

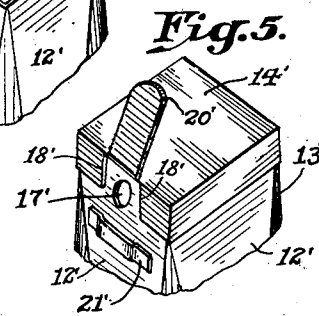
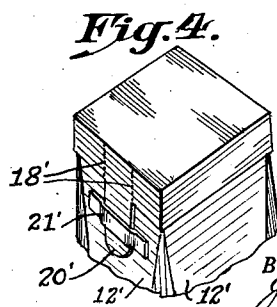
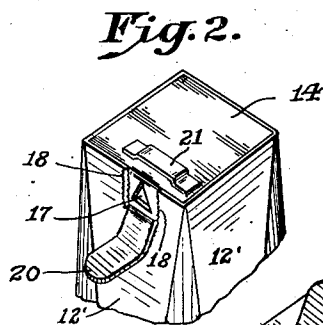
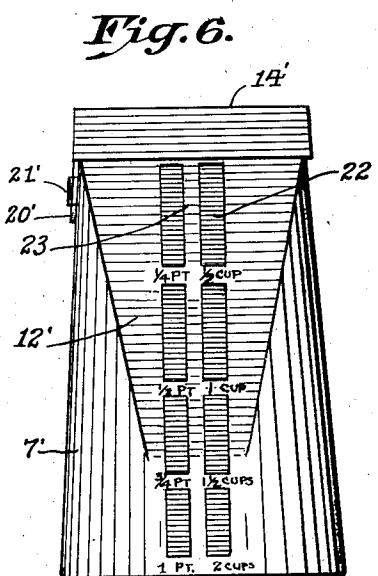
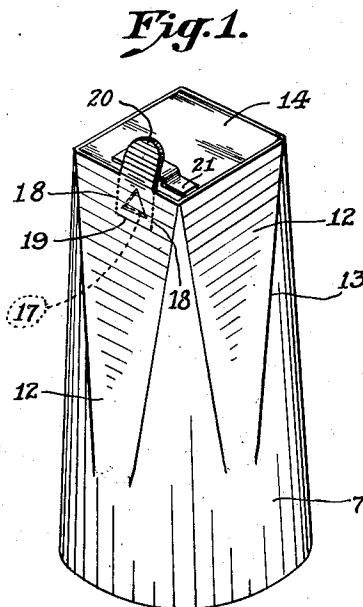
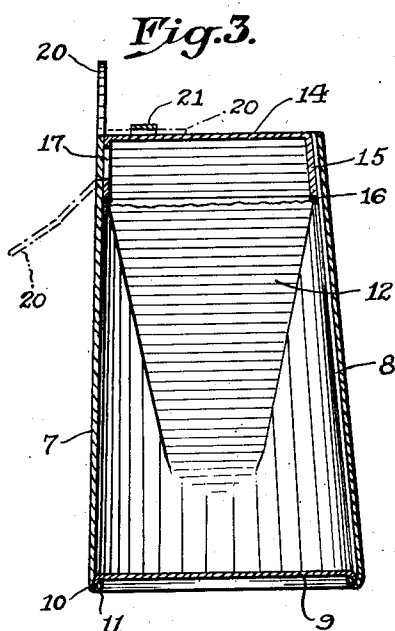
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PAPER RECEPTACLE

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PAPER RECEPTACLE

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16 Claims. (Cl. 229—7)

My invention relates to receptacles and particularly to paper receptacles for various commodities in liquid, powder, solid or other form.

An important object of the invention is to provide receptacles made of flexible material such as relatively heavy paper or various types of cardboard, and characterized by substantial strength and rigidity so that they may be filled, transported, and handled with facility and with practically no danger of breakage or leakage.

Another important object of the invention is to provide receptacles of the above type with sealed closures, and an opening in either the body of the receptacle normally closed by a tab or part on one of the closures, or an opening in the closure normally closed by a tab or part on the body of the receptacle, whereby the contents may be dispensed without removing the closures.

A further object of the invention is to provide means for covering the opening when desired after the tab or part which originally sealed the opening has been moved to break the seal and expose the opening.

Another object of the invention is to provide means in connection with a receptacle of opaque or translucent character to indicate the quantity of material in the receptacle without opening it for inspection, and such means further serving as a measuring guide for dispensing purposes.

All of the foregoing and other objects and advantages of the invention and the means whereby they are accomplished will be pointed out and specifically referred to during the course of the following detailed description of the accompanying drawing, wherein are shown preferred illustrative embodiments of the invention, and in which

Fig. 1 is a perspective view of a receptacle illustrating one embodiment of the invention;

Fig. 2 is a fragmentary view of the top of the receptacle shown in Fig. 1, showing the dispensing opening uncovered;

Fig. 3 is a vertical central sectional view through the receptacle of Fig. 1;

Figs. 4 and 5 are views similar to Fig. 2, showing a modified type of top closure with the dispensing opening closed and uncovered, respectively; and

Fig. 6 is an elevation of one side or wall of a receptacle showing content indicating or pouring guide means applied thereto in accordance with my invention.

Referring to Figs. 1-3, the numeral 7 designates the sides or walls of the receptacle formed preferably from a sheet of relatively flexible card-

board or heavy paper of predetermined size according to the capacity of the receptacles to be formed. The walls 7 are formed from the sheet by rolling the sheet to cylindrical form and securing the overlapping longitudinal edges together as at 8 with any suitable adhesive. One end of the receptacle is closed by an end closure 9 in the form of a disc having depending flanges 10 around which the lower ends of the wall 7 are crimped as at 11 in known manner and by known machines, such closure being commonly known as a spun-bottom. In order to make the receptacle relatively rigid, I provide the upper portion or upper ends of the wall 7 with flat areas 12 between lines 13, and preferably make the upper polygonal end of the receptacle of smaller cross-sectional area than the bottom, so that the receptacle is substantially frustro-conical. It will be understood, of course, that the embodiment shown in the drawing is purely illustrative and that the top need not be in all cases rectangular, but may be of any polygonal or other shape.

In the embodiment shown in Figs. 1-3, the upper end of the receptacle is closed by top 14 having depending flanges 15 corresponding in number and length to the number and width of the walls or areas 12, against which they fit, the top 14 being of the same shape and substantially the same size as the inner dimensions of the upper end of the receptacle, whereby the top and receptacle have a telescoping fit. The top 14, in accordance with my invention, is secured in the position shown in Figs. 1 and 3 by means of any suitable adhesive applied between the flanges 15 and the upper portions of the areas 12 which embrace the flanges, so that the top is more or less permanently secured in place. Where the receptacles are used for milk or other liquids, the interior and exterior of the receptacle is dipped or sprayed or treated with paraffin or similar pure waxy substance, and this forms a covering 16 between the end of the flange 15 and the walls of the container preventing contact of the milk or other liquid with the adhesive. It is understood, of course, that the spun-bottom 9 is also sealed by paraffin in usual manner.

To provide for dispensing the contents from the receptacle without removing either of the closures, regardless of the nature or character of the contents, under the embodiment shown in Figs. 1-3, I provide through one of the walls of the flange 15 an opening 17, and the corresponding area 12 which overlies the said portion of the flange is scored along lines 18 and 19, the scorings not being deep enough to cut through the

material but sufficient to enable tearing of the material along the lines 18 down to the line 19 to expose the opening 17. Above the top edge of the container wall and extending off of the portion bounded by the scorings 18 and 19, I provide a tab 20 which not only facilitates and serves tearing of the material along the lines 18, but also may be utilized as a handle in picking up the receptacle in its original sealed form. For the purposes of this application, the portion of the material bounded by the lines 18 and 19 and the upstanding portion designated by the numeral 20 may all be regarded as a tab. It is preferable to make the scorings along the line 19 much lighter than the scorings along the line 18, so that when the top is pulled out and down to the position shown in Fig. 3, it will not tear off along the line 19 but will merely bend therealong, so that if only a portion of the contents are dispensed the tab may be pushed up to again close the opening. In order to hold the tab up and maintain it in position covering the opening after the container has once been opened, I may provide a keeper for the upper end of the tab in the nature of a strip 21 secured by any suitable means such as adhesive at its ends to the top 14 and having its central or intermediate portion unsecured, so that the upper end of the tab 20 may be inserted thereunder, as shown in dotted lines in Fig. 3. It will be apparent that any time the user wishes to dispense contents from the receptacle, he or she merely pushes the tab from under the strip 21 a sufficient distance to permit grasping, so that it can be swung down along the crease 19 to expose the opening 17 and permit pouring.

Although it is not absolutely necessary, the preferred method of assembling and filling the receptacle would be to cut the blank from which the side walls are formed to predetermined dimension and secure the longitudinal edges in overlapping relation as indicated at 8 by any suitable adhesive, of course shaping the upper end to any desired polygonal shape. One of the areas 12 would be provided with scorings 18 and 19, preferably before the material is curved and formed into the tubular structures to receive the end closures. The top 14 would be inserted after adhesive has been applied to the flange 15 with the opening 17 in alignment with the tab 20 between the scorings 18 and 19. The top may or may not be provided with the strip 21. Paraffin or a similar substance is then applied to the interior of the receptacle by any suitable means, such as by spraying or dipping to provide the seal 16 between the flange 15 and walls of the receptacle and also along the overlapping edges of the walls. The receptacle can be filled from the bottom and then the disc 9 may be secured in place to tightly seal the contents.

In actual practice, I have found that the structure shown and described is highly desirable, in that the substantially circular bottom and polygonal top with the closure applied in the manner specified, provides a strong and rigid paper or cardboard receptacle. Furthermore, the forming of the flat areas 12 in the manner shown and described does not distort the bottom, and the receptacle has a perfectly flat rim on which to rest, so that there is no strain on any portions of the sealing medium between the closure and receptacle walls.

In Figs. 4 and 5, I have shown merely the top of a receptacle, the bottom and walls of which are formed exactly in the manner described and shown in connection with the receptacle in Figs.

1-3. However, to illustrate that it is not absolutely necessary to have the telescoping fit between the top closure and walls such that the top is within the walls and embraced thereby, I have shown the closure 14' having flanges 15' embracing the upper ends of the walls of the receptacle on the exterior thereof. The flanges are secured to the walls by adhesive and the interior may be sprayed with paraffin to provide a seal between the top wall of the closure and the side walls of the receptacle. In the embodiment shown in Figs. 4 and 5, the arrangement is the reverse of that shown in Figs. 1-3, and it will be noted that the dispensing opening 17' is formed in one of the areas 12' and the tab 20' is formed or provided on the closure, the scorings 18' being made vertically across one of the flanges 15' up to the top thereof. I may also provide a strip 21' on the area 12' which has the dispensing opening therein, to hold the tab 20' down over and covering the opening 17' as shown in Fig. 4.

In both forms of the invention illustrated the receptacle body preferably has the cylindrical bottom portion and a polygonal upper portion with the walls spaced apart to receive the top closure either in the manner shown in Figs. 1-3 or Figs. 4 and 5. I find that by uniting a flanged closure such as 14 or 14' to the upper portion of receptacles made of flexible material in the manner shown, I impart thereto an appreciable amount of rigidity facilitating handling of the receptacle during shipment, sale and use. In the embodiment shown in Figs. 1-3, the free end of the tab which projects above the top of the receptacle also affords a handle which may be grasped to lift the receptacle.

The remaining feature of the invention is shown in Fig. 6, wherein one of the walls or sides of the receptacle is provided with preferably colored areas or blocks 22 arranged in pairs and spaced apart at predetermined definite intervals. The areas 22 are lined in the drawing merely for the purpose of illustration to indicate the color blue. The space between the top pair of blocks 22 and the second pair is located in the embodiment shown on a transverse line on the receptacle between which and the top the cubic area of the receptacle is one-fourth of its total cubic area. The second pair of blocks are spaced from the third along a line between which and the top of the receptacle the cubic area is one-half of the total capacity of the container, and so on. When the receptacle is made of opaque or translucent material, which is usually the case when the relatively heavy paper or light cardboard is treated with paraffin, the level of the liquid in the container is not readily discernible, especially where the liquid is colorless or white, such as milk. However, by providing the contrasting colored blocks in the manner shown when the translucent receptacle is held up to the light, one may readily see, and gauge in connection with the colored blocks, the level of the liquid, such level being more readily seen in the space 23 which extends from the top to the bottom of the receptacle between the blocks. The receptacle may be used for other liquids and commodities than those mentioned herein, such as oils of amber or dark colors, and in such case the blocks 22 would also serve as a guiding medium or indicating means as to the level of the liquid within the receptacle. It should be obvious that the blocks 22 and the spaces between the respective pairs of blocks serve also as a guide in pouring predetermined amounts of the contents of the receptacle. The use of the pour-

ing or level indicating means is optional in connection with the other features of the invention.

Paper receptacles may be made in accordance with my invention in various sizes to hold various kinds of commodities, and regardless of the size of the receptacle when the same is constructed in accordance with my invention and particularly the manner of applying the closures, the receptacle would be found to possess great strength and rigidity. Inasmuch as the contents may be tightly sealed within the receptacle, there is no likelihood of commodities which are affected by atmospheric conditions being spoiled or adversely affected during storage or shipment, and inasmuch as the dispensing opening is relatively small and may be tightly closed after the original package has been opened, there is little likelihood of the contents being adversely affected while in the possession of the purchaser or user. Furthermore, the invention effectively prevents substitution or adulteration of the original contents of the package, because to gain access the seals must be broken.

In the appended claims where I use the word "tab", I do so in the sense that the tab may be an integral part of the structure as shown in the drawing or a separate element secured thereto.

I claim:

1. A receptacle made of flexible material comprising a body member having one end polygonal and its other end cylindrical, a polygonal closure member for said first end, means securing said members together and sealing the joint therebetween, a dispensing opening in one member, and a part on the other member covering said opening and movable to uncover said opening, and a closure for said second end of the body member.

2. A receptacle made of flexible material comprising a body member having one end polygonal and its other end cylindrical, a polygonal closure member for said first end, means securing said members together and sealing the joint therebetween, a dispensing opening in one member, and a part on the other member covering said opening and movable to uncover said opening, and a closure for said second end of the body member, said part being an integral portion of said other member and provided with a projection extending beyond an edge thereof for grasping.

3. A receptacle made of flexible material comprising a body member having one end polygonal and its other end cylindrical, a polygonal closure member for said first end, means securing said members together, a dispensing opening in one member, and a part on the other member covering said opening and movable to uncover said opening, a closure for said second end of the body member, said part being an integral portion of said member and provided with a projection extending beyond an edge thereof for grasping, and means on the other member to retain said projection in position with said part covering said opening.

4. A receptacle of flexible material for liquids comprising a body member and a closure member having flanges telescopically engaging the walls of the body and sealed thereto, and one of said members having a dispensing opening and the other member a part closing said opening, and sealed thereover, said part being swingable away from said opening whereby the liquid may be poured through said opening, and means to hold said part over said opening to again close it after the seal between said part and one member has been broken.

5. A receptacle of flexible material comprising a body member and a closure member having flanges telescopically engaging the walls of the body and sealed thereto, and one of said members having a dispensing opening and the other a scored portion overlying said opening, said scored portion and opening being in the area of the flange, and said scored portion being swingable away from said opening to permit dispensing through said opening.

6. A paper or cardboard receptacle comprising a tubular body member, a closure for each end of the tubular body member, at least one of said closures having a flange telescopically fitting within the tubular body member, said flange being provided with an opening, a tab on the body member overlying said opening and extending beyond the edge of said body member, said closure being sealed to the body member with the tab sealed over said opening, and means on said closure to hold the projecting portion of the tab flatly thereagainst.

7. A paper or cardboard receptacle comprising a tubular body member substantially round at one end and polygonal at its other end, a closure for each end of the receptacle, the closure at the polygonal end being flanged and corresponding in shape and dimensions to the said polygonal end of the body member, the flanges of said closure being disposed within the walls of the body member and embraced thereby, an opening in said flange, a tab on said body member overlying and closing said opening, said flanges being adhesively united and sealed to said walls.

8. A paper or cardboard receptacle for liquids comprising a tubular body member, a closure for each end of the tubular body member, at least one of said closures having a flange fitting over an end of said body member, an opening in the wall of said body member adjacent one end thereof beneath said flange, and a tab forming a part of said flange overlying said opening and closing the same, said flange, tab, and portions of the walls of the body member embraced thereby being adhesively united and sealed together, said tab on the flange being swingable to expose and cover said opening.

9. A paper or cardboard receptacle comprising a tubular body member substantially round at one end and polygonal at its other end, a closure for each end of said receptacle, the closure for said polygonal end being flanged and conforming to the shape of said end and placed thereon with the flanges embracing portions of the walls of the body member at said end, a dispensing opening in said portion of the walls, and a tab on the flange overlying said dispensing opening, said flange and portion of the walls being adhesively united and sealed together.

10. A paper or cardboard receptacle comprising a tubular body member, a closure for each end of the tubular body member, at least one of said closures having a flange telescopically fitting within the tubular body member and said flange being provided with an opening, a tab on the body member overlying said opening, and said closures being sealed to the body member with the tab sealed over said opening, a part of said tab projecting beyond the end of said receptacle for grasping when moving said tab to uncover said opening.

11. A paper or cardboard receptacle comprising a tubular body member, a closure for each end of the tubular body member, at least one of said closures having a flange telescopically fitting

- within the tubular body member and said flange being provided with an opening, a tab on the body member overlying said opening, and said closures being sealed to the body member with the tab sealed over said opening, a part of said tab projecting beyond the end of said receptacle for grasping when moving said tab to uncover said opening, and means on the closure to hold said tab over said opening after the tab has once been loosened to uncover said opening.
12. A receptacle of translucent or opaque material having arranged thereon vertically aligned areas of a color contrasting with that of the receptacle and spaced apart at definite predetermined intervals to indicate the level of the contents within the receptacle.
13. A receptacle of translucent or opaque material having arranged thereon vertically aligned pairs of markings, the markings of each pair being spaced apart laterally, and each pair of markings being spaced apart at predetermined intervals and serving as a gauge to determine the level of the liquid within the receptacle.
14. A receptacle of flexible material comprising a body member and a closure member having flanges telescopically engaging the walls of the body and sealed thereto, one of said members having a dispensing opening in the plane of the flange and the other member a swingable part overlying said opening, said opening being of less area than said swingable part whereby said part may be tightly sealed against the portion of the member bordering said opening to tightly close the opening.
15. A paper or cardboard receptacle comprising a body member, a closure for each end of the body member, at least one of said closures having a flange telescopically fitting within the walls of the body member, said flange being provided with an opening, a tab on the body member overlying said opening, said tab being of greater area than the opening whereby it may be tightly sealed against the surface of the flange bordering said opening, and the flange of said closure being also sealed to the walls of the body member.
16. A paper or cardboard receptacle comprising a body member, a closure for each end of the body member, at least one of said closures having a flange telescopically fitting over the walls of the body member, said flange being provided with a swingable flap, an opening in the wall of the body member beneath said flap and of less area than the flap whereby said flap may be tightly sealed to the portions of the body member bordering said opening.

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