

Dec. 29, 1953

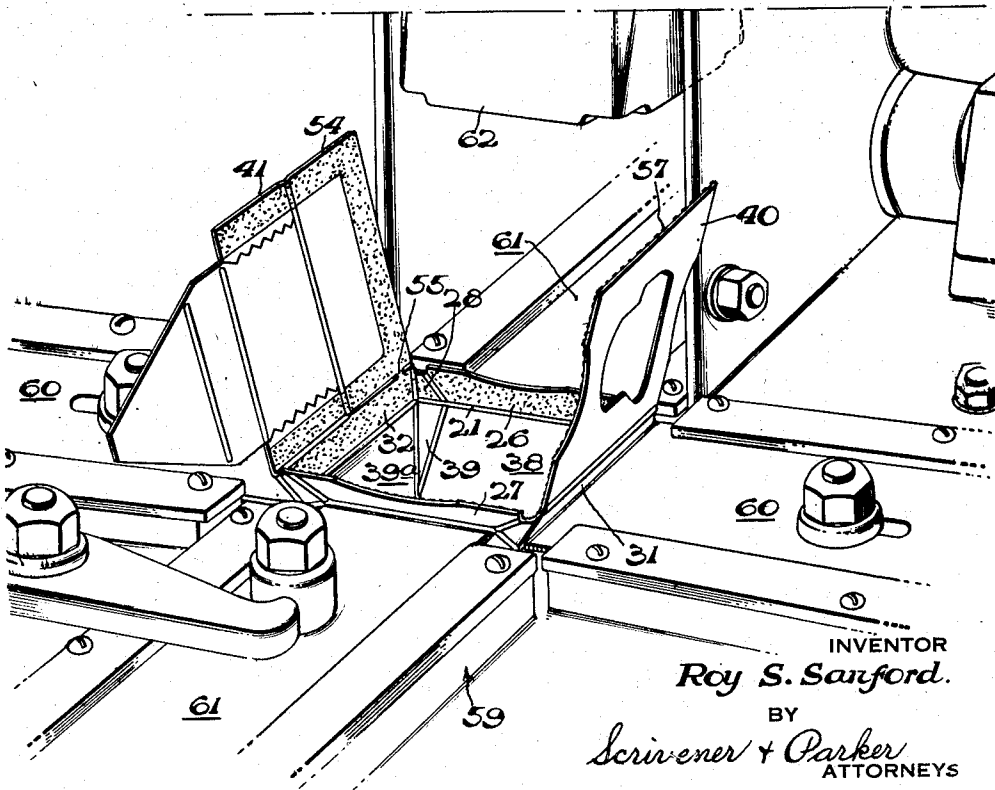
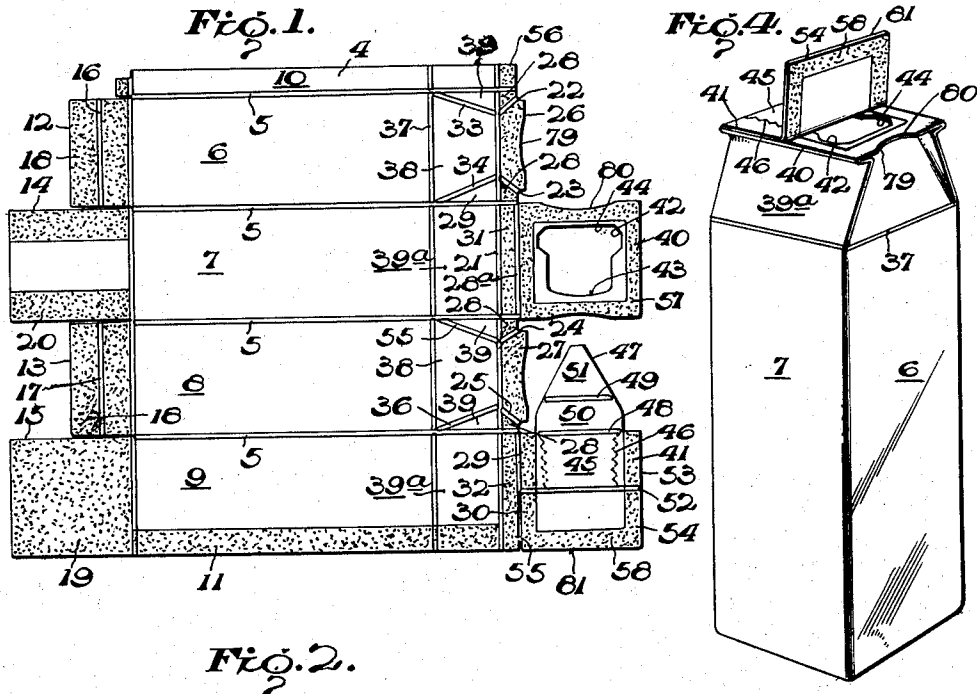
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2,664,237

PAPER CONTAINER

Filed Nov. 4, 1947

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

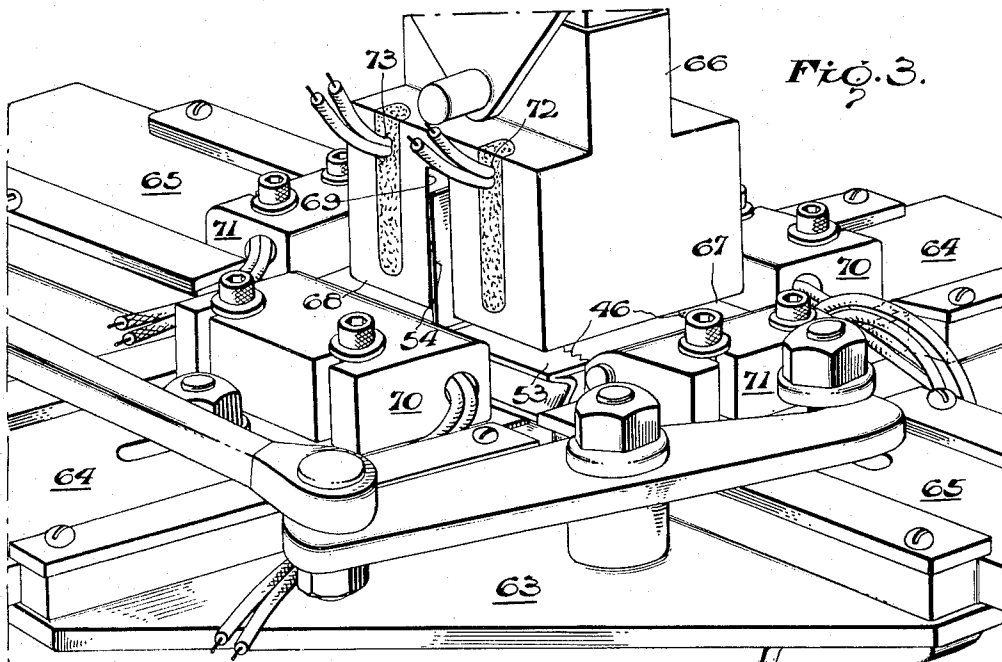


FIG. 5.

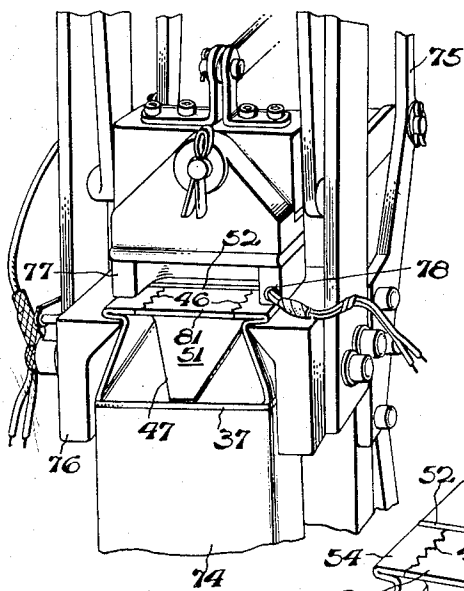


FIG. 7.

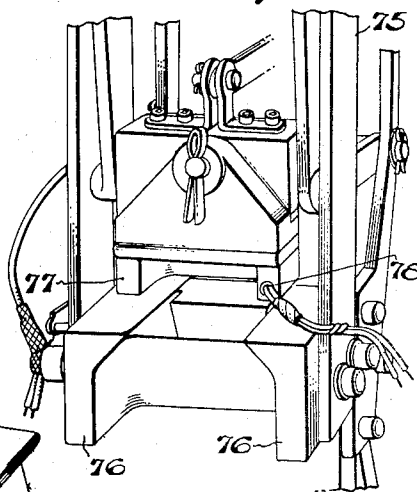
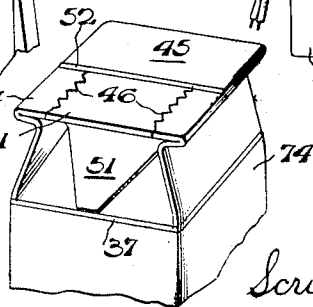


FIG. 6.



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2,664,237

PAPER CONTAINER

Roy S. Sanford, Oakville, Conn., assignor, by mesne assignments, of one-half to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan, and one-half to a group comprising Ace C. Fessenden, Chicago, Ill., and Ace Carton Corporation, Chicago, Ill., a corporation of Illinois

Application November 4, 1947, Serial No. 783,904

9 Claims. (Cl. 229—37)

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This invention relates to containers of paper-board or other sheet material, and more particularly to a novel liquid-tight and sift-proof container and to a means and method for making the same.

One of the objects of the present invention is to provide a novel paper container blank which is readily adapted for quick and efficient sealing at both ends, the construction being such that complete sealing of all pin holes and cracks is achieved, thus providing a container having end portions which are completely air-tight, when used for liquids, or sift-proof when employed for powdered materials.

Another object is to provide a closure for the upper end of a tubular container, so constituted as to permit portions of the container forming the end closure to be adhesively bonded together at a relatively high pressure sufficient to effect a positive flow of adhesive between the portions to fill and seal all cracks and openings therebetween at the container end.

A further object is to provide a novel closure for the upper end of a container of the above type, so constituted as to facilitate the filling of the container and the subsequent sealing of the end thereof.

Still another object is to provide a container of the above type having separate dispensing and filling openings so arranged as to facilitate the filling of the container and the subsequent dispensing of the material therein.

Yet another object is to provide a container of the above type having separate filling and dispensing openings and closure means therefor, and so constituted as to permit closing and sealing of the dispensing opening prior to filling of the container, and subsequent sealing of the filling opening, thus providing a container having a sanitary dispensing opening which remains sealed not only during the filling operation but until the dispensing opening is uncovered to dispense the contents of the container.

A further object is to provide a sanitary liquid-tight and sift-proof container having separate dispensing and filling openings and formed from a single piece of sheet material such as paper-board.

Another object is to provide a container of the above type having a filling opening adapted to be temporarily closed and sealed to permit sanitary shipment with the container empty, and adapted to be readily opened for filling and to be subsequently permanently sealed.

Still another object of the invention is to provide, in connection with a container having filling and dispensing openings and closure means therefor, a novel means and method for closing said dispensing opening while leaving the closure means for the filling opening in open position,

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A further object of the invention is to provide a means and method of effecting initial temporary and subsequent final sealing of a closure member on a container so constituted as to permit the temporary seal to be broken without damage to the container and to permit a permanent final seal to be effected thereafter.

Yet another object is to provide a blank for a container of the above type having a closure flap for a filling opening hingedly secured to a portion of the blank and secured to but readily detachable from another portion of the blank to permit handling of the blank without damage to said flap.

A still further object is to provide a container having separate filling and dispensing openings and closure means for the filling opening so constituted as to shield the dispensing opening closure from the filling opening during the filling operation.

Another object is to provide a container having separate filling and dispensing openings and separate closure means therefor, and so constituted as to permit the application of a protective coating such as paraffin to the interiorly exposed portions of the dispensing opening closure means after the latter is closed.

A further object is to provide, in connection with a container having a protective coating of paraffin or other thermoplastic material and a heat-sealable end closure, a novel means and method for substantially preventing said coating from melting and dropping into the interior of the container during the heat-sealing operation.

Another object is to provide, in connection with a container of the type having separately operable and hingedly connected dispensing and filling flaps, means for separately sealing said flaps and for insuring a seal along the hinge line therebetween.

Other objects and novel features of the invention will appear more fully hereinafter from the following detailed description when considered in connection with the accompanying drawings, wherein one embodiment of the invention is illustrated. It is to be expressly understood, however, that the drawings are utilized for purposes of illustration only, and are not to be taken as a definition of the limits of the invention, reference being had for this purpose to the accompanying claims.

In the drawings, wherein similar reference characters refer to similar parts throughout the several views:

Fig. 1 is a plan view of a blank adapted to be formed into the novel container of the present invention;

Fig. 2 is a perspective view of a partially assembled container and mechanism for forming the container;

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Fig. 3 is a perspective view showing a step in the formation of the end closure and mechanism for forming the end closure;

Fig. 4 is a perspective view of a container with the end closure partially completed;

Fig. 5 is a perspective view showing another step in the formation of the end closure and mechanism for forming the end closure;

Fig. 6 is a perspective view of the upper end of a container showing a completed end closure, and

Fig. 7 is a perspective view showing the mechanism of Fig. 5 in more complete detail.

The present invention is particularly directed to a means and method for forming and sealing a container of sheet material, the bottom end of the container being preferably closed and sealed as set forth more fully in the copending application of Roy S. Sanford and Wilfred A. Eaton, Serial No. 644,547 filed January 31, 1946, now Patent No. 2,596,224, for Paper Container, owned by the same assignee as the present application. The upper end of the container is in general preferably formed as set forth in the copending applications of Wilfred A. Eaton, Serial No. 671,832, filed May 23, 1946, now Patent No. 2,596,225, for Paper Container, and Roger H. Casler, Serial No. 699,750, filed September 27, 1946, now Patent No. 2,581,237, for Dispensing Containers likewise owned by the same assignee as the present application, the instant application setting forth certain improvements in structures of the above type, as will be more fully described hereinafter.

Containers of the type shown and described in the instant application and in the above referred to applications are ordinarily formed and filled by means of automatic machines, and when such containers are used for milk and similar products, it has been found desirable for sanitary reasons, to separate as completely as possible, the operations of forming the container from the operation of filling the container. Such a result can be obtained by forming the container in one room and filling and closing the container in an entirely separate room, the formed containers being transported to the filling room by suitable conveyor means which may be so constructed as to conform with sanitary requirements. As will be shown, the container of the present application is particularly adapted to meet these requirements, as the container may be substantially completed before being filled, the only operations required after filling being those of closing and sealing a filling flap.

It is likewise desirable in some cases to form the containers and ship them empty to another place for filling, in which case they must be sealed during shipment to prevent contamination of the interior, and subsequently opened, filled, and resealed. The present invention provides for this contingency, in that the container may be formed and temporarily sealed at one place, and thereafter opened without damage to the container, filled, and permanently sealed at another place, ready for distribution to the customer, it being noted in this connection that the dispensing opening, which is closed when the container is formed, is not disturbed in any way during the subsequent opening, filling and re-sealing operation, and consequently is not subject to contamination before reaching the consumer.

Referring more particularly to Fig. 1, the present invention is illustrated therein as including a container blank 4 divided by scored folding lines 5 into preferably rectangular wall panels 6,

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7, 8, and 9, the panel 6 being provided with a glue flap 13 adapted to be adhesively secured to panel 3, which may be provided with a coating of adhesive 11 along the lower edge thereof for that purpose. As set forth in the copending application of Roy S. Sanford and Wilfred A. Eaton, above referred to, the wall panels 6 and 9 are provided at their left ends with integral half-flaps 12 and 13, while the panels 7 and 8 are provided with full flaps 14 and 15, the flaps 12, 13, and 14, 15, thus being in opposed relationship when the container is assembled. Flaps 12 and 13 are provided with scored lines 16 and 17 which divide the half flaps into separate panels of the same shape and substantially equal area, the inner surfaces of flaps 12 and 13 having a coating 18 of a flowable adhesive. The inner surface of flap 15 is provided with a similar adhesive coating 19 and the flap 14 is provided with narrow strips of adhesive coating 20. The blank is formed into a tube and the bottom closed and sealed as described in the above referred to application of Sanford and Eaton, the two panels of the half-flaps being folded together and inside of the container with their adhesively coated surfaces together and the flaps 14 and 15 being folded thereover and subjected to pressure to bond all of the flaps together and to force adhesive outwardly between the two panels of the half flaps toward the side walls and corners of the container to seal all openings therebetween.

Referring to the right hand portion of Fig. 1, a score line 21 defines, in cooperation with angularly disposed score lines 22, 23, 24 and 25, substantially isosceles trapezoidal shaped panels 26 and 27, and adjacent substantially triangular panels 28. Additional score lines 28a and 29 and a partially cut line 30 define, in conjunction with score lines 5 and 21, rectangular panels 31 and 32. Other angularly disposed score lines 33, 34, 35 and 36 define, in connection with score lines 5, 21, and a score line 37, isosceles trapezoidal panels 38 and adjacent triangular panels 39, while the score lines 5, 21, and 37 define a pair of rectangular panels 39a.

Top closure flaps 40 and 41 are provided, and are preferably formed integral with and adjacent to panels 31 and 32 respectively, and hingedly secured thereto along score lines 28a and 29. The flap 40 has an opening 42 provided with a dispensing portion or opening 43 and a preferably enlarged filling portion or opening 44. While the openings 43 and 44 form portions of a single opening 42 in the form illustrated, it will be understood that if desired, the openings 43 and 44 may be separately formed in the flap 40, in which event, a narrow web or bridge may separate the two openings. The outer closure flap 41 is adapted when folded to overlie and close the opening 42, and is provided with a tear strip or dispensing port forming member 45 separable from the flap 41 as along perforations 46, and adapted to cover the dispensing portion 43 of opening 42 when the flap 41 is in closed position. The separable member is preferably provided with an opening tab 47 extending therefrom, and having scored folding lines 48 and 49 dividing the tab into portions 50 and 51. A score line 52 is provided substantially along the median line of flap 41, thus dividing the latter into integral and hingedly connected portions 53 and 54. The portion 54 is separated from panel 32 by the cut line 30, but in order to facilitate handling the blank, a small piece of paper 55 is left uncut to provide a separable con-

nection or web between panel 32 and portion 54 of the flap 41.

The panels 26, 27, 28, 31 and 32 and the upper end of the glue flap 10 are provided with an adhesive coating 56 as shown, and a strip of adhesive 57 is provided about the outer edge of closure flap 40 having a width approximately the same as that of the adhesive strip 56. A U-shaped strip of adhesive 58 of similar width is provided on flap 41, the shape of this strip being preferably such that there is no adhesive on the tear strip 45 or the perforations 46, although adhesive may be applied around the entire periphery of the flap if desired. While it is contemplated that the adhesive coatings 18, 19, 20, 56, 57 and 58 will be of the heat-sealing type printed on the blanks in the pattern shown and dried before shipment, it will be understood that other types of adhesive may be used, and that if desired, the adhesive may be applied to selected areas of the blank during the various steps of forming a container from the blank in order to adhesively secure the parts as above described.

Assuming that the glue flap 10 has been adhesively secured to the wall panel 9 and the bottom flaps 12, 13, 14 and 15 folded and sealed to form a tubular container as described, the container is placed in a forming machine 59, partially shown in Fig. 2 with the lower end thereof resting on a suitable support, not shown. The machine is provided with a pair of relatively movable opposed slides 60 and another pair of opposed slides 61 arranged as shown, together with a vertically movable plunger 62 adapted to fit into the open end of the container and engage the interior surfaces of the panels 26, 27, 31 and 32. In forming the container top, the plunger 62 is partially entered into the mouth of the container, and the slides 60 and 61 are moved inwardly substantially simultaneously, engaging the walls of the container adjacent score line 21, and folding panels 38, 39 and 39a inwardly, while panels 26, 27, 28, 31 and 32 are folded outwardly with respect thereto, due to the engagement of the edges of plunger 62 with the inner surfaces of panels 26, 27, 31 and 32. This operation serves to break the scores between the adjacent panels and to partially preform the upper end of the container, thus facilitating the final closing and sealing operations.

The container is now removed from the pre-forming machine 59, whereupon the flap 40 is folded inwardly with the adhesive coating strip 57 adjacent panels 26, 27, 31 and 32. The flap 41 is then folded in overlapping relationship with flap 40, and the tab 47 is folded inwardly substantially at right angles to the flap 41. The flap 54 is moved upwardly about score line 52 with sufficient force to break the connecting piece of paperboard 55, and with the flap 54 held in a substantially vertical position, the container is placed on a sealing machine 63, as shown in Fig. 3, the latter being provided with a pair of opposed slides 64 and another pair of opposed slides 65 arranged in a manner similar to the slides 60 and 61 in the machine 59. A vertically movable sealing plunger 66 is provided with a die member 67 adapted to engage the upper surface of portion 53 of flap 41, and is also provided with another die member 68 adapted to engage the portion of flap 49 not covered by flap portion 53, a slot 69 being provided therebetween to receive the vertically extending flap 54. As shown, the level of the lower surface of plunger por-

tion 67 is slightly higher than that of plunger portion 68 in order to compensate for the thickness of the flap 54 to provide uniform pressure on the flaps during the sealing operation. The slides 64 and 65 are moved inwardly to again fold panels 38, 39 and 39a inwardly and panels 26, 27, and 28 outwardly as heretofore described, the plunger 66 thereafter being moved downwardly to engage flap 40 with flange forming panels 26, 27, 31 and 32, and to engage flap 41 with flap 40, it being understood that one of the slides 65 engages tab 47 to tuck the portion 50 thereof under the flange forming panel 27, as more fully described in the above referred to copending application of Roger H. Casler. In the event an adhesive of the heat-sealing type is used, the slides 64 and 65 are provided with heating elements 70 and 71 respectively, while portions 67 and 68 of plunger 66 are provided with heating elements 72 and 73. The slides 64 and 65 having been moved inwardly, serve to support the flange forming panels, and on downward movement of plunger 66 by suitable means, not shown, heat and pressure are applied to the flange forming panels and flaps 40 and 41 to effect a secure bond between the engaging portions thereof and to positively flow the adhesive to seal and fill all openings therebetween. In the event other types of adhesive are utilized, it will be understood that the seal or bond between the above mentioned panels and flaps may be effected by pressure exerted by the plunger 66. Also in the event the adhesive is of the type requiring the action of heat to facilitate drying and setting, the slides or plunger or both may be heated by suitable means for this purpose.

Following the above described operations, the container is substantially in the form shown in Fig. 4, with the flap portion 54 extending upwardly and leaving port 44 open. In the event the container is to be coated with a protective material, it may be coated by dipping manually, or by automatic machinery, not shown, in a bath of molten wax or other suitable coating material, the latter being applied to the interior of the container and drained therefrom through the opening 44, and applied to the exterior by the operation of dipping the container in the bath. Thus the entire container is provided with a coating 74 and in the event wax or other thermoplastic material is utilized, it will be apparent that the adhesive coating 58 on flap 54 will have an overlying coating of a different thermoplastic heat sealable material, which is preferably so chosen as to be heat sealable at a lower temperature than the adhesive coating 58, for purposes to be more fully described hereinafter. In any event, it is desirable that the adhesive coating 58 and the protective coating 74 be so chosen as to be capable of effecting bonds between flap 40 and flap 54 under different conditions of temperature or pressure, or both, the coating 74 being preferably so constituted as to provide a relatively weak bond compared with the adhesive coating 58, in order to permit temporary closing and sealing of flap 54 and subsequent reopening thereof without damage to the container.

It is also to be noted, in connection with the above described coating operation, that in view of the fact that the portion 53 of flap 41 has already been adhesively secured to the flat end portion of the container formed by the flange panels 26, 27, 31 and 32, and by the flap 40, all of the interiorly-exposed portions of the flap 53 and the separable dispensing port forming mem-

ber will receive a coating of the protective material, thus insuring that the portions thereof which are exposed to the container contents are provided with a sanitary protective coating. In the event no adhesive is applied to the under surface of the tear strip 45, the coating material tends to fill and seal any openings between this strip and the flap 49, thus insuring a leakproof closure at this point, as well as a protective coating of the outer surface of flap 49 adjacent the inner surface of the tear strip 45 and around the dispensing port.

The container is now ready for filling, and may be filled with a product such as milk, for example, either manually or by suitable automatic machinery, not shown, and thereafter closed and sealed for delivery to the consumer. During the filling operation, the flap 54 is held in upwardly extending position by suitable means, not shown, thus permitting filling of the container through the opening 44. When the container is to be filled with food products, and particularly with fluid milk, it is important for sanitary reasons that no milk be allowed to collect on the outer surface of the dispensing closure flap 41 and adjacent areas, and particularly adjacent the strip 45 and the perforations 43. The upwardly extending flap 54 performs an important function in this connection, in that it provides an effective shield between the filling opening and the outer surface of flap 53 to prevent splashing of liquid on the latter from the region of the filling opening during the filling operation.

The final closing and sealing is accomplished by folding the flap 54 downwardly against flap 40 to cover opening 44, and placing the upper end of the container on a suitable machine 75, shown in Fig. 7, to effect sealing of the closure flap. The machine 75 may be provided with a U-shaped lower die 76 adapted to receive the upper end of the container and to support the flange forming panels 26, 31 and 32, and a similarly shaped upper die 77 movable by suitable means vertically with respect to the die 76. With the flap 54 folded to closing position, the top of the container is moved into the die 76 with the flap 54 toward the rear and the tab 47 at the front of the container as shown in Fig. 5, whereupon the die 77 is moved downwardly to force the flap 54 against the upper surface of flap 43 to effect a bond and seal therebetween. In the event the adhesive utilized is of a heat-sealing type, a heating element 78 may be provided in the die 77. If found desirable, a similar heater, not shown, may be provided for the lower die 76. In order to insure complete sealing of the flap 54 to flap 40, the dies are so arranged as to apply pressure across and on both sides of the hinge score line 52. It is also to be understood that these dies, as well as the slides and plunger of machine 63, are so contoured as to compensate for the number of layers of paperboard material being bonded in different areas, in order to insure adequate bonding pressures between all surfaces. Since the portion 53 of flap 41 has previously been bonded to flap 40, and since the U-shaped dies apply pressure to the free edges of flap 54 and across the hinge line 52 it will be apparent that after filling of the container, the flap 54 may be readily sealed along its periphery and along the hinge line to prevent leakage from the container, this being accomplished without disturbing the closure of the dispensing opening, which has already been effected by the portion 53 of flap 41 as described.

In the event the coating material is paraffin or some other low melting point material, and in the event an adhesive of the heat-sealing type is employed in adhesively securing the flap 54 to the flap 40 to effect a final closure, it is desirable to localize the application of heat to the flap 54 during the heat sealing operation in order to prevent the coating from melting and dropping into the container. Due to the employment of the U-shaped heated die 77, which engages only the peripheral portion of the flap 54, the heat is localized and melting of the coating is substantially eliminated.

As heretofore stated, it may sometimes be found desirable to form and coat the container, and thereafter seal it temporarily to permit shipment empty to another location for filling and subsequent resealing, the interior of the empty container being protected against contamination during shipment so as to avoid the need for sterilizing prior to filling. The present container is well adapted to this type of operation, the container in the form shown in Fig. 4 having its interior coated with wax or other suitable protective material through the opening 44, and the exterior preferably being similarly coated by the operation of dipping the container in the bath of coating material. Assuming that wax is used as the coating material, the coating is set by cooling in a suitable refrigerator, resulting in a container coated with wax, and including a coating of wax over the adhesive band 53 on closure flap 54. The wax normally used for such coatings has a lower melting point than the adhesive 53, thus permitting softening of the wax coating for heat sealing at a temperature below that required to activate the adhesive 53 for heat sealing, and so low as to leave the adhesive 53 substantially unaffected. The temporary closure may be affected in substantially the same manner as the final closure heretofore described, the upper portion of the container being placed between dies of a machine of the type shown in Fig. 7 with the flap 54 folded down against the flap 40. The heater 78 is so chosen or adjusted as to heat the die 77 sufficiently to soften the wax coating over the adhesive 53 and on the upper surface of flap 40 sufficiently to soften or render the wax coating tacky without disturbing the adhesive coating 53, the parts being pressed together by the operation of the dies during or after the softening operation to effect a temporary bond between, which, in the event the protective coating is of wax or other suitable material, is strong enough to maintain and seal the flap 54 in closed position, but is not strong enough to damage the container during subsequent reopening of the closure flap. In the event it is found necessary to cool the wax coating to insure a good bond, this may be accomplished by cooling the dies while maintaining pressure on the flaps, or by removing the container to another similar machine having dies maintained at a proper temperature to rapidly cool the wax while holding the parts in engagement.

The container is now ready for shipment empty to a filling station, where the container can be reopened for filling by lifting the flap 54 and breaking the relatively weak bond between the flap 54 and flap 43. Subsequent to the filling operation, the container is placed in a machine of the type shown in Fig. 7 having dies maintained at a temperature suitable for activating the adhesive 53, and the final closure made by heat and pressure as previously described. In order to facilitate reopening the flap 54 and

breaking the temporary wax seal, a cut-out 79 may be provided at the upper edge of panel 26 and a corresponding cut-out 80 on the edge of flap 40, as shown in Fig. 1. When the top is formed and sealed, these cut-outs are substantially in register so as to expose a portion 81 of the outer edge of flap 54, thus permitting the latter to be grasped or acted on by a suitable tool to break the wax seal and lift the flap to permit filling of the container.

From the foregoing, it will be seen that the present invention provides a novel blank and container structure which may be readily formed in a single piece from paperboard or other similar sheet material. Furthermore, it will be apparent that as shown in the drawings, and particularly in Fig. 6, a finished container is formed having a top closure which presents a substantially flat and unbroken or non-recessed outer surface having distinctive advantages from a sanitation standpoint when used for the packaging of food products such as milk, for example. It will also be noted that the closure member presenting this flat unbroken outer surface includes not only a tab separable therefrom to provide a dispensing opening, but also a separate flap which, prior to closing, is adapted to provide access to a filling opening for the container which is entirely separate and distinct from the dispensing opening. A protected dispensing opening is provided which may be sealed prior to filling of the container, and which remains undisturbed during the subsequent filling operation. The construction is such that the container may be substantially completely assembled in one room and filled in another room, the only operations performed in the filling room being those of filling, closing the filler flap, and sealing the latter, thus greatly minimizing the possibility of contaminating the product with which the container is filled. The container is also readily adapted for temporary sealing, and subsequent opening, filling, and resealing, a procedure which is often highly desirable.

While one form of the container has been shown, and described herein with considerable particularity, it will be understood by those skilled in the art, that various modifications may be resorted to without departing from the spirit of the invention. For example, in some instances the flap 40 may be dispensed with entirely if desired, in which case the portions 53 and 54 of closure flap 41 may be adhesively secured to the flat end of the container formed by the flange forming panels 26, 27, 31 and 32, rather than to the flat end formed by securing the flap 40 to the flange forming panels. Other modifications may also be resorted to within the scope of the invention.

Reference will, therefore, be had to the appended claims for a definition of the limits of the invention.

What is claimed is:

1. A closure for the open end of a tubular container of rectangular cross section including a closure flap adhesively secured to an end portion of the container and closing substantially one-half of the open end thereof, said flap presenting a flat unbroken outer surface, and a rectangular filler flap integral with and hingedly connected to the first named flap along one edge and having its remaining edges free to allow independent pivotal movement thereof about said hinged connection to expose the remaining portion of the open end of the container to allow filling of the

container, the free edges of said filler flap being adapted to be adhesively secured to the end portion of the container to close said remaining portion of said open end and presenting a flat and unbroken outer surface forming a continuation of and lying in the plane of the outer surface of the first named flap, the latter flap being provided with a member separable therefrom for providing a dispensing opening therein.

2. A tubular container of rectangular cross section having four side wall panels, a foldable flange forming panel at the end of each of said side wall panels, folded outwardly and forming a substantially continuous marginal flange about the upper end of said container, a substantially rectangular closure flap integral with one of said flange forming panels, provided with a dispensing and filling opening and adhesively secured to said flange, and a second substantially rectangular closure flap scored along the median line thereof from one side edge to the other to provide separate portions hingedly connected together along said median line, one portion being integral with the flange forming panel opposite said one flange forming panel and adhesively secured to said first named closure flap and having a tear strip covering the dispensing part of said opening, and the other portion having three free edges adapted to be adhesively secured to said first named closure flap to close the filling part of said opening after the container has been filled through said filling part of the opening.

3. A tubular container of rectangular cross section having side wall panels, a bottom closure, an outwardly extending marginal flange formed about the upper ends of said side wall panels, a first rectangular closure flap integral with and hingedly connected to a portion of said flange and adhesively secured to said marginal flange and provided with a port, a second rectangular closure flap integral with and hingedly connected with another portion of said flange and adhesively secured to said first flap and covering a portion of said port, said second closure flap provided with a tear strip separable therefrom to provide a dispensing opening therein registering with said port portion, and a third rectangular flap integral with and hingedly connected to said second flap at one edge and having three free side edges, said third flap being adapted to be adhesively secured to said first flap to cover the remaining portion of said port after the container has been filled.

4. A tubular paper container of rectangular cross section having a plurality of side wall panels formed to provide a marginal flange at one end thereof, and a pair of rectangular top closing flaps, one of which is securely bonded to said flange and is provided with an opening providing dispensing and filling portions, and the other of which includes two hingedly connected parts, one of said parts being securely bonded to the one flap to cover the dispensing portion of the opening prior to the filling of the container, and the other of which is provided with three free edges adapted to be securely bonded to the one flap to cover the filling portion of the opening after the container has been filled through said filling portion, said one part having a tear strip between the side edges thereof to uncover the dispensing portion of the opening to dispense the container contents.

5. In a paperboard container of rectangular cross section having side walls and an outwardly extending marginal flange at the upper end of

said side walls, means providing a sealed end closure for said upper end having a substantially flat and unbroken outer surface lying in a plane substantially at right angles to the vertical axis of the container, said means including a flat one piece closure member extending to the extreme edges of said flange and scored substantially along the median line thereof from one side edge to the other to provide a pair of hingedly connected flaps integral with each other and adapted to be separately sealed against said upper end to close the upper end of said container, one of said flaps being provided with a tongue separable therefrom along lines of weakness to provide a dispensing opening and the other flap serving prior to closing and sealing thereof to provide a filling opening separate and distinct from said dispensing opening.

6. A tubular container having side wall panels, a bottom closure, an outwardly extending flange formed about the upper ends of said side wall panels having a cut-out portion along one edge, a first closure flap having an opening therein, said closure flap being adhesively secured to said flange and provided with a cut-out portion substantially registering with the cut-out portion of said flange, a second closure flap provided with a tear strip separable therefrom to provide a dispensing port therein and adhesively secured to said first flap covering a portion thereof and also covering a portion of said opening, and a third flap integral with and hingedly connected to said second flap and separately closed and releasably sealed to said first flap and covering the remaining portion thereof and also covering the remaining portion of said opening, said third flap being so dimensioned along one of the free edges thereof as to overlie the cut-out portions of said flange and ported flap, whereby said free edge may be grasped to break said seal and move said third flap to open position.

7. A blank for a tubular container of rectangular cross section, comprising a sheet of paperboard material scored and cut to provide side wall panels, bottom closing flaps at one end of said side wall panels and a flange panel at the other end of each of said side wall panels, a substantially rectangular top closing flap formed integrally with one of said flange panels and being substantially coextensive with the length of the latter, said top flap having a centrally positioned opening therein providing filling and dispensing portions, a second substantially rectangular top flap scored substantially along the median line thereof from one edge to the other to provide a pair of substantially rectangular hingedly connected portions, one of said portions being formed integrally with a second flange panel and the other portion being free of said second flange panel, said scored median line extending at right angles with respect to the length of said second flange panel and the combined dimensions of said portions taken parallel with the length of said second flange panel being substantially equal to the length of said second flange panel, said one portion being weakened along lines defining a tear strip intermediate two side edges thereof, and the dimension of said opening in the first named top flap in a direction parallel with the length of its integrally connected flange panel being greater than the corresponding dimension of either of said portions.

8. A flat blank for a tubular container of rectangular cross section, comprising a sheet of paperboard material scored and cut to provide

side wall panels, bottom closing flaps at one end of said side wall panels, and a plurality of flange panels at the other end of said side wall panels, the flange panels forming outwardly extending marginal flanges when the blank is folded into a container, a substantially rectangular top closing flap formed integrally with one of said flange panels and having a centrally positioned opening therein providing dispensing and filling portions and having also a surface over which the contents of the container, when the container is assembled, may be poured, a second substantially rectangular top flap scored along a median line from one edge to the other to provide a pair of hingedly connected parts of similar shape and area, one part being integrally connected with a second flange panel and said scored median line extending at right angles to said second flange panel, and the combined dimensions of said parts taken parallel with the length of said second flange panel being substantially equal to the length of the latter, said one part having a tear strip provided with a lift tab extending beyond the margin of said one part, the tear strip, when the container is assembled, overlying the dispensing portion of said opening and said surface, the other part being free of said second flange panel and allowing filling of the container when assembled, through the filling portion of said opening, and the dimension of said opening in a direction parallel with the length of its integrally connected flange panel being greater than the corresponding dimension of either of said hingedly connected parts of said second top flap.

9. A closure for a rectangular tubular container of the type having an opening at one end thereof, said closure including a rectangular flap adhesively secured to said end of the container to partially close said opening and provided with a tear strip between opposite side edges of the flap and separable from said flap to provide a dispensing opening therein registering with a portion of the first named opening, and a second rectangular flap integral with and hingedly connected with the first named flap and provided with three free edges so that the second flap is movable to open and closed positions about the hinged connection to open and close the remaining portion of the first named opening, said second flap when open, forming a shield between said remaining portion and the outer surface of the first named flap and adjacent areas when filling the container through said remaining portion and adapted to be adhesively secured to the end of the container after filling thereof to close the remaining portion of said first named opening.

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