Feb. 25, 1936. C. B. KLEFEKER 2,031,834

ICE CREAM PAIL

Filed May 12, 1933 2 Sheets-Sheet 1

Fig. 1

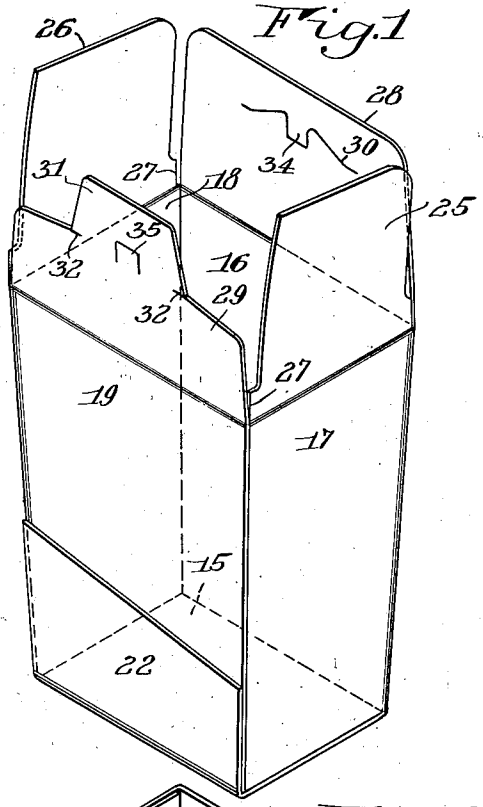


Fig. 5

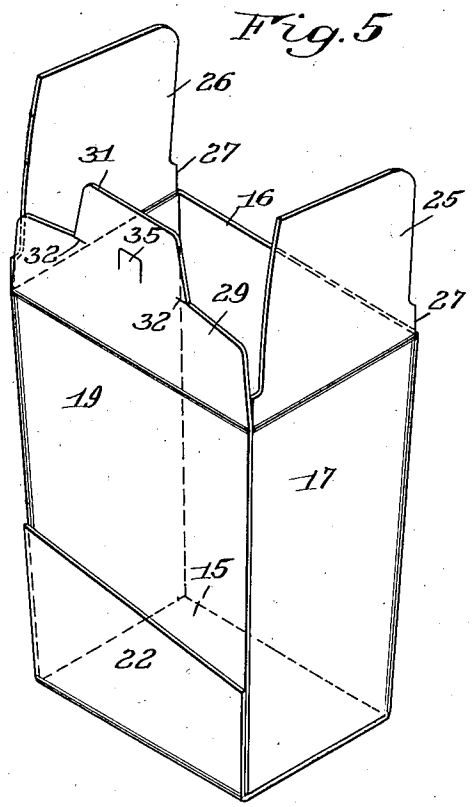


Fig. 2

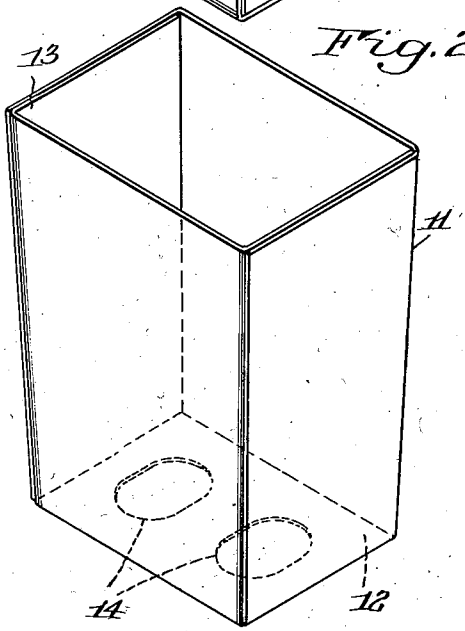
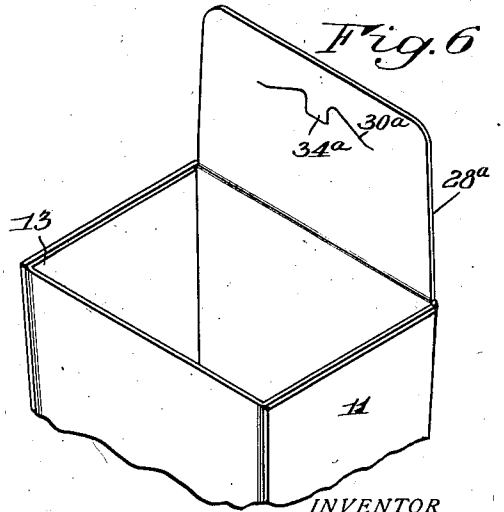


Fig. 6



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ICE CREAM PAIL

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Fig. 3

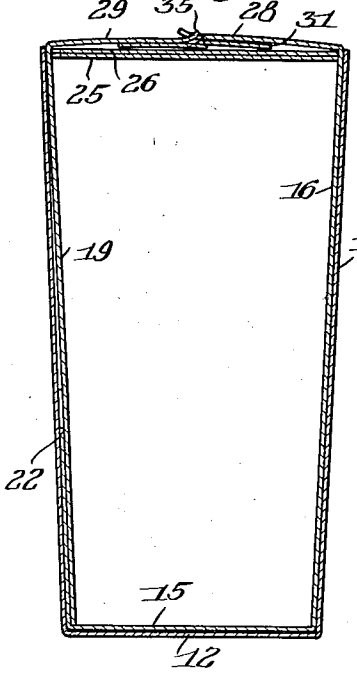


Fig. 10

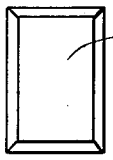


Fig. 11

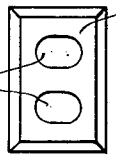


Fig. 7

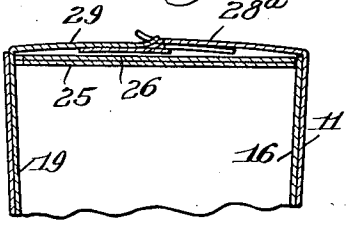


Fig. 8

Fig. 4

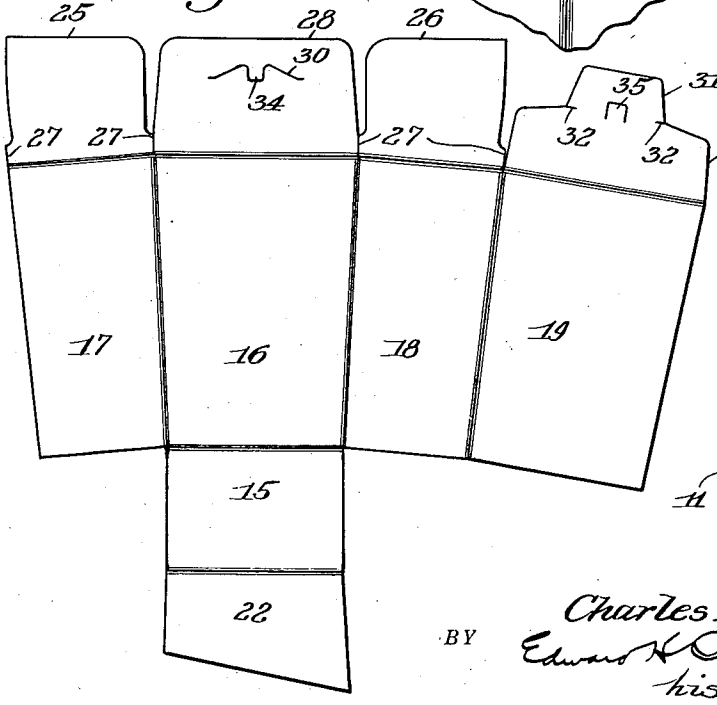
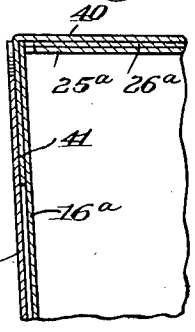


Fig. 9



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UNITED STATES PATENT OFFICE

2,031,834

ICE CREAM PAIL

Charles B. Klefeker, Newark, N. Y., assignor to Bloomer Bros. Company, Newark, N. Y., a corporation of New York

Application May 12, 1933, Serial No. 670,759

10 Claims. (Cl. 229—14)

This invention relates to cartons of the type commonly known in the trade as pails, and particularly to cartons or pails which are especially suitable for the packing of materials which may be somewhat soft or semi-solid, such as ice cream and ices, for example.

An object of the invention is the provision of a generally improved and more satisfactory carton or pail of the above kind, which will effectively hold ice cream, ices, and similar materials, and which will prevent leakage of the contents even if the ice cream or other contents should melt or soften to a considerable extent.

Another object is the provision of a simple and satisfactory pail of this character which is so designed and constructed that the contents may be readily removed in a single piece or block if desired, without the necessity of cutting or tearing the pail.

A further object is the provision of an improved two-part pail embodying an inner slide member or liner formed of unglued sheet material so that it may be readily opened up into a substantially flat condition, to fit within an outer cup member or pail which holds the parts of the inner member in proper cooperative relation to each other, with relatively tight joints, until the slide or liner is removed from the pail.

A still further object is the provision of improved closure means for a carton or pail of this type, which closure means may include, for example, a flap attached to the cup and assisting in maintaining the slide or liner in proper position within the cup.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Fig. 1 is a perspective view of a slide or liner constructed in accordance with a preferred embodiment of the invention;

Fig. 2 is a similar view of a cup or pail for receiving the liner illustrated in Fig. 1;

Fig. 3 is a vertical section taken substantially centrally through the assembled pail and liner of Figs. 1 and 2;

Fig. 4 is a plan of a blank from which the liner of Fig. 1 may be made;

Figs. 5 and 6 are views similar to Figs. 1 and 2, respectively, illustrating a modification of the invention;

Fig. 7 is a view similar to the top portion of Fig. 3 illustrating the modification shown in Figs. 5 and 6;

Fig. 8 is a fragmentary perspective view showing a further modification of the invention;

Fig. 9 is a fragmentary vertical section through the corner of a closed carton constructed as shown in Fig. 8;

Fig. 10 is a bottom view of a pail constructed in accordance with one embodiment of the invention, and

Fig. 11 is a similar view showing another embodiment of the invention.

The same reference numerals throughout the several views indicate the same parts.

The carton or pail of the present invention is made preferably in two pieces and comprises an inner member which may be described as a liner or slide, and an outer member which may be described as a cup or pail. Preferably they are both tapered so that the liner may be forced tightly into the pail, and are of any suitable polygonal cross section, preferably rectangular. The liner is constructed so that it may be held in normal erected position by the pail, but so that when removed from the pail it may be readily unfolded or opened up, without tearing or cutting, to free the contents of the liner (such as ice cream, for example) so that the contents may be readily removed in a single piece or block if desired and need not be dug out of the liner as must be done in many prior pails.

Referring now particularly to Fig. 2 of the drawings, the cup or pail is shown in its preferred form as made from a single piece of suitable sheet material such as cardboard or the like, sufficiently stiff and rigid so that it will not buckle or wrinkle when the liner is forced into or shoved out of it. The piece of material is suitably cut and scored to provide side walls indicated in general by the numeral 11, and a bottom 12. The walls and bottom of the pail may be overlapped with each other and glued or otherwise secured to each other in any suitable manner, so as to make tight joints both at the substantially vertical corners between the various side walls themselves, and at the substantially horizontal corners between the respective side walls and the bottom 12, all as well understood in the art. The overlapping of certain of the side walls is indicated, for example, at 13.

The liner or slide is of a cross sectional shape corresponding to that of the pail 11, and is correspondingly tapered to fit snugly within the pail or cup. It is preferably likewise made from a single piece or blank of suitable sheet material such as cardboard or the like, cut, scored, and

folded as illustrated particularly in Figs. 1 and 4, and sufficiently stiff and rigid so that it will not buckle or wrinkle when forced into or shoved out of the cup. It has, for example, a bottom 15, and a plurality of side walls. One of these side walls, such as 16, is preferably hingedly connected to the bottom 15 along one edge of the latter. The other side walls are preferably not directly hinged to the bottom, but are hinged to each other. That is, one side wall 17 is hinged to the wall 16 along one edge of the latter, which edge corresponds to one corner of the carton or pail, and another side wall 18 is hinged to the wall 16 along the opposite edge of the latter, corresponding to another corner of the pail. The fourth side wall (when the pail is of the preferred rectangular cross section) is indicated at 19, and is hinged to an edge of the wall 18, as plainly indicated in Fig. 4.

It is apparent that the four side walls 16, 17, 18, and 19 may be folded up to form a hollow body of rectangular cross section, of which the portion 15 may form a bottom. At three of the substantially vertical corners of this body, the hinge connection between adjacent sides will form a tight joint, while at the fourth corner, the edges of the sides 17 and 19 will abut against each other and will be held in tight contact with each other by the wedging action of the tapered pail 11, when the liner is properly placed within the pail.

The junction between the bottom 15 and the side 16 is made tight by reason of the hinge connection between these parts. At the other three edges of the bottom 15, the bottom edges of the side walls are in firm contact with the edges of the bottom 15, to form relatively tight joints, when the structure is in normal erected position. If desired, a flap 22 may be hingedly connected to one side of the bottom 15 so that when the parts are in normal erected position this flap 22 will extend upwardly for a short distance along the outer side or surface of the side wall 19. But whether or not one or more such flaps are used, the joints of the liner when it is properly wedged within the cup or pail are found in practice to be sufficiently tight so that they may be described as substantially leak-proof, at least insofar as ice cream and similar soft or semi-solid materials are concerned. Furthermore, if there should be any slight leakage through the unconnected but tightly engaged corners or edges of the liner, the material leaking through these corners will be caught and held by the outer pail 11, all the corners of which are tight.

When the parts are in normal erected position as shown in Fig. 3, the sides of the liner are not only in engagement with the corresponding sides of the cup or pail, but the bottom of the liner also rests firmly upon the bottom 12 of the pail. Thus the bottom corners of the cup (that is, the corners between the bottom 12 and any of the sides which extend upwardly therefrom) embrace the bottom corners of the liner tightly and assist in rendering the corners of the latter leak-proof. This additional protection is especially desirable at the bottom corners of the liner which are formed of edges merely abutting against each other and unconnected to each other.

This construction, including a bottom on the cup for engagement with the bottom of the liner, results in making a substantially tight and leak-proof pail without the necessity of always using special flaps on the edges of the bottom 15 to which no side walls are hingedly connected, thus reducing the amount of material which is needed for making the liner.

The bottom 12 of the pail may be solid or unperforated, as shown in Fig. 10. Preferably, however, it is provided with one or more apertures through which access may be had to the bottom of the liner, for pushing the liner upwardly out of the pail to free it therefrom. Two apertures 14 are preferably formed in the bottom, as indicated in Figs. 2 and 11, spaced conveniently so that two fingers of a person's hand may easily pass through the apertures to press upwardly on the bottom 15 of the liner. It is to be especially noted that the edges of the apertures are spaced a substantial distance from the side edges of the bottom 12. Thus, notwithstanding the apertures, the bottom 12 may be said to extend a substantial distance inwardly from its side edges, so that there is a substantial contact between the bottom 12 of the pail and the bottom 15 of the liner for a substantial distance inwardly from the edges of the latter, to provide a tight and substantially leak-proof construction.

The liner is provided with a suitable filling opening, the top of the liner preferably being open for this purpose. Suitable closure means is provided for closing the filling opening, this means preferably comprising a plurality of flaps foldable down across the filling opening in overlapping relation to each other, and having interlocking means on certain of the flaps for locking them to each other to prevent relative sidewise movement.

The closure flaps may be, for example, of the form illustrated in the copending application of John P. Shearer for patent on Pail, Serial No. 582,684, filed December 23, 1931. For instance, the liner blank may have, at two opposite sides of the top opening or mouth of the liner, flaps 25 and 26 to be folded down across the filling opening, these flaps having portions 27 at their corners for tight engagement with adjacent sides of the opening to provide substantially leak-proof corners. The other two sides of the filling opening may be provided with other flaps 28 and 29 respectively, to be folded down over the flaps 25 and 26 to complete the closure. Preferably the flaps 28 and 29 are provided with cooperating interlocking means for locking these flaps to each other so as to prevent relative sidewise movement between them and thus to prevent or impede twisting or side sway of the top of the carton, which might cause the corners to loosen up and leak.

The cooperating interlocking means may be formed, for example, by a slit 30 in the flap 28, and a tapered tongue 31 on the flap 29, which tongue may be inserted through the slit 30 to interlock the parts with each other. The width of the tapered tongue 31 at its base is made substantially equal to the distance between the ends of the slit 30 so that the tongue may be wedged tightly in the slit to connect the flaps 28 and 29 relatively firmly to each other and to prevent relative sidewise movement between them. Also, short slits 32 may extend inwardly from the base of the tongue 31 as shown in Figs. 1 and 4, so that the material at the ends of the slit 30 may engage slightly in these slits 32 to provide a further interlocking engagement between the two flaps.

Still further interlocking means may be provided if desired. For instance, the slit 30 in the flap 28 may have a somewhat U-shaped portion 34, and the flap 29 may have a U-shaped slit to form a tongue 35 so positioned that when the

flaps are in proper closed relationship, the small tongue 35 may extend into and be wedged in the U-shaped part 34 of the slit 30, to provide a further interlock to increase the protection against relative side sway of the top of the carton. The cooperative relationship and interlocking between these various tongues and slits is fully set forth in the aforesaid copending application, Serial No. 582,684.

In use, the liner or slide member is erected from the flat blank shown in Fig. 4 to form the hollow body shown in Fig. 1, and is thrust down tightly into the tapered cup or pail shown in Fig. 2, so that the pail holds the parts of the liner firmly in erected position with the various edges tightly in engagement with each other to provide tight joints which are substantially leak-proof, at least insofar as ice cream and similar soft materials are concerned. The bottom 12 of the pail assists materially in preventing leakage, especially from the unconnected bottom corners or edges of the liner.

Because of the bottom 12 of the pail, the pail is ordinarily not collapsible, and consequently the pails are usually nested with each other and shipped from the carton factory in nested relation, while the liners are usually shipped flat and are erected and placed within the pails preferably at the place where they are to be used.

At the store or establishment where the pails are to be used, they are unnested from each other and each individual carton is filled with the ice cream or other material which is to be packed therein, the filling taking place easily through the large top opening which is present when the closure flaps are turned upwardly as in Fig. 1 or turned substantially horizontally outwardly. After the filling is completed, the closure flaps are turned in and down in overlapping relation across the filling opening, the tongue 31 of the flap 29 being thrust through the slit 30 of the flap 28, so that the flaps are arranged substantially as illustrated in Fig. 3.

When the filled pail has been transported to the place where the contents of the pail are to be used, the parts are disassembled by pushing the liner upwardly out of the pail, which can be easily done by inserting one's fingers through the apertures in the bottom of the pail, or by pulling upwardly on the top of the liner if no aperture is provided in the bottom of the pail. The closure flaps are unfastened, and the entire liner may then be readily unfolded and opened up substantially into a plane, since the various sides of the liner are not glued or otherwise permanently connected to each other. Hence, when opened up and flattened out into a plane, the contents of the pail is rendered readily accessible and may be easily lifted off of the flattened liner in a single piece, or may be cut into slices, or otherwise served in any desired way.

It is seen that this construction provides a maximum of accessibility for the contents of the pail, yet without the necessity of tearing or cutting any parts of the pail, and without requiring the bothersome and time-consuming operation of digging the contents out with a spoon or the like, as is generally necessary with prior pails. Also, it is seen that the liner of improved pail of the present invention requires comparatively little material, and can easily be made of cardboard or similar suitable sheet material by machinery commonly available in carton factories.

The construction is particularly suitable for holding ice cream, ices, and similar products at low temperatures, because the pail and liner together provide walls of double thickness, thus giving increased thermal insulation in comparison to many prior pails having walls of single thickness, and resulting in slower melting of the ice cream or ices or other contents of the pail.

Figs. 5, 6, and 7 illustrate a modified construction which may be identical with that heretofore described, except as to the closure flaps. The closure flaps 25, 26, and 29 also may be identical with the corresponding closure flaps of Figs. 1, 3, and 4, and may be formed as an integral part of the liner blank. The fourth closure flap 28, however, is preferably formed, in this modification, not as a part of the liner blank, but as a part of the cup or pail 11, being designated in Figs. 6 and 7 as 28*a*, and having the same slit 30*a* and portion 34*a* corresponding to the parts 30 and 34 in the previous embodiment. This modified form of the invention operates in the same manner, except that the flap 28*a*, being on the pail 11 instead of on the slide, when folded over the slide acts as locking or retaining means to hold the slide in place and to prevent accidental displacement of the slide or liner from the pail until the closure flaps are loosened.

In Figs. 8 and 9 there is shown still another modification of the invention. The sides and bottom of the pail and liner may be formed as before. The flaps 25 and 26 are retained, being numbered 25*a* and 26*a*, and they are preferably formed integrally with the liner or slide member, as before. The other closure flaps 28 and 29 are omitted, however, and are replaced by a closure flap 40 hingedly connected to the upper edge of the liner at one side of the top, which flap is of the proper size and shape to fold down over and to cover substantially the entire area of the top of the carton. At what may be termed the free edge of this flap 40, there is a tab or tongue 41 which may be thrust downwardly between the front wall of the pail 11 and the adjacent wall 16*a* of the liner or slide, to hold the flap 40 frictionally in closed position. The top edge of the front wall of the pail may be cut away as at 42 to provide a slight recess to aid in inserting the tongue 41 between the pail and the liner.

It is seen that in this form of construction, only three closure flaps are provided instead of four, and that the uppermost closure top preferably has an area substantially equal to the entire top area of the carton or pail so that it completely covers the entire top opening.

All of the modifications above described embody the same desirable feature of a carton or pail which, without tearing or cutting, may be readily opened up or unfolded to free the contents for easy access, and yet which is relatively tight and substantially leak-proof, at least for semi-solid materials such as ice cream, so long as the liner is left in normal position tightly engaged within the pail.

I claim:

1. A container for holding semi-solid material, comprising a tapered pail having a bottom at its smaller end and open at its larger end, said bottom forming a permanent tight joint with the side walls of the pail at all sides thereof, a tapered slide insertable in and removable from said pail through said open end, said slide having a bottom and side walls held in substantially tight relationship to each other by said pail, adjacent side walls being unconnected to each other along at least one corner of said slide so that

when said slide is removed from said pail said side walls may be readily separated and opened up to obtain easy access to contents of said slide, and closure flaps foldable into overlapping relation to each other to form a substantially tight closure for one end of said slide.

2. An ice cream container comprising a tapered liner of sheet material formed to provide a bottom and side walls hingedly connected to each other for relative movement so that said walls may be readily flattened out substantially into a plane to free the contents of said liner, a removable tapered pail extending around said side walls and at least partially along said bottom to maintain them in normal tight cooperative relationship to each other so that said walls may enclose and hold a quantity of ice cream, the portions of said pail extending along the side walls of said liner forming permanent tight joints on all sides with the portions of said pail extending along the bottom of said liner, and closure means including a plurality of flaps foldable down into overlapping relationship to provide a relatively tight closure for one end of said liner.

3. A container comprising a pail having a substantially rectangular transverse cross section, and a collapsible liner insertable in and removable from said pail, said liner comprising a piece of sheet material formed to provide a bottom and side walls capable of being erected to form a longitudinally tapered hollow body having its side walls unconnected to each other along one edge of the body and hingedly connected to each other along all other edges, the bottom of said body being hingedly connected along one edge to one of said side walls, said liner body when erected being adapted to fit within and to be held with its walls and bottom in relatively tight cooperative relationship by said pail, and being adapted when removed from said pail to be readily opened up and flattened out substantially into a plane to obtain easy access to the contents of said liner.

4. A container for holding semi-solid material comprising a tapered pail having side walls and bottom, a tapered liner having a bottom and side walls normally held in relatively tight cooperative relationship to each other by said pail when said liner is inserted in said pail and capable of being readily opened up to obtain free access to the contents of said liner when said liner is removed from said pail, said liner having a filling opening at its top, and a plurality of overlapping closure flaps for closing said filling opening, said closure flaps including a flap at one side of said opening and a flap at an opposite side of said opening both adapted to be folded over said opening, and cooperating interlocking means on said flaps to lock them to each other to prevent relative sidewise movement of the flaps.

5. A container for holding semi-solid material comprising a tapered pail having side walls and a bottom, a tapered liner having a bottom and side walls normally held in relatively tight cooperative relationship to each other by said pail when said liner is inserted in said pail and capable of being readily opened up to obtain free access to the contents of said liner when said liner is removed from said pail, said liner having a filling opening at its top, a plurality of closure flaps each hingedly connected to said liner adjacent said filling opening, said flaps being foldable down across said opening in overlapping relation to each other, and cooperating interlocking means on certain of said flaps for locking said flaps to each other to prevent relative sidewise movement between them.

6. A container for holding semi-solid material comprising a tapered pail, a tapered liner having a bottom and side walls normally held in relatively tight cooperative relationship to each other by said pail when said liner is inserted in said pail and capable of being readily opened up to obtain free access to the contents of said liner when said liner is removed from said pail, said liner having a filling opening at its top, and a plurality of closure flaps foldable across said opening in overlapping relationship to each other for closing said opening, at least one of said closure flaps being hingedly connected to said pail, so that said flap, when closed, will assist in holding said liner in place in said pail, and another of said closure flaps being hingedly connected to said liner.

7. A container for holding semi-solid material comprising a tapered pail, a tapered liner having a bottom and side walls normally held in relatively tight cooperative relationship to each other by said pail when said liner is inserted in said pail and capable of being readily opened up to obtain free access to the contents of said liner when said liner is removed from said pail, said liner having a filling opening at its top, and closure means for said filling opening, said closure means including a plurality of closure flaps foldable across said opening in overlapping relationship to each other, the uppermost one of said flaps being hinged substantially at one side of said opening and extending substantially entirely across said opening and having a portion to be inserted between said pail and said liner.

8. A container for holding semi-solid material, comprising a tapered pail having side walls and a bottom forming tight joints with each other, and a tapered liner adapted to fit tightly within said pail and having side walls and a bottom hinged to each other along certain corners of said liner and unconnected to each other along other corners of said liner, said side walls and bottom being held engaged with each other along said unconnected corners when said liner is placed tightly within said pail, and the bottom of said pail contacting with the bottom of said liner for a substantial distance inwardly from said side walls to assist in rendering said pail leak-proof, said liner being capable of being removed from said pail and unfolded and flattened out substantially into a plane for free access to contents of said liner.

9. A container for holding semi-solid material, comprising a liner having a polygonal bottom and a plurality of side walls, at least one of said side walls being hinged to said bottom and one or more of said side walls being unconnected to said bottom but hinged to other side walls, said liner being capable of being flattened out substantially into a plane and of being erected into a hollow tapered body with said side walls extending upwardly from the edges of said bottom, and a tapered pail for enveloping the erected liner and holding it in erected position, said pail including side walls for extending upwardly along the side walls of the liner and a bottom for extending inwardly along the bottom of the liner for a substantial distance from said side walls, the bottom of said pail being tightly connected to the side walls thereof along corners corresponding to the edges of the liner bottom which are unconnected to the side walls of the liner, to

assist in maintaining said corners tight and substantially leak-proof.

10. A container for holding semi-solid material, comprising a liner having a polygonal bottom and a plurality of side walls, at least one of said side walls being hinged to said bottom and one or more of said side walls being unconnected to said bottom but hinged to other side walls, said liner being capable of being flattened out substantially into a plane and of being erected into a hollow tapered body with said side walls extending upwardly from the edges of said bottom, and a tapered pail for enveloping the erected liner and holding it in erected position, said pail including side walls for extending upwardly along the side walls of the liner and a bottom for extending inwardly along the bottom of the liner for a substantial distance from said side walls, the bottom of said pail being tightly connected to the side walls thereof along corners corresponding to the edges of the liner bottom which are unconnected to the side walls of the liner, to assist in maintaining said corners tight and substantially leak-proof, and the bottom of said pail having an aperture therein for access to the bottom of said liner for pushing said liner out of said pail.

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