

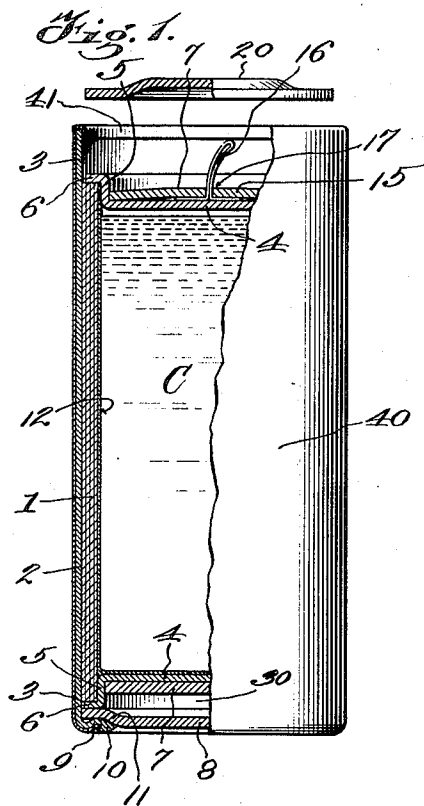
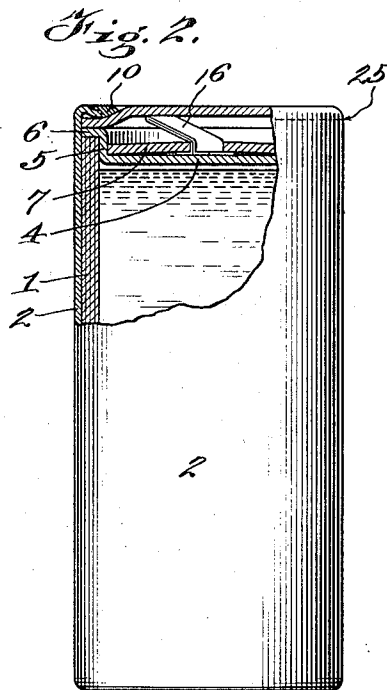
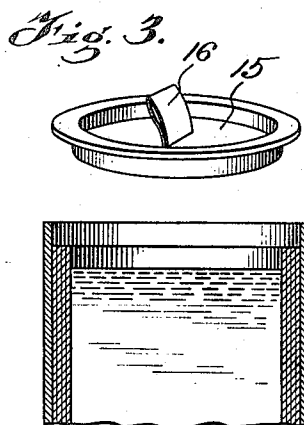
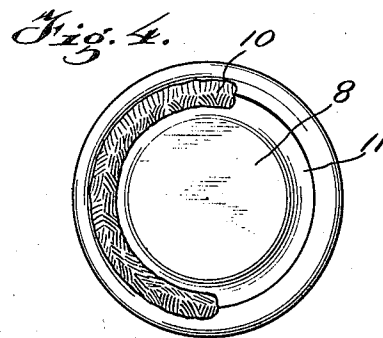
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G. E. GRIMM

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CONTAINER

Filed Jan. 15, 1923



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UNITED STATES PATENT OFFICE.

GERHARDT E. GRIMM, OF NEW YORK, N. Y.

CONTAINER.

Application filed January 15, 1923. Serial No. 612,675.

To all whom it may concern:

Be it known that I, GERHARDT E. GRIMM, a citizen of the United States, and resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Containers, of which the following is a specification.

My invention relates to containers which, while not definitely limited in size, are especially adaptable and desirable for packing commodities in small quantities.

The general object of the invention is to provide an inexpensive container which is well adapted to enclose and preserve a great variety of substances, such as various food products, including jellies, jams, marmalades, etc., and other substances, and which may be, and is preferably, so constructed and "closed" as to substantially prevent loss of moisture to the contents, or is in preferred cases hermetically sealed.

A more particular object is to provide a container of relatively cheap, fibrous material, such as paper stock of various suitable grades or characters, which is adapted to replace glass or metal containers now extensively used, with various advantages over such containers in addition to cheapness.

Another object is to provide an inner removable and replaceable cover, in addition to an outer, "permanent" seal or cap.

The characteristics and advantages of the invention are further sufficiently explained in connection with the following detail description of the accompanying drawings, which show one representative embodiment of the invention. After considering this embodiment, it will be understood that various modifications may be made within the principles of the invention, and I do not limit myself to details except as claimed hereinafter.

Fig. 1 is a view, partly in elevation and partly in longitudinal section, of a container embodying the invention in one form, filled and ready for capping and sealing.

Fig. 2 shows the container closed or sealed.

Fig. 3 shows the container opened by removing the outer cover or cap, and with the contents exposed by removal of the inner, replaceable cover.

Fig. 4 is an end view of the closed or sealed container.

The inner shell or body 1 of the container

is preferably made of sheet fibrous material such as a suitable grade of card-board rolled in cylindrical form to the desired thickness according to any known or suitable method of preparing such tubes. The outer shell 2 may be similarly formed but is usually thinner than the inner shell and has end portions 3 projecting considerably beyond the ends of the inner body 1. At a suitable stage in the manufacture of the complete body it may be suitably treated to provide the desired moisture-proof qualities. According to one procedure the inner shells or bodies 1 prior to the application of the outer body or layer 3 may be immersed in heated and liquefied wax or paraffin and thoroughly impregnated with this water-proofing material and then the outer layers 3 may be wound upon the inner body. Otherwise, the entire body structure consisting of the members 1 and 2 may be similarly water-proofed. In some cases any such moisture-proof treatment may be omitted.

One end of the complete shell or body may be provided with any suitable permanent closure which is not necessarily similar to the other end closure, presently to be described; but in many cases it is desirable to provide a bottom or permanent closure which is in most respects substantially similar to the other or top end closure. In this case a piece 4 of suitable material such as card-board of substantial thickness is pressed or otherwise formed with an outer wall 5 extending at right angles from the body portion and with a flange 6 extending outward from the wall 5. This member is desirably reinforced by a disk 7 which is of card-board and which may be somewhat thicker than the material of the member 4, inserted and secured by adhesive or otherwise against the outer face of the member 4 within the recess provided by the wall 5. The complete closure member is then inserted in the position shown in Fig. 1 and may be secured in any suitable way. Desirably for securing the complete closure member 4 and completing the permanent or bottom closure, another piece or disk 8 of card-board of substantial thickness is inserted within the bottom extension 3 so that it rests on the flange 6, and then the material of the wall extension 3 is rolled or pressed inward with accompanying treatment of moisture or heat according to any suitable or known methods

of handling such materials, producing an in-turned bead or flange 9 which engages the margin of the closure member 8 and holds it and the inner closure member 4-7 securely in position with the flange 6 of the inner closure tightly secured against the end of the body member 1.

When desired the closure may be additionally sealed by the application of a narrow strip or ring of a suitable wax 10 to the joint or intersection of the bead or flange 9 with the outer closure member 8; and when this method of hermetic sealing is employed the outer closure member 8 is preferably provided in dished form so that when it is put in position, as shown in Fig. 1, an annular depression 11 is formed adjacent the edge of the bead 9, this depression serving to define a narrow channel for the convenient application of the sealing material 10 with the objects of properly locating the sealing material and increasing the effectiveness of the seal and also economizing the sealing material.

The container may then be additionally treated interiorly to increase its moisture-proof qualities or to prevent penetration of the container by the contents. One such treatment consists in a thin layer 12 of wax or other suitable material applied to the interior of the casing consisting of the body members 1 and 2 and the permanent bottom closure. Or such a protecting layer may consist of celluloid or a material analogous to celluloid which may be brushed on the interior of the casing while liquid, or the liquid celluloid or similar material may be poured into the casing in such a way that it coats the entire interior surface and the surplus may then be poured off and the remaining coating permitted to harden, producing a complete, homogeneous, durable and impervious inner lining or coating. Otherwise, the inner coating or surfacing of the container may consist in a sheet of tinfoil or other suitable material and this may be applied in the process of manufacture of the body member 1 by connecting a strip of the tinfoil or other material to the strip of body material, the connected strip of tinfoil or the like being long enough to form the inner layer or surface of the body member.

The container is then filled with any suitable commodity C which may be any of a great variety of food products including liquid, semi-liquid, moist, oily, or other materials, which are well maintained in the proper condition by the nature of the container; and the nature of the container, including its treatment to render it impervious to such materials, also prevents injury of the container itself as well as any deterioration of the contents even when the commodity remains in the container for a

long time. The container may thus be used instead of glass or metal containers for food products or other articles which it may be desired to pack and keep in the original containers for a long period of time before they are utilized.

The top closure or closure members are then applied. Conveniently the top closure is in two parts, one of which, 15, is substantially similar to the inner closure member 4-7, previously described, except that, desirably, a handle or lifter 16 is provided on this inner member, this handle consisting in the present embodiment of a piece of tape doubled and passed through a slot 17 in the closure member 7 and having its ends extending between the closure member 7 and the member 4 and secured adhesively or otherwise.

The inward face of the inner closure member 15, which may be conveniently designated as the cover, may be treated in any of the ways suggested in connection with the container proper to render it moisture-proof or impermeable to the contents. The cover 15 is most desirably not secured in position except by the application of another closure member upon it, for reasons which will appear.

The other top closure member or cap 20 is then inserted and this may be constructed substantially in accordance with the bottom closure member 8 previously described. The edge of the upper body extension 3 is then pressed or rolled in and when desired sealing material such as wax 10 is applied as in the case of the bottom closure, producing the completed sealed container as shown in Fig. 2, which may be handled, packed and shipped with the same security and facility as the ordinary glass and metal containers, with the further great advantages of lower first cost, lighter shipping weight, and greater compactness due to the cylindrical form, as compared with many forms of glass containers.

When it is desired to gain access to the container contents a cut is made through the outer wall or shell 2 at the point indicated by the dotted line at 25, Fig. 2, and this cutting line may be designated on the outside of the container by a suitable inscription. The outer closure member or cap 20 is either removed in the act of cutting through the outer wall, or it may be easily removed, giving access to the inner closure or cover 15, and the handle 16 of this cover may then be grasped and the cover removed and replaced after the desired amount of the contents has been removed, the cover thus acting as an easily removable and replaceable cover until the contents of the container are entirely utilized. The wall 5 of the cover may be made to fit quite snugly within the upper end of the body portion 1

so that the contents may be kept practically air-tight during its utilization.

It is therefore evident that the top closure provides a convenient, easily removable and replaceable cover for use after the container is opened by removing the outer seal or cap 20.

The desired end closure structure provides spaces or chambers 30 between the inner and outer closure members, or otherwise provides substantially a cushioned end structure which is well calculated to resist shocks or strains applied at the ends of the container and to prevent crushing or deformation of the main body portion.

When desired the outer surfaces of the body may be provided with a finishing sheet or outer layer which may consist of a sheet of paper 40 of suitable grade or quality and this may, of course, if desired, be imprinted with any suitable indicia or decorative or advertising design. This cover layer or paper may extend to the outer ends of the extensions 3, and the end margins 41 of the cover paper may in some cases be turned in upon the inner margins of the extensions. Otherwise the cover paper may extend over a greater or less part of the length of the outer cylindrical surface of the container.

Instead of impregnating the body material 1 with a waxy substance, the desired waterproof or impermeable qualities may be imparted by the application of other material such as silicate of soda in solution, and this may be applied to the strip material as it is being rolled into cylindrical form. This material hardens quickly and acts as a cement to hold the layers together and also renders the wall of the body impermeable to oily or greasy material.

I claim:

1. A commodity container comprising a tubular body of sheet fibrous material having a bottom closure and an internal shoulder adjacent the top, an inner top closure member having its margin resting on said shoulder, and an outer closure member resting on said inner member, a portion of the container body above the shoulder being intumed upon a margin of the outer closure member to secure the closure members in position.

2. A commodity container comprising a tubular body of sheet fibrous material having a bottom closure and an internal shoulder adjacent the top, an inner top closure member having its margin resting on said shoulder, and an outer closure member resting on said inner member, a portion of the container body above the shoulder being intumed upon a margin of the outer closure member to secure the closure members in position, the cap having an annular depression adjacent the intumed body edge, and sealing material located in the depression.

3. A commodity container of fibrous material comprising a cylindrical body having a bottom closure and an internal shoulder adjacent the top, a removable and replaceable cover having a cylindrical wall portion engaging within the body adjacent to said shoulder and having a flange resting on said shoulder, and an outer closure disc resting on said flange, a portion of the container body wall being intumed upon a margin of the disc to secure the closure members in position.

4. A commodity container of fibrous material comprising a cylindrical body having a bottom closure and an internal shoulder adjacent the top, a removable and replaceable cover having a cylindrical wall portion engaging within the body adjacent to said shoulder and having a flange resting on said shoulder, and an outer closure disc resting on said flange, a portion of the container body wall being intumed upon a margin of the disc to secure the closure members in position, the body material being impregnated with a substance impervious to liquid contents.

5. A commodity container of fibrous material comprising a cylindrical body having a bottom closure and an internal shoulder adjacent the top, a removable and replaceable cover having a cylindrical wall portion engaging within the body adjacent to said shoulder and having a flange resting on said shoulder, and an outer closure disc resting on said flange, a portion of the container body wall being intumed upon a margin of the disc to secure the closure members in position, the cap having an annular depression adjacent the intumed body edge, and sealing material located in the depression.

6. A container comprising an inner cylindrical body portion, an outer body portion having an end projected beyond the inner portion, a removable cover including a wall fitting within the end of the inner body portion and a flange adapted to rest on the end of said inner body portion, and a cap disk resting on said flange, said projecting wall portion being intumed and secured upon the margin of the cap.

7. A container comprising an inner cylindrical body portion, an outer body portion having an end projecting beyond the inner portion, a removable cover including a wall fitting within the end of the inner body portion and a flange adapted to rest on the end of said inner body portion, a cap disk resting on said flange, said projecting wall portion being intumed and secured upon the margin of the cap, and sealing material applied to the edge of said intumed portion and the adjacent surface of the cap.

8. A container comprising an inner cylindrical body portion, an outer body portion having an end projecting beyond the inner

portion, a removable cover including a wall fitting within the end of the inner body portion and a flange adapted to rest on the end of said inner body portion, a handle projecting outward from the cover, and a cap disk resting on said flange, said projecting wall portion being inturned and secured upon the margin of the cap.

9. A container comprising an inner cylindrical body portion of multi-ply fibrous material, an outer body portion having an end projecting beyond the inner portion, a dished removable cover of fibrous sheet material including a wall member fitting within the end of the inner body portion and a flange adapted to rest on the end of said inner body portion, and a cap disk of fibrous sheet material resting on said flange, said projecting wall portion being inturned and pressed upon a margin of the cap.

10. A container comprising an inner cylindrical body portion of multi-ply fibrous material, an outer body portion having an end projecting beyond the inner portion, a dished removable cover of fibrous sheet material including a wall member fitting within the end of the inner body portion and a flange adapted to rest on the end of said inner body portion, a cap disk of fibrous sheet material resting on said flange, said projecting wall portion being inturned and pressed upon a margin of the cap, and waxy sealing material applied to the edge of said inturned portion and the adjacent surface of the cap.

11. A container comprising an inner cylindrical body portion of multi-ply fibrous material, an outer body portion having an end projecting beyond the inner portion, a dished removable cover of fibrous sheet material including a wall member fitting within the end of the inner body portion and a flange adapted to rest on the end of said inner body portion, a flexible tape handle projecting outward from the cover, and a cap disk of fibrous sheet material resting on said flange, said projecting wall portion being inturned and pressed upon a margin of the cap.

12. A container comprising a cylindrical body of fibrous material having an inward shoulder near one end, a cover consisting of a dished disk of fibrous sheet material having a wall adapted to fit within the body below said shoulder and a flange at the outer edge of said wall adapted to rest on said shoulder, a reinforcing disk inserted within

the dished portion of the cover, a handle projecting outward from said reinforcing member and secured between said member and the central portion of the cover disk first named, a closure gap resting on said flange, and means securing the cap in position.

13. A container of fibrous sheet material comprising a cylindrical multi-ply body having internal shoulders near the ends, inner closures consisting of dished disks of fibrous sheet material having walls adapted to fit within the body adjacent to said shoulders and flanges at the outer edges of said walls adapted to rest on said shoulders, reinforcing disks inserted within the dished portions of the covers, a handle projecting outward from one of said reinforcing members and secured between said member and the central portion of its cover disk first named, closure caps resting on said flanges, and means for securing the caps in position.

14. A container of the class described consisting of paper or similar fibrous sheet material and comprising a cylindrical body portion having an internal shoulder and an outer wall extending beyond the shoulder, the body being treated to render it impermeable, an inner sealing member or cover having a flange resting on said shoulder, and an outer sealing member or cap resting on the flange, said extension being turned in and secured against the margin of the cap, and an annular seal of cementitious material applied to the outer surface of the cap and the margin of said inturned extension.

15. A container of the class described consisting of paper or similar fibrous sheet material and comprising a cylindrical body portion having an internal shoulder and an outer wall extending beyond the shoulder, the body being treated to render it impermeable, an inner sealing member or cover having a flange resting on said shoulder, and an outer sealing member or cap resting in the flange, said extension being turned in and secured against the margin of the cap, the inner surface of the body being coated with impermeable material, and an annular seal of cementitious material applied to the outer surface of the cap and the margin of said inturned extension.

Signed at New York, in the county of New York and State of New York this 12th day of January A. D. 1923.

GERHARDT E. GRIMM.