Nov. 23, 1943. J. D. GERAHTY 2,334,817

CONTAINER

Filed Aug. 31, 1942

Fig. 1

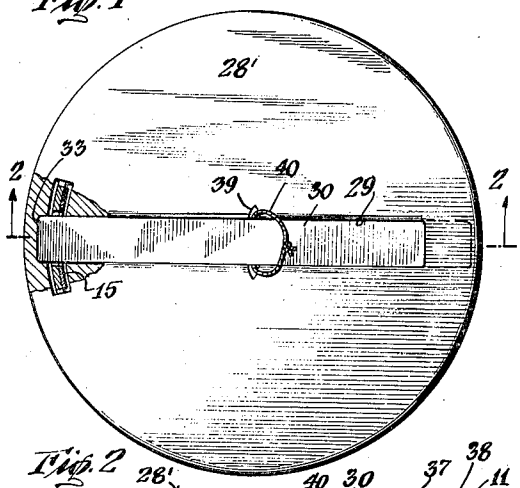


Fig. 2

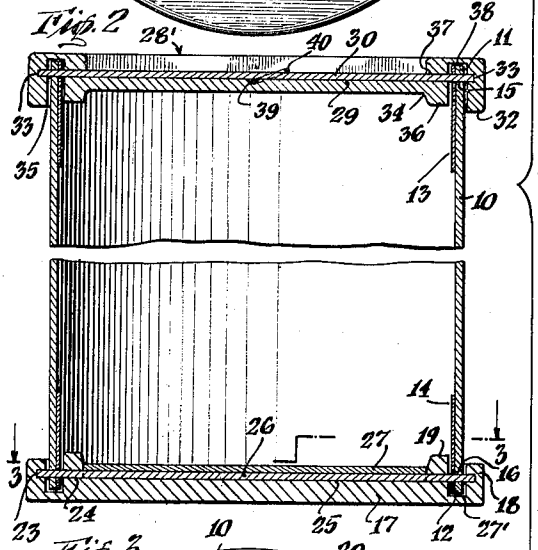


Fig. 3

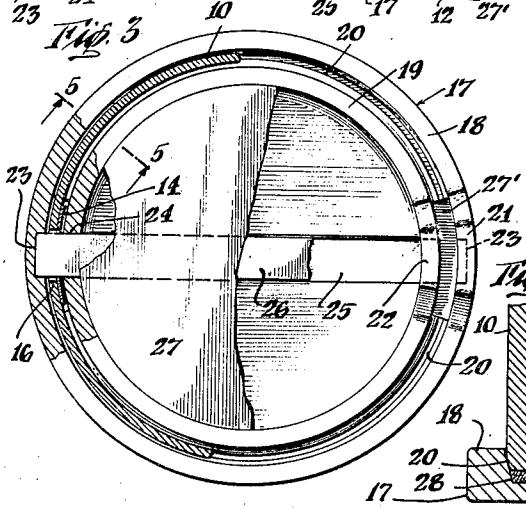
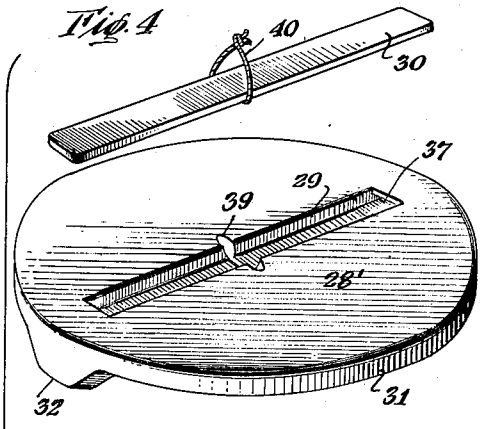


Fig. 4



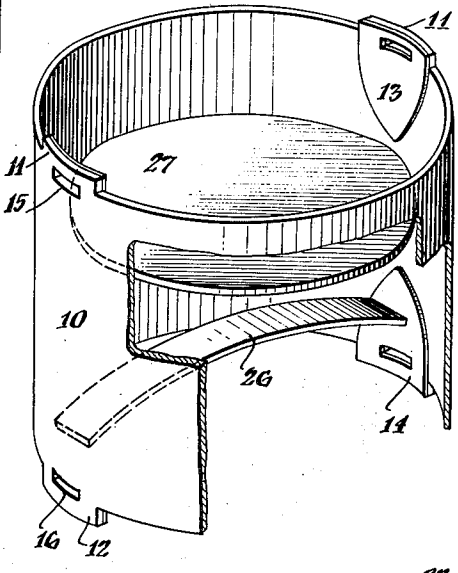
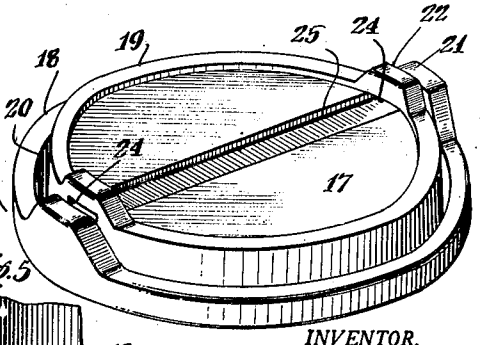


Fig. 5



INVENTOR.

James D. Gerahty

BY

Townsend & Decker

ATTORNEYS

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2,334,817

CONTAINER

James D. Gerahty, New York, N. Y.

Application August 31, 1942, Serial No. 456,740

7 Claims. (Cl. 229—45)

The principal object of the invention is the production of a non-metallic container adapted for the shipment or storage of a number of commodities of varying types, and including foodstuffs, which commodities may be either solid, semisolid and, in some cases, liquid in character if the meeting edges of the body of the container with its cover and base are properly sealed. The use of the invention is particularly desirable at the present time in view of the prevailing metal shortage as metal does not enter into the construction of the container or of the component parts.

A further object of the invention is the production of a container of the above character which shall be leak-proof for all practical purposes and which in its preferred form shall comprise a cylindrical body constructed of a paper-like material and a base and cover constructed preferably of a hardened clay-like or plastic material which shall possess rigidity and strength and act as supporting and strengthening members for the body of the container.

A further object of the invention is the production of a container having the above characteristics which shall be resistant to fracture and abuse incident to ordinary handling.

A further object of the invention is the production of a container of the above character, the component parts of which may be manufactured with facility and expedition and which may be assembled together to form the completed package in a minimum of time.

Other and further objects of the invention will be apparent as the description thereof proceeds, the invention consisting in the novel container and inter-related parts thereof all as hereinafter more particularly described and then specified in the claims.

In the accompanying drawing illustrating a practical embodiment of the container of the invention:

Fig. 1 is a plan view of the container.

Fig. 2 is a horizontal section on the line 2—2 of the Fig. 1.

Fig. 3 is a horizontal section on the line 3—3 of Fig. 2.

Fig. 4 is an exploded perspective view of the various elements making up the completed container prior to their assembly, and

Fig. 5 is a section on the line 5—5 of Fig. 3.

Referring in detail to the several figures of the drawing:

The body of the container is indicated at 10 and it comprises a cylinder or tube made of a paper-like or analagous material the thickness and consequent strength of which may vary depending on the use for which the container is employed. The method of manufacturing such tubes or cylinders is very old in the art and forms no part of the present invention. Needless to say, however, they may be made of appreciable strength and stiffness and of varying sizes. The peripheral upper and lower edges of said body 10 are provided with outwardly extending, diametrically opposed ears or tabs 11 and 12 respectively which are integral with the body 10. Said ears or tabs are, by preference, reenforced by reenforcing strips or elements 13 and 14 respectively which may be made of any desirable material. The reenforcing strips follow the contour of the ears or tabs and extend downwardly or upwardly, as the case may be, within the body and are securely fastened to the ears or tabs and to the body by any suitable adhesive or by any other suitable fastening means. Such reenforcing strips or elements 13 and 14 act as stiffeners and strengtheners for the ears or tabs and make them resistant to bending or cracking.

Manifestly, the cylinder or tube 10 including the ears or tabs 11 and 12 as well as the reenforcing elements 13 and 14 may be impregnated or coated or lined with any suitable liquid or material either for stiffening purposes or to render them inert to the chemical or other action of the contents of the container. Also, if so desired, the inner surface of the cylinder may be coated with sanitary lacquer should the contents of the container make that advisable or desirable. The body 10, in addition, is provided therein with diametrically opposed locking slots 15 and 16 respectively which extend within and through the aforesaid ears or tabs and through the adjacent reenforcing elements 13 and 14.

The circular base of the container is indicated at 17. It is constructed preferably of a non-metallic substance such as a hardened clay-like or plastic material made of a size to interfit with the body 10. Said base is provided with an outer circumferential upstanding rim or wall 18 and an inner circular upstanding flange or bead 19 forming an inner circular wall separated from the outer wall to form a circular channel 20 preferably of V-shaped configuration for reception of the lower edge of the body 10. The outer wall 18 and the inner flange or wall 19 are provided with opposed projecting strengthening portions or bosses 21 and 22 respectively which are in substantial alignment. The projecting portions 21 are grooved as at 23 forming interiorly disposed sub-

stantially concealed grooves while the projecting portions 22 are slotted as at 24. Said grooves and slots align with each other as well as with a diametrically disposed groove 25 formed in and extending transversely across the base 17. A spring-like locking strip is indicated at 26 and is of a size to enable it to snugly interfit with the transverse groove 25. Said strip may be composed of any flexible springy material such as wood. A closure disk or seal made preferably of a paper-like material is indicated at 27 and its function will be presently described. The channel 20 adjacent the projections 21 and 22 is provided with downwardly extending grooves 27' communicating with the channel and of a size and depth permitting them to snugly receive the tabs 12.

To lock the cylindrical body 10 to the base 17, the lower edge of the body is inserted within the V-shaped groove 20 and forced therein by pressure to compress and wedge such lower edge and make it conform to the configuration of the groove and thus effect a tight seal between the body and base. When the edge of the body is so inserted the tabs 12 are received by the grooves 27'. If so desired any suitable sealing material 28 may also be employed which is first poured or inserted within the groove 20 to enhance the sealing operation. Before the lower edge of the body is compressed within said groove, as described, a locking strip 26 is forced upwardly within the body in deformed position as shown in Fig. 4 with its ends in alignment with the slots 16. In the assembly operation inasmuch as the tabs 22 are inserted in the grooves 27' the parts are so proportioned and positioned as to enable the slots 16 to align with the grooves 23 and slots 24 hereinbefore referred to. After the lower edge of the body has been forced within the groove 20 with the parts relatively positioned with respect to each other in the manner explained, the locking strip 26 is pressed downwardly from the upper open end of the body 10 and into the groove 25 whereby the ends of the strip will automatically snap through the slots 24 and 16 and into the concealed grooves 23 the walls of which provide stops for the ends of said locking strip. The locking strip, accordingly, not only locks the body to the base but it prevents relative rotation of one member with respect to the other. Such relative rotation is further resisted by the engagement of the tabs 12 with the grooves 27'.

When in locked position, the locking strip 26 interfits with the groove 25 and lies snugly therein in undeformed and flat condition and its upper surface is flush with the upper surface of the base 17. To hide these parts from view and to prevent their interference or contamination with the contents of the container the disk 27 is inserted downwardly therein and within the base and over the groove 25 and locking strip 26 and it is held in assembled and sealed position by tight frictional engagement of its peripheral edge with the inner wall of the upstanding flange 19.

The cover of the container is indicated at 28' and its construction is very similar to that of the base previously described and, as in the case of the base, it is constructed of a non-metallic substance such as a hardened clay-like or plastic material. The cover interfits with the body 10 and it is provided with a transverse diametrically disposed groove 29 of predetermined length. A locking strip 30 is also provided which interfits with said groove but is of longer length than that of the groove.

A circumferential outer depending flange of the cover is indicated at 31 and it is provided with bosses or projections 32 in alignment with the groove 29 and each of which is provided with a concealed groove 33 therein. An inner depending flange or wall 34 is also provided for the cover and it is spaced from the outer flange 31 to form a circular channel 35, which, as in the case of the base, may be of V-shaped character which receives the upper edge of the body 10. The inner flange or wall is also provided with enlargements or bosses 36 in alignment with the bosses 32 and groove 29 and said bosses 36 are slotted as at 37 for reception of the ends of the locking strip 30. The channel 35 is also provided with grooves 38 communicating with the channel and of a size permitting them to snugly receive the tabs 11.

To detachably fasten the cover 28' to the body 10, the cover is placed on the body in such manner as to force the tabs 11 in the grooves 38 whereby the upper edge of the body will enter the circular channel 35. When in this position the transverse groove 29 registers with the locking slots 15 in the body adjacent the tabs 11. The locking strip 30 is then deformed or bent and inserted within the groove 29 in such manner that its ends will extend through the slots 37 and 15 and into the concealed grooves 33 the walls of which provide stops therefor. When in locking position the strip 30 lies snugly within the groove 29 and it is preferably flush with the outer surface of the cover 28'. For convenience of removing the cover it is provided with a cross-groove 39 intersecting the groove 29 centrally thereof and within which a loop 40 of cord or similar material is seated and through which the strip 30 extends. By grasping the loop 40 and pulling it in a direction away from the container the locking strip, obviously, is withdrawn from its locking position.

The device as described will be found useful for shipping and storing any number of commodities and will be found to be leak-proof in character excepting possibly in the case of a commodity which comprises or contains a very thin liquid. On the other hand, should the commodity contain some moisture, a certain amount of it will be absorbed by the body of the container which is apt to cause a slight expansion of the body and thus assist in sealing its edges within the channels in the base and cover. A commodity of heavy character likewise will assist in the sealing operation as its weight will tend to force the edges of the body outwardly to jam or wedge them into the channels in the base and cover and into better or more effective sealing position.

It will be understood that in some cases the tabs 11 and 12 may be omitted as well as the reenforcing elements 13 and 14 in which cases the necessity for providing the grooves 27' and 38 disappears.

The invention claimed is:

1. A container comprising a cylindrical paper-like body provided with diametrically opposed slots adjacent the upper edge thereof, a base connected to said body, a rigid detachable cover of a non-metallic hardened material interfitting with the body and provided with spaced flanges integral therewith forming a groove snugly receiving the upper edge of the body, one of said flanges being slotted for registry with the aforesaid slots and a locking element for holding the cover to the body and extending through said registering slots.

2. A container comprising a cylindrical paper-

like body provided with diametrically opposed slots adjacent its edges and a cover and base interfitting with said body and composed of a non-metallic hardened material and each having a peripheral flange and an inner circular flange integral therewith to form a channel receiving an edge of the body with the peripheral flange oppositely grooved and the circular flange diametrically slotted in alignment with the grooves and a locking element entering the slots in the body and said grooves and slots in said peripheral and circular flanges respectively.

3. A container comprising a cylindrical paper-like body provided with diametrically opposed slots therein, tab members extending from the edges of said body and a cover and base of substantially similar construction interfitting with said body and composed of a non-metallic hardened material and each having a peripheral flange and an inner circular flange integral therewith and spaced from said peripheral flange to form a channel having a tab-receiving groove communicating with said channel, said channel receiving an edge of said body with a tab extending within said tab-receiving groove, said peripheral flange being provided with diametrically disposed grooves therein and said circular flange being provided with diametrically disposed slots therein in alignment with said grooves and a locking element entering the slots in the body and said grooves and slots in said peripheral and circular flanges respectively.

4. A container comprising a cylindrical paper-like body provided with diametrically opposed slots therein and a cover and base of substantially similar construction interfitting with said body and composed of non-metallic hardened material and each having a peripheral flange and an inner circular flange integral therewith and spaced from said peripheral flange to form a circular V-shaped channel snugly receiving an end of the body and each also having a transverse groove extending therethrough in one side thereof with the peripheral flange provided with concealed grooves and the circular flange diametrically slotted in alignment with said transverse groove and concealed grooves and a spring-like locking strip received by said transverse groove and extending through the opposed slots in the body, through the slots in the circular flange and into said concealed grooves in the peripheral flange.

5. A container comprising a cylindrical paper-like body provided with diametrically opposed slots adjacent an end thereof and a rigid cover and base of a non-metallic hardened material interfitting with the body, said base being provided with a peripheral flange and a circular flange spaced therefrom to form a circular channel receiving the aforesaid end of said body, said peripheral flange having concealed grooves therein and said circular flange having opposed slots registering with said concealed grooves, a locking element extending through the slots in the body and the circular flange and into the concealed grooves and a closure disk frictionally engaging a wall of the circular flange and covering said locking element.

6. A container comprising a cylindrical paper-like body provided with diametrically opposed slots adjacent the upper edge thereof, a base secured to said body, a rigid removable cover formed of a hardened non-metallic material and having a transverse groove in the upper side thereof and provided with a peripheral flange and a circular flange spaced therefrom to form a channel receiving the upper edge of the body, strengthening boss members on said peripheral flange provided with concealed grooves therein, strengthening boss members on said circular flange provided with slots therein in alignment with said transverse groove and said concealed grooves and a spring-like locking strip interfitting with said transverse groove and extending through the slots in the body, the slots in the bosses on the circular flange and into the said concealed grooves.

7. A container comprising a cylindrical paper-like body provided with slots adjacent the upper edge thereof, a base secured to said body and a removable cover interfitting with said body and composed of a non-metallic hardened material and provided with a peripheral flange and an inner circular flange integral therewith and spaced therefrom to form a channel snugly receiving the upper edge of said body, said circular flange being provided with slots positioned so as to register with the slots in said body and locking means extending through the registering slots to detachably lock said cover to said body.

JAMES D. GERAHTY.