9 may be torn away by grasping the element 9 at the finger grasping portion 9' which permits the pulling away of the strip material around one edge and the next side of the tear strip element 7 to free this element so that it may be hinged about the hinge elements 31. If desired, it is possible for the user of the container with the closure construction to operate only one of the tear strips 9 or 20 in order to free an associated closure lid element 6 or 7 in accordance with which type of material dispensing is desired. If it is desired to dispense the material from the container by dusting it or spreading it in the manner of shaking, it is necessary to open the closure lid portion 7. However, if it is desired to take the material out of the container by measuring devices such as spoons, it is possible to do so by opening the closure lid portion 6. In either event whichever closure lid portion is opened, the remaining closure lid assembly remains integral with the container as a continuous protection and the individual closure lid elements may be pivoted back on their hinges to close the container after it has once been opened.

In accordance with a further feature of the invention the closure lid element 6 includes a projection or plug formation 18 with bevelled walls shaped at the inner edge in the outline of the opening 5 of the plug member 13 to permit easy entry of this end into the opening when the closure lid element 6 is closed. The upper portion of the walls of the plug element 18 are somewhat wider than the opening 5 so that these walls will be wedged in position when the closure lid 6 is fully closed. In addition, the closure lid element 6 includes an encircling lip 72 defined therearound which fits around the raised wall portion generally designated 58 of the plug 13.

The closure lid portion 6 also includes a guiding tongue or projection 74 which extends outwardly from an inner face thereof adjacent the hinge portions 30, 30 and is

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adapted to overlies the top of the top wall 58 of the plug 13 to position the closure lid 6 in an upright position when it is opened. In addition, the projection 74 is adapted to fit into the cavity 22 and functions as a guide for the closing of closure lid portion 6 to insure that the projection 18 is properly seated in the opening 5. The closure lid portion 7 advantageously includes a plurality of projecting elements or pins of a number and location to correspond to the openings 4 which are defined in the wall 2 of the plug member 13. The projecting elements 25 are of a size and configuration to cause the walls adjacent the openings 4 to be expanded slightly and to penetrate through the bottom openings therein to dislodge any material which may have accumulated around these openings and thus insure that whenever the closure lid 68 is opened the openings will be free for the pouring of material therefrom. In addition, this portion also has a projecting tongue 41 which fits into the cavity 32 defined inwardly from the face 56.

The container illustrated by way of example has a substantially rectangular cross-section but it will be readily understood that a container of circular, oval or other cross-section or shape may be employed with a similarly shaped closure construction therefor. In addition, the number and the arrangement of the different apertures of the various portions of the closure may be interchanged or rearranged in accordance with the principles of the invention.

While specific embodiments of the invention have been shown and described in detail to illustrate the application of the inventive principles, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. A closure member for a container having an opening with a rim defined at the outer end of an axially extending wall extending around the opening, comprising a plug having an encircling wall extending in an axial direction and adapted to be peripherally engaged with the container, said encircling wall being of a material and a dimension to permit the exterior periphery to be snap-fitted into engagement with the interior of the rim of the container, said plug having a first wall portion covering a first dispensing area of the container between adjacent portions of said encircling wall and having a relatively large size opening in said wall portion for the dispensing of materials therethrough, a second wall portion covering a second dispensing area adjacent the first dispensing area between portions of said encircling wall and adjacent said first wall portion and having a relatively small-sized opening therein for the dispensing of materials therefrom, and a closure lid having an encircling skirt portion extending in an axial direction dimensioned to be press-fitted over said plug and around the outside of the rim of said container, a first closure lid portion defined between opposite sides of said skirt portion hingedly connected to one side of said skirt portion and extending thereacross for covering said first dispensing area, a second closure lid defined alongside said first closure lid and extending between opposite sides of said skirt portion for covering the second dispensing area of the container, and separate tear strip elements connecting said first and second closure lid portions adjacent the periphery thereof to said skirt portion and being selectively removable said tear strips being severable from said skirt portions and the respective closure lids for selectively freeing portions of said lid for permitting opening and closing thereof.

2. A closure construction according to claim 1, wherein said tear strip elements include a first severable tear strip connecting said first lid portion to said skirt portion along its peripheral edge except on the peripheral edge portions alongside said second closure lid portion and adjacent the hinge connection to said skirt portion, a second severable tear strip connecting said second lid to said skirt portion along its peripheral edge except on

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the peripheral edge portions alongside said first closure lid portion and adjacent the hinge connection to said skirt portion.

3. A closure lid construction according to claim 1, including a projection defined on said first closure lid portion adapted to fit into the opening defined on said first wall portion of said plug.

4. A closure lid according to claim 1, including a projection defined on the interior wall of said second closure lid adapted to fit into the opening defined on said second wall portion of said plug.

5. A closure member for a container having an opening with a rim defined at the other end of an axially extending wall which extends around the opening, comprising a plug having an encircling wall extending in an axial direction and adapted to be peripherally engaged with the container, said encircling wall being of a material and a dimension to permit the exterior periphery to be snap-fitted into engagement with the interior of the rim of the container, said plug having a first wall portion covering a first dispensing area of the container between adjacent portions of said encircling wall and having a relatively large size opening in said wall portion for the dispensing of material therethrough, a second wall portion covering a second dispensing area adjacent the first dispensing area between portions of said encircling wall and adjacent said first wall portion and having a relatively small size opening therein for the dispensing of material therethrough, and a closure lid having an encircling skirt portion extending in an axial direction dimensioned to be fitted over said plug and around the outside of the rim of said container, a first closure lid portion defined between opposite sides of said skirt portion hingedly connected to said skirt portion and extending thereacross for covering said first dispensing area, a second closure lid defined alongside said first closure lid and extending between opposite sides of said skirt portion for covering the second dispensing area of the container, said second closure lid being hingedly connected to said skirt portion, separate tear strip elements connecting said first and second closure lid portions adjacent the peripheries thereof to said skirt portion and being selectively removable, said tear strip being severable from said skirt portions and the respective closure lids for selectively freeing said first and second closure lids for permitting opening and closing thereof, a projection formed on said first closure lid and extending axially outwardly from said first closure lid and adapted to engage the upper surface of said plug when said first closure lid is in an open upright position with said first closure lid disposed substantially parallel to the axis of the plug opening for supporting said first closure lid in the upright position.

6. A closure member according to claim 5 wherein said second closure lid includes a projection extending outwardly therefrom and extending substantially axially when said closure lid is in a closed position but extending substantially parallel to the axis of the associated opening of said second closure lid and resting on the exterior surface of said plug when said second closure lid is upright for supporting said second closure lid in an upright position.

7. A closure member for a container having wall means with an opening at one end, said wall means including a rim extending around the opening, comprising the combination of an outer closure lid assembly and an inner plug, said inner plug having a peripheral wall of a material and a dimension to permit it to be engaged with the rim of the container, said plug further including a first wall portion disposed at substantially right angles to said peripheral wall and covering a first dispensing area of the container between adjacent portions of said encircling wall, said first wall portion having a relatively large size opening for dispensing a material therethrough, and a second wall portion disposed at substantially right angles to said peripheral wall and covering a second dispensing area

adjacent the first dispensing area and between portions of said peripheral wall and located adjacent said first wall portion and having a plurality of relatively small size openings therein for the dispensing of material therefrom, said outer closure lid assembly being engageable over said inner plug and including first and second closure lid portions which are hingeable adjacent an edge thereof to permit said first and second closure lid portions to be pivoted about the hinge for opening respective first and second dispensing areas, said second closure lid portion having a plurality of projections of a number corresponding to the number of small sized openings of said second dispensing area which extend through corresponding ones of the small sized openings when said second closure lid portion is closed over said second dispensing area.

8. A closure member for a container having wall means with an opening at one end, said wall means including a rim extending around the opening, comprising the combination of an outer closure lid assembly and an inner plug, said inner plug having a peripheral wall of a material and a dimension to permit it to be engaged with the rim of the container, said plug further including a first wall portion disposed at substantially right angles to said peripheral wall and covering a first dispensing area of the container between adjacent portions of said encircling wall, said first wall portion having a relatively large size spoon-shaped opening large enough to permit insertion of a spoon for dispensing a material therethrough, and a second wall portion disposed at substantially right angles to said peripheral wall and covering a second dispensing area adjacent the first dispensing area and between portions of said peripheral wall and located adjacent said first wall portion and having a plurality of relatively small size openings therein for the dispensing of material therefrom, said outer closure lid assembly being engageable over said inner plug and including first and second closure lid portions which are hingeable adjacent an edge thereof to permit said first and second closure lid portions to be pivoted about the hinge for opening respective first and second dispensing areas, said second closure lid portion having a plurality of projections of a number corresponding to the number of small sized openings of said second dispensing area which extend through corresponding ones of the small sized openings when said second closure lid portion is closed over said second dispensing area, said closure lid assembly including an encircling skirt portion adapted to engage around the rim of said container, said first and second closure lid portions being hingedly connected to said skirt portion.

9. An outer closure construction for a container having a wall with an opening and with a rim defined around the opening and with the opening closed by a plug engaged around said rim, comprising a skirt portion having an encircling wall adapted to be fitted over the container rim, a first closure lid extending at substantially right angles to said encircling wall and being hinged adjacent an edge of said first closure lid permitting pivotal opening and closing movement of said first closure lid, said first closure lid extending between opposite sides of said skirt portion for covering a first dispensing area of the container, said first closure lid having at least one plug projection extending downwardly into the container when said first closure lid is in a closed position over the plug, a second closure lid defined alongside said first closure lid and being hinged adjacent an edge of said second closure lid for pivotal opening and closing movement, said second closure lid extending at substantially right angles to said skirt portion and disposed between opposite sides thereof and having a continuous curved projecting tongue extending downwardly into the container when said second closure lid is in a closed position over the plug, and tear strip means extending around respective peripheries of said first and second closure lids and connected to said skirt portion and being severable therefrom to free said first and second closure lids from said skirt portion to permit separate

pivotal hinged movement of said first and second closure lids.

10. An outer closure construction for a container having a wall with an opening and with a rim defined around the opening and with the opening closed by a plug engaged around said rim, said plug having a first wall portion adjacent one end with a relatively large sized dispensing opening and a second wall portion adjacent the opposite end having a plurality of relatively small sized shake-out openings, comprising a skirt portion having an encircling wall adapted to be fitted over the container rim, a first closure lid extending at substantially right angles to said encircling wall and being hinged adjacent an edge of said first closure lid permitting pivotal opening and closing movement of said first closure lid, said first closure lid extending between opposite sides of said skirt portion for covering a first dispensing area of the container, said first closure lid having a projecting flange extending axially when closed into the large sized opening of said plug and a second closure lid defined adjacent said first closure lid and being hinged adjacent an edge of said second closure lid for pivotal opening and closing movement, said second closure lid extending at substantially right angles to said skirt portion and disposed between opposite sides thereof, said second closure lid having a plurality of projecting elements extending axially when closed into respective small sized openings of said plug.

11. A closure construction for a container having a top wall with an opening and a rim defined around the opening, comprising a skirt portion having an encircling wall extending substantially axially and adapted to be engaged around the container rim, and first and second closure lid members extending at substantially right angles to said encircling wall and defined in at least a portion of the area encompassed by said wall, said first closure lid member being hinged to said skirt portion adjacent one side thereof, said second closure wall being hinged to said skirt portion on an opposite side of said skirt portion from said first closure lid, said first and second closure lids being disposed in side by side relationship when closed but being separated from said skirt portion along the adjacent abutting edges of said first and second closure lids, a first tear strip extending around a portion of the periphery of said first closure lid and connecting said first closure lid to said skirt portion except in the area of said hinge and along the side of said first closure lid which is adjacent said second closure lid, and a second tear strip disposed around a portion of the periphery of said second closure lid and connecting said second closure lid to said skirt portion except in the area of the hinge and along the side of said second closure lid adjacent said first closure lid.

12. A combination outer and inner closure for a container having a wall with an opening and a container rim defined around said opening, comprising an inner closure plug member adapted to be engaged over the rim of said container and having a substantially flat top wall adapted to extend over the container opening with a relatively large sized opening and at least one small sized opening in said top wall and an outer closure lid, said outer closure lid comprising first and second closure lid portions adapted to be positioned over said plug and having an encircling skirt connected peripherally around said flat top wall and adapted to be engaged on said plug, said first and second closure lid portions being pivotal about their respective hinged edges to permit pivot opening and closing movement thereof, said first and second closure lid portions being located, when closed, to close the large opening and the small opening, respectively, said first closure lid portion having a projecting tongue which projects into the large sized opening of said plug when in a closed position and said second closure lid portion having a projection which extends into the small sized opening of said plug when in a closed position.

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