

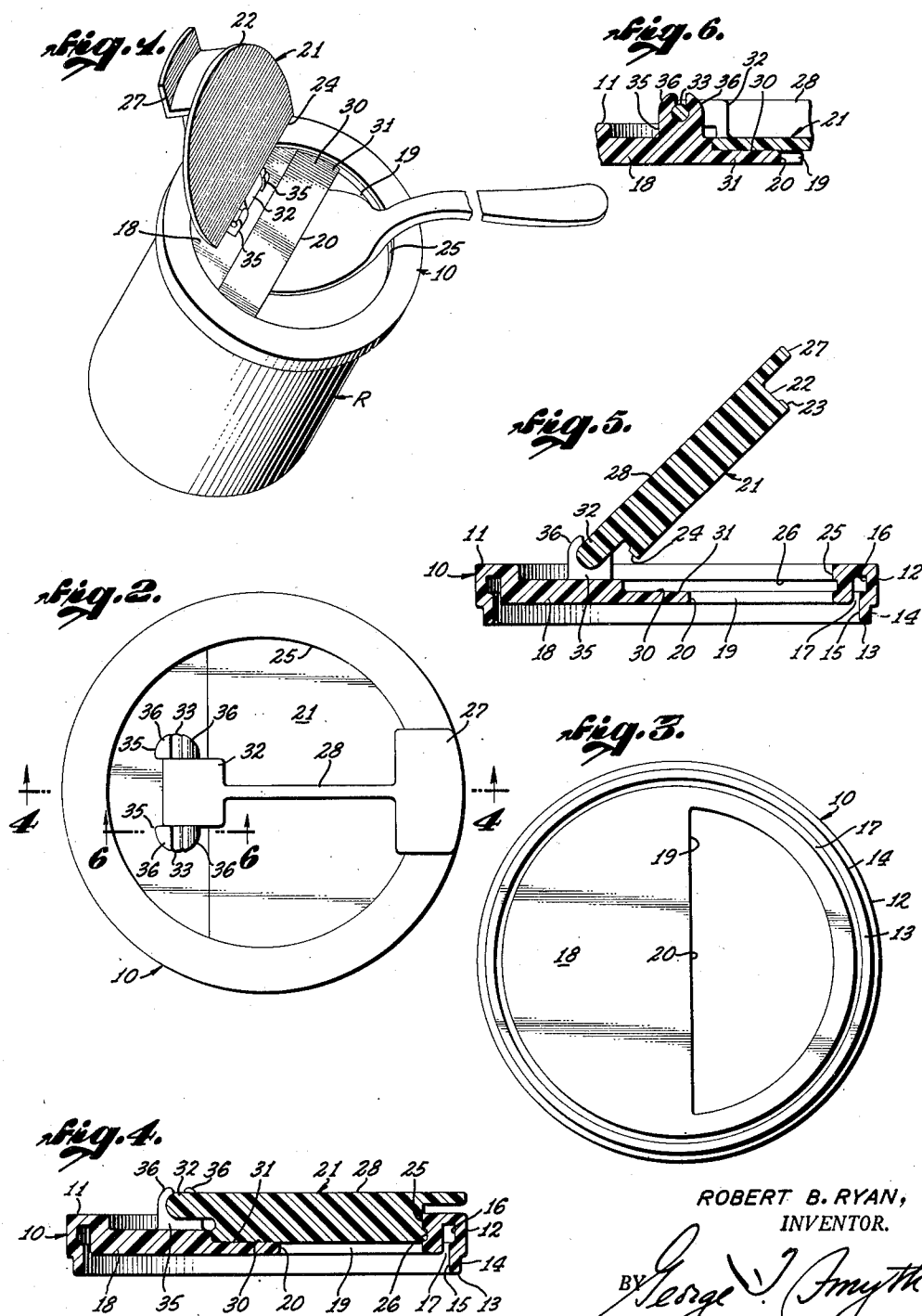
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CLOSURE

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CLOSURE

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This invention relates to receptacle covers and is particularly concerned with readily applied and removed auxiliary covers for preserving and dispensing receptacle contents after the original opening of a container.

The keeping of materials, particularly foods in metallic containers in which they were sold, after the hermetic seal has been broken was for a long time discouraged, not only because of contamination from air borne foreign matter but because of deleterious chemical reactions of such materials with the receptacle in the presence of air. However, improvements in receptacle materials, liners, coatings and the like, have, for the most part, removed such objections as to present day containers and it is now permissible to keep foods in their original so-called "tin cans" after the same have been opened, particularly when refrigeration is available.

It is desirable, however, that a temporary or auxiliary cover be provided so as to preclude contamination by air borne foreign matter, insects, drying out of foods or absorption of ambient gases. Such auxiliary cover should, of course, be of light weight, easily applied and removed, and of such durability as to permit successive use on successive receptacles or containers.

The device of the present invention is particularly adapted for use with containers in which so-called baby foods are sold today. Although the containers in which these foods are sold are smaller in size than conventional cans, until a child reaches an age at which the entire contents of a can are consumed at one meal, it is necessary to store and preserve the uneaten portion. The cover element herein disclosed greatly facilitates the preservation of the portion of the food stored, as well as the subsequent dispensing of this food.

The present invention provides a cover of this type, preferably made of a yieldable synthetic material, such as polyethylene, which is resistant to moisture and temperature changes and which will retain its original characteristics of strength and flexibility over a long life despite repeated use. One feature of the present cover comprises a can gripping rim including a flange which may be flexed over a receptacle bead and thereafter snugly engage and seal the side of the receptacle near such edge. The rim also includes a bead receiving recess into which the can bead fits to prevent accidental disengagement of the cover from the receptacle.

It is also desirable that a cover of this type provide for the dispensing of part of the contents from time to time. For this purpose the present invention includes a hinged lid adapted to be readily moved to cover and uncover a convenient dispensing aperture in the cover. Since an air tight seal is preferable when material is not being dispensed, an interlocking groove arrangement is provided for securing the cover in closed position, sealing the aperture of the cover.

Another feature of the invention is the mounting of the lid to permit complete removal as may be convenient during some dispensing and in order to facilitate cleaning. By the present arrangement the lid is mounted

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on a hinge pin releasably engaged between yieldable arms of spaced receiving brackets. Such mounting not only permits easy removal and replacement of the lid, but is obtained with an economy of manufacture and assembly expense.

In the removal of small quantities of materials, particularly baby foods, from receptacles it is often desirable to limit or measure the amounts dispensed by leveling or scraping excess material above a spoon edge. To this end, the opening of the present cover is provided with a straight leveling edge by which excess material may be wiped from a spoon or like device used, in withdrawing the contents. The leveling edge is located on the underside of the cover at the dispensing opening whereby material wiped from the utensil will fall back into the receptacle without exposure and without contact with any external surfaces.

Other features of the present invention will be apparent from the following description when taken in connection with the accompanying drawing, in which:

Figure 1 is a perspective view of the cover of the present invention illustrating the position of parts during dispensing of the container contents;

Figure 2 is a top plan view of the cover with the lid in closed position;

Figure 3 is a bottom plan view of the cover;

Figure 4 is a sectional view taken on line 4—4 of Figure 2 with the lid in closed position;

Figure 5 is a view similar to Figure 4 with the lid in open position; and

Figure 6 is a detail section showing the lid mounting and taken on line 6—6 of Figure 2.

The cover of the present invention, referring now to the drawings, comprises a body member including peripheral rim portion 10 conforming to the general outline of the top of the receptacle to which the cover is to be applied. In the form of the invention herein shown, the cover is circular to conform with the cylindrical receptacle R. The rim 10, generally rectangular in cross section as shown best in Figure 5, is formed with a flat top surface 11, an outer cylindrical surface 12 and an inwardly spaced depending, deformable can side engaging flange 13, including an outer cylindrical surface 14 spaced inwardly from the surface 12 of the rim 10 and an inner can embracing surface 15.

With the rim 10 and above the side engaging flange 13, there is formed an annular receptacle bead-receiving recess 16, generally rectangular in cross-section, open at the inner edge of its bottom wall, as indicated at 17, to receive the upper edge of a receptacle together with its peripheral bead. By this construction and in view of the nature of the polyethylene composition preferably used to form the body member, a special flexibility is provided for the flange 13 to permit it to flex outwardly to receive the bead and to flex inwardly thereafter to embrace the receptacle wall directly below the bead and thus to lock the bead securely and sealingly within the recess 16.

Formed integrally with and partially spanning the rim 10 is a substantially semi-circular plate element forming a closure portion 18. The semi-circular formation of the closure portion 18, in the illustrated embodiment of the invention, provides for a substantially equal semi-circular dispensing opening 19 bounded at its circular edge by a portion of the rim 10 and at its straight side approximately at the center of the cover, by the straight edge 20 of the closure portion 18. It will, of course, be understood that these proportions are not critical and either the cover portion or aperture may be proportionately greater or less than half the area bounded by the rim.

The aperture 19 is adapted to be temporarily opened

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or sealingly closed by a lid 21 also preferably formed of a polyethylene composition. The lid 21 comprises a disc-like body having a circular edge 22 including a sealing lip 23 and a straight side 24. The circular edge 22 is greater than one half of the arc of the circle formed by the inner edge 25 of the rim 10 and the straight side 24 is thus less than the diameter of the rim. For sealingly receiving the lip 23 when the lid is closed, that portion of the inner edge 25 of the rim 10 receiving the circular edge 22 is formed with a lip receiving recess 26. To facilitate movement of the lid between open and closed positions a lifting tab 27 is provided extending forwardly from the center of the circular edge 22. The tab 27 is preferably formed as a transversely widened extension of a central upstanding reinforcing section 28 formed across the center of the top of the lid.

Since the lid 21, while conforming in shape to that of the dispensing aperture 19, is of greater size and extends past the center of the cover, the closure portion 18 is formed with a transversely extending recess 30 to receive the marginal portion 24 of the lid and thus forming a shelf 31 leading forwardly from the back of the closure portion to the straight aperture edge 20. As will be noted the recess 30 is in line with the groove 26 of the inner face 25 of the rim and thus the lower face of the lid is jointly supported by the shelf 31 and engaged by the fitting of the lip 23 in the groove 26 to sealingly and yieldably secure the lid in closed position.

For pivotally mounting the lid 21 to the closure portion 18 an extending hinge boss 32 is provided and formed as an overhanging extension of the reinforcing rib 28. A pair of transverse hinge pins 33 oppositely extend outwardly beyond the side edges of the boss 32 to be yieldably received and retained by spaced pairs of hinge brackets 35 mounted on the upper face of the closure portion 18 beyond the shelf 31. Each hinge bracket comprises parallel pairs of upstanding companion legs 36 inwardly recessed to receive and restrain the pins 33 therebetween but open above their recesses to permit removal of the pins when flexed apart. Thus, for complete removal of the lid the pins may be forced upwardly against the yielding pressure of the legs to disconnect the lid when desired.

It will, of course, be understood that the rim and closure portion, as well as the lid, are contemplated as being molded as integral pieces. As indicated a polyethylene material is contemplated particularly of the type which will insure continuous flexibility over a long life of usefulness. It is to be understood, however, that the invention is not limited either to the integral molding of rim or lid nor to the materials here suggested. Either the body member or lid may be fabricated of separate component parts and numerous other types of materials may be used.

In use of the device, assuming a conventional so-called "tin can" of baby food has been opened by removal of its top by the usual can opener, the flange 13 is stretched outwardly from the contour of the rim 10 at one point and is slipped downwardly over the bead of the can and relaxed to press against the side wall of the can after the bead at such point is received within the annular recess 16. Such action progresses around the upper edge of the can until the entire can bead is within the recess 16 and the walls of the can are securely sealed by compressive engagement by the inner face 15 of the flange 13. By so affixing the cover not only does the rim structure seal the entire top of the can, but the extension of the side 12 beyond the flange 13 and the side of the can provides a convenient gripping bead for convenience in handling.

Assuming the lid 21 to be closed when the cover is applied, it may be readily opened to expose the aperture 19 by an upward lift of the tab 27, which releases the bead 23 from the groove 26 to permit pivotal movement of the lid to open position. With the lid 21 in open

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position, a spoon may be inserted through the exposed aperture and upon withdrawal excess food may be scraped off against the underside of the shelf 31 at the edge 20. Such excess material is therefore removed without exposure to the atmosphere or danger of spilling from the container. After dispensing the desired quantity of the contents of the container or can, the lid may be pivotally moved to its aperture closing position to once again cause the lip 23 to sealingly engage in the groove 26.

A feature of the cover of the present invention resides in the ease of removal of the lid 21 from the body member. This is brought about merely by a sharp tug on the lid to apply a force sufficient to release the pins 33 from the legs 36 of the brackets 35. This feature allows the cover to be more easily cleaned after a use for the separation of the lid from the body member obviates all danger of food particles lodging in inaccessible portions of the cover as in the pivotal connection between the lid and body member.

The cover of the present invention, although particularly useful for sealing or closing containers in which baby foods are sold, is not limited to such use. It should be obvious now that the cover can be used with any container from which the contents of the same are to be dispensed from time to time.

Although the now preferred embodiment of the present invention has been shown and described herein, it is to be understood that the invention is not to be limited thereto, for it is susceptible to changes in form and detail within the scope of the appended claims.

I claim:

1. A cover assembly for use on an open top receptacle comprising: a cover member of flexible plastic material having a peripheral flange for releasable engagement with the rim of said receptacle, said cover member having a wall portion to extend across the open top of the receptacle, said wall portion being formed with a dispensing aperture, a portion of the edge of said aperture being arcuate and the remaining portion being a straight edge for use to level material in spoons, said wall portion being reduced in thickness to form a step adjacent said straight edge, the arcuate portion of the edge of the aperture being formed with a peripheral recess with the two ends of the recess extending over said step; and a lid member pivotally connected with the upper side of said wall portion adjacent said step, said lid member being dimensioned to close said aperture and overlap said step, said lid member having a peripheral projection for releasable engagement with said recess to latch the lid member in closed position.

2. A cover assembly as set forth in claim 1 in which said step terminates in a shoulder on the upper side of said wall portion parallel with the straight edge of the aperture; and in which said lid is formed with a straight edge to abut said shoulder at the closed position to the lid.

3. A cover assembly as set forth in claim 2 in which said cover member is formed with a peripheral rim portion and said wall portion is offset downward from said rim portion.

4. A cover assembly as set forth in claim 3 in which said peripheral flange, said rim portion and the offset of said wall portion form a downwardly opening circumferential groove to releasably embrace the rim of the receptacle.

5. A cover assembly as set forth in claim 4 in which said circumferential groove has a relatively narrow entrance and is enlarged internally to grip the rim bead of a receptacle.

6. A cover assembly as set forth in claim 5 in which said lid member is made of plastic material reinforced by an upwardly projecting integral rib, one end of said rib overhanging said wall member and being pivotally connected thereto.

7. A cover assembly as set forth in claim 5 in which

the other end of said rib terminates in a handle portion
for manipulation of the lid member.

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