Nov. 8, 1955 W. J. McCUNE, JR 2,723,051

SINGLE USE, DISPOSABLE CONTAINERS AND STOCK AND BLANKS FOR FORMING THE SAME

Filed June 10, 1950

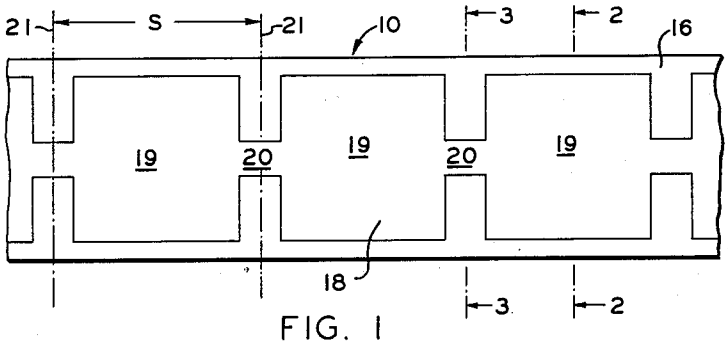

FIG. 1

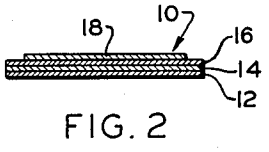

FIG. 2

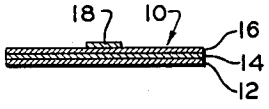

FIG. 3

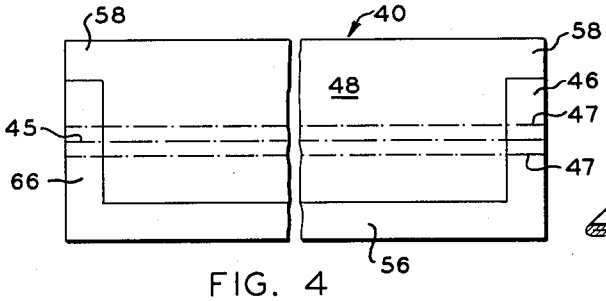

FIG. 4

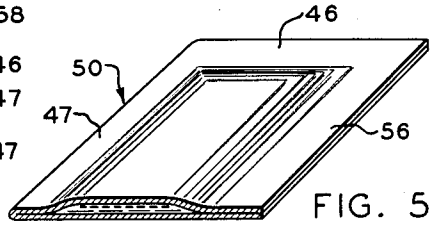

FIG. 5

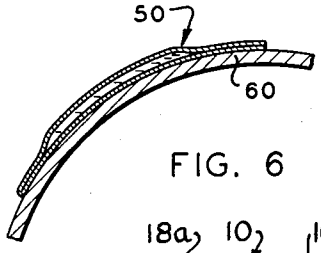

FIG. 6

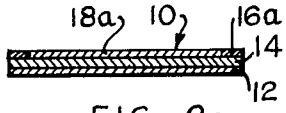

FIG. 2a

FIG. 7

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SINGLE USE, DISPOSABLE CONTAINERS AND STOCK AND BLANKS FOR FORMING THE SAME

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Application June 10, 1950, Serial No. 167,445

19 Claims. (Cl. 222—107)

This invention relates to containers, and more particularly has reference to a single use, disposable container capable of having its liquid content directly spread therefrom in a thin layer and constructed so that a liquid-containing cavity therein is substantially maintained in an unrestricted condition, as well as to blanks from which said containers may be made, and also to stock material in the form of continuous sheet from which blanks for said containers may be provided.

Objects of the invention reside in the provision of a container having an elongated liquid-containing cavity and a sealed passage adjacent the long edge thereof which may be uniformly unsealed throughout a length approximately equal to said cavity upon application of stress to the container walls, and of means comprising different thermoplastic materials having different adhesive properties providing coatings on the inner side of the walls of the container whereby the walls of said container may be sealed along marginal portions thereof and may be effectively restrained from adhering to each other between the sealed portions, as well as in the provision of a container of the character set forth which is flat and which, in its filled and sealed condition, is readily deformable to a curved shape without rupture whereby it is possible to mount a plurality of containers on a strip of sheet material which can be wound into a roll having a relatively small radius.

Another object of the invention is to provide continuous material from which individual blanks, adapted to form individual containers, may be cut, said material being in the form of a continuous deformable sheet which is substantially impervious to liquid adapted to be retained within the containers formed therefrom and which is also substantially impervious to vapor from said liquid and to oxygen from the atmosphere, the surface of the sheet adapted to provide the inner side of containers having coatings thereon of thermoplastic materials of different adhesive properties with the exposed surface portion of one coating being located over an area of said sheet which comprises enlarged portions spaced longitudinally of the sheet between the edges thereof and strip portions positioned between and joined to the adjacent enlarged portions, and with the exposed surface portions of a second coating overlying the area of the sheet uncovered by the first-mentioned coating.

Further objects of the invention are to provide a blank which is formable into a container of the character described upon folding upon itself and sealing the edges thereof, and which has a coating of a thermoplastic material covering the surface of the blank adapted to provide the inner side of the walls of the container and extending over an enlarged portion of said surface at a location between the edges of the blank except for an elongated marginal portion and wherein the enlarged portion covered by said coating is in part surrounded by marginal portions which are covered by a coating of a second thermoplastic material having adhesive properties different from the first-mentioned coating; and to provide blanks of the kind just set forth from stock material of continuous nature.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the products possessing the features, properties and the relation of components which are exemplified in the following detailed disclosure, and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings wherein:

Figure 1 is a broken-away plan view of continuous material which is used in the formation of container blanks and which is characterized by having one surface thereof formed by two superposed layers of different plastics;

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

Fig. 2*a* is a section similar to Fig. 2 but taken through continuous material which is used in the formation of container blanks and which is similar to the continuous material of Fig. 1 but differs therefrom in that the plastic layers forming one surface thereof are arranged in side-by-side relation instead of being superposed;

Fig. 3 is a section on the line 3—3 of Fig. 1;

Fig. 4 is a plan view, with parts broken away, of a blank from which one embodiment of the novel container of the present invention may be formed;

Fig. 5 is a perspective view of a portion of the container structure of the present invention in its filled and sealed condition;

Fig. 6 is a sectional view showing the container mounted on a suitable base of a curvature which the container may readily assume without rupture; and

Fig. 7 is a somewhat diagrammatic perspective view, with parts broken away, illustrating an application of the container of the present invention.

Frequently it is required that a small quantity of liquid material be applied in a relatively thin layer over a fairly large surface area. For example, a photosensitive film may be processed or a picture may be toned by applying on the surface thereof a layer of liquid containing the processing reagent or toning agent in solution. Another example of the need for applying a thin liquid layer over a large surface area resides in the application of a dye or ink to a hand press or printing block for producing prints or impressions. Adhesion of two elements also often necessitates a continuous layer of an adhesive between surfaces of said elements. The present invention comprehends an inexpensive, disposable container adapted to provide for such uses a liquid which is in a quantity sufficient to carry out a single application to the surface to be treated and which is in a condition for direct application to said surface whereby to afford greater efficiency and economy of operation.

In one embodiment, the container is an elongated structure having a length at least twice its width and is relatively flat, having a depth which is only a fraction of its width. The container is deformable in its filled and sealed condition so that it may be curved in the direction of its width, for example about a radius equal to its width, without danger of rupturing its seal. A sealed passage extends the length of the container along one edge thereof, and is the weakest of the edge seals which define the liquid-containing cavity and which confine the contents in said cavity.

The contents of the container are of a viscosity exceeding a predetermined minimum viscosity and, in this viscous condition, cooperate with the container structure and the sealed passage to insure a uniform peeling apart of the walls of said sealed passage upon application of a squeezing force to the walls of the container. This force

is applied to the entire length of the container as by a doctor blade, roll applicator or a pair of pressure rolls, and progresses widthwise of said container in the direction of the sealed passage. By equipping the container with a fairly wide, flat, liquid-containing cavity, and by suitably thickening the contents to give the same at least a predetermined minimum viscosity, the squeezing together of the container walls, particularly during the initial stages of the pressure application, insures an equalization of the hydraulic peeling pressure transmitted by the container contents to the sealed passage prior to rupture of the seal. The further squeezing together of the container walls during the progressive application of the liquid-releasing force produces a uniform and complete peeling apart of the marginal walls which constitute the sealed passage.

The container should be fluid-tight, substantially water-vapor-impervious and inert to its contents whereby said contents may be kept intact and inactive for long periods of time. In carrying out this concept, the inner side of the walls of the container is adapted to be coated with a plurality of thermoplastic materials which are inert to the contents of the container and which function as adhesives whereby edge portions of the container may be sealed together upon the application of heat and/or pressure thereto. The container must be maintained in a condition so that the contents thereof can be squeezed and distributed therefrom with the same ease and uniformity at any instant during the several months or more which may follow the forming, filling and sealing of the container. In meeting this requirement, the liquid-containing cavity in the container should be substantially maintained in an unrestricted condition so that the liquid contents therein may, at all times, be freely discharged from the container. This may be accomplished by effectively restraining the inner side of the walls of the container from adhering to each other by the appropriate applications thereon of coatings of thermoplastic material of different adhesive properties.

Containers of the character described, while awaiting use, are frequently subjected to forces which deform the containers without causing rupture thereof. These forces may result in pressing portions of the inner walls of the container which overlie the cavity into contact with each other. For example, there is a tendency for this to occur in containers attached to a carrying sheet which is wound into a roll, as in the case of image-receiving sheet used in a photographic transfer process. Contacting portions of a thermoplastic coating will adhere to each other under temperature conditions which at least approach the softening point of the thermoplastic material. It will be apparent that adhesion of the inner walls within the cavity portion of the container will lead to the failure of the container by restricting the cavity therein whereby a uniform discharge of the contents of the container will be prevented. It is frequently desirable, in forming containers of this character, to employ a relatively low softening point thermoplastic material. It therefore happens that temperatures may be encountered in the normal use of the container which at least approach the order of the softening point of the thermoplastic adhesive whereby accidental sealing may be expected.

The present invention is concerned with a container design which avoids the difficulties set forth in the foregoing, as well as with providing a blank from which such a container may be formed and with continuous material useful in the formation of these blanks.

The container is preferably formed from a single, essentially rectangular blank folded medially. It may also be formed from two essentially rectangular blanks secured together at their marginal edges. It is so simply constructed that blanks therefor may be cut without waste from continuous sheet material. Furthermore, filled, sealed and individual and separate containers may be formed as part of one continuous operation from a continuous strip of sheet material having container blanks laid out thereon in end-to-end relation.

Referring to Fig. 1 there is shown a sheet **10** of continuous material adapted to be cut into a plurality of individual blanks, each of which is formable into a single, disposable container. The sheet **10** is of a deformable nature, is substantially impervious to liquid adapted to be retained within containers formed therefrom as well as to vapor from said liquid and preferably is also substantially impervious to oxygen. The sheet is preferably formed of a plurality of layers or plies, as is particularly well illustrated in Figs. 2 and 3.

An outer layer **12** serves as a backing or support for the sheet **10**. Outer layer **12** is preferably formed of a thin, relatively inexpensive, tough material which may be a plastic but is preferably a paper, such as kraft paper. A thin film or sheet of a relatively vapor impervious material, such as a metal foil **14**, is suitably adhered to a surface of layer **12**. Applied onto the surface of the metal foil are coatings or layers **16** and **18** of suitable thermoplastic materials which are capable of being adhered to each other and to themselves by the application of heat and/or pressure. The metal foil **14** and the coatings **16** and **18** are each relatively thin, being only sufficiently thick to be continuous.

The materials which form both of the coatings **16** and **18** are preferably liquid-impervious in order to protect the metal foil **14** by preventing the contents of the container from reaching the foil to corrode or otherwise deteriorate the same. In addition, the layers formed by coatings **16** and **18** are of materials which are inert to the metal foil.

For a reason which will presently appear, a plastic material is selected for the layer or coating **16** which has a greater affinity for itself than for the plastic material which forms the coating **18**, or a plastic is employed for coating **16** which is more easily bondable to itself than to the coating **18**. It is therefore possible to readily obtain a stronger seal between portions of the coating **16**, which overlie each other, than it is between overlying portions of the coatings **16** and **18**. In general, suitable plastic materials for this purpose have relatively low softening points. In this regard, as will also be pointed out, it is desirable to employ a plastic for the coating **18** which has a higher softening point than the plastic used for the coating **16**.

With particular reference to Figs. 1, 2 and 3, it may be noted that the coatings or layers **16** and **18** form that surface of the sheet **10** which is adapted to provide the inner side of containers formed from the sheet. Coatings **16** and **18** provide surface portions which together form the inner face for containers made from the continuous material. The exposed surface portion of the coating **18** is located over an area of the sheet which comprises enlarged portions **19** spaced apart longitudinally of the sheet between the edges thereof and strip portions **20** positioned between and joined to adjacent enlarged portions. The other coating **16** is located at least over that area of the continuous sheet **10** which remains uncovered by the coating **18**.

It may be observed that the enlarged portions **19** and the strip portions **20** of the coating **18** are, respectively, similar and are positioned symmetrically with respect to the longitudinal center line of the sheet **10** whereby the center line passes substantially through the center of each portion **19** and **20**. As shown, enlarged portions **19** and strip portions **20** are rectangular in shape and have their long sides symmetrically located with respect to the longitudinal center line of the sheet **10**. It will be appreciated, however, that the shape of the area on the sheet **10** covered by the coating **18** may be varied whereby to include a variety of geometrical patterns which will be influenced by the use to which the container will be employed.

A convenient method of applying the coatings **16** and

18 to the metal foil 14 is to apply the coating or layer 16 over the entire surface of the foil 14, as for example by roll coating practices, by doctoring or other conventional procedures. The coating 18 may then be applied by printing onto the surface 16 with a printing roll which has the pattern for the enlarged portions 19 and strip portions 20 suitably engraved or otherwise formed thereon and which is inked with the coating 18. While the just described procedure for applying the coatings 16 and 18 is preferred, it is of course within the scope of the invention to apply the coatings individually and only over the areas on the sheet 10 which they are to cover. For example and with reference to Fig. 2*a*, a coating 18*a* substantially similar to the coating 18 may be applied by the use of a printing roll directly onto the surface of the metal foil 14 and a coating 16*a* substantially similar to the coating 16 may then be applied to the uncovered areas of the metal foil by the use of another printing roll which carries a pattern complementary to the pattern of the roll employed for applying the coating 18*a*.

If the sheet 10 is of a width equal to the width of two unfolded container blanks, a section may be cut therefrom which has longitudinal and transverse dimensions of a magnitude sufficient to provide two individual blanks by cutting the sheet transversely on each side of an enlarged portion 19 of coating 18 at a distance from said enlarged portion 19 equal to one-half the spacing between the enlarged portions 19 of the coating 18. A section of this character is indicated at S in Fig. 1 as lying between transversely extending boundaries indicated by dash-dot lines 21. Since the sheet 10 is of a continuous character, it will be obvious that a plurality of sections S will extend successively from end to end of the sheet. The construction employed greatly facilitates the formation of individual container blanks of the character illustrated in Fig. 4 from the sheet 10, since to form individual container blanks is merely a matter of slitting the sheet along its longitudinal center line and cutting it transversely on the boundary lines 21 between adjacent sections S.

Blank 40 of Fig. 4 is representative of one of the halves of a section S of sheet 10 after the sheet has been longitudinally and transversely severed, as previously described. In this regard, the particular blank 40 which is illustrated is a blank cut from that half of a section S of sheet 10 which lies towards the bottom of the drawing.

Blank 40 includes an enlarged surface portion or area 48 which is in part surrounded by marginal portions 46, 56 and 66. Enlarged portion 48 is covered by coating 18, while the marginal portions 46, 56 and 66 are covered by the coating 16. With special reference to Figs. 1 and 4, it may be observed that the enlarged surface portion 48 of blank 40 is the equivalent of one-half of a surface portion 19 of sheet 10 plus one-half of each strip portion 20 extending from said surface portion 19 while the marginal portions 46, 56 and 66 are equivalent to the area over one-half of a section S of sheet 10 which is covered by coating 16 and which adjoins that part of said half section covered by the coating 18.

Enlarged portion 48 of the blank 40 is substantially continuous over one long side of the blank whereby the portion 48 is generally rectangular in shape, except for marginal extensions 58 needed to render the coating which forms the enlarged portion 48 coextensive over said long side of the blank. As the width of the enlarged portion 48 is less than that of the blank, and as the enlarged portion 48 is symmetrically positioned on the blank, this leaves a part of the marginal portions on the short sides of the blank and the marginal portion on the second long side of the blank uncovered by the coating which provides the enlarged portion 48 and permits these just-described marginal areas to present exposed surfaces which comprise the coating 16. Consequently, the unfolded blank 40 is provided with marginal portions which extend entirely around the same and which may be brought into face-to-face contact by folding the blank upon itself along its longitudinal center.

Container 50 is formed from the blank 40 by folding the blank along a substantially medial line 45 extending the length of the blank. Folding of the blank 40 in this manner brings the short side marginal portion 46 into contact with itself, the short side marginal portion 66 into contact with itself and the long side marginal portion 56 into contact with the marginal portion provided by the coating which covers the area 48. These several marginal portions, after folding in the manner described, are secured together by the application of heat and/or pressure whereby to provide a sealed container 50 having a liquid-containing cavity which extends substantially the length thereof. In addition, it is preferable to adhesively secure together a narrow strip 47 of the container walls adjacent the fold line 45. This expedient provides a thin leading edge from the container 50 over which a suitable pressure-applying device, such as a pressure roll or doctor blade, may be readily advanced to compress the container walls and effect the release of the container content. As will more fully become apparent, it is preferable, although not critical, that pressure applied to the container blank for sealing the marginal portions 46, 56 and 66 be restricted to an area having a maximum width from the container edges equal to the width of the marginal portions.

It is to be noted that a sealed liquid-releasing passage, coextensive in length with the container cavity and adapted to be peeled apart or ruptured from end to end thereof upon discharge under pressure of the liquid contents of the container, is provided over the long side of the container which includes the marginal portion 56.

Upon folding of the blank 40, the marginal portions at the long sides of the blank present overlying surfaces for sealing which are formed, respectively, of the coatings 16 and 18, while the marginal portions at the short sides of the blank 40 present overlying surfaces which are formed only of the coating 16. As heretofore indicated, the material of coating 18 which covers the surface portion 48 of the blank 40 has a lesser affinity for the coating 16, which covers the marginal portions 46, 56 and 66 of the blank 40, than the coating 16 has for itself. It will thus be appreciated that a bond may be readily obtained at each end of the container 50 which is stronger than the bond between the long marginal portions of the container blank adapted to form the sealed liquid-releasing passage. This differential sealing effect is desirable since the passageway for the discharge of the container contents should be the weakest of the edge seals which define the liquid-containing cavity and which confine the liquid in said cavity.

Certain special advantages accrue from the employment of a container blank design of the character illustrated in Fig. 4. For example, by utilizing a shape for the coated area 48 of the blank 40 which includes extensions 58, it will be apparent that a substantially uniform bond may easily be obtained over the entire marginal length of the container which forms the rupturable discharge passageway. Also, in a container of the character disclosed, likelihood of accidental sealing of overlying inner wall surfaces of the container is decreased by the application of a coating, such as the coating 18, over an area 48 of the container blank which approximates 75% or more of the total area of the blank whereby this large coated area will be substantially coextensive with the liquid-containing cavity of the container. This statement in regard to control against accidental sealing becomes apparent in view of the fact that the coating 18 adjacent the cavity in the container has a higher softening point than the plastic of the coating 16 used in conjunction with the edge seals so that there will be less opportunity for the plastic of the coating 18 to approach a bondable condition from temperatures encountered in service. Furthermore, it is more difficult, as hereinbefore indicated, to bond the plastic of

coating **18** to itself than to bond it to the coating **16** so that the coating over the inner walls of the liquid cavity is difficulty bondable under pressures normally encountered during use and service.

By one convenient procedure, containers are made from continuous stock formed by slitting the finished sheet **10** longitudinally of itself. Folding of continuous stock of this character along its longitudinal center line will provide walls between which the liquid to be contained in the containers may be introduced as the container walls formed by folding are undergoing sealing. For example, the long edges of the container blank may be sealed together before the blank is severed from the stock of material from which it is formed. During the sealing together of the long edges, the desired quantity of liquid content for the container is introduced between the folded walls of the blank and thereafter the short edges are sealed together and the finished container is severed from the remainder of the sheet stock. The sealing is preferably effected by the application of heat and/or pressure, and a uniform heat and/or pressure may be applied to all of the marginal portions being sealed together in view of the difference between the adhesive properties of the material over the enlarged area **48** and the material of the marginal portions **46**, **56** and **66**.

It is to be expressly understood that a greater strength differential between the short edge seals **22** and the rupturable long edge seal **24** may be obtained by subjecting the short edge seals to a greater heat and/or pressure during sealing than is used in forming said long edge seal.

The walls of container **40** in one preferred form comprise a construction in which base **12** is a kraft paper, layer **14** is a silver or lead foil and coating **16**, which provides the marginal portions **46**, **56** and **66**, is a thermoplastic material such as a polyvinyl acetal, for example polyvinyl butyral, polyvinyl acetal or polyvinyl formal. It is to be understood that the composition of the just-described coating may include suitable plasticizers and other materials which render the coating formed from the plastic composition more suitable for its purpose. For example, a composition comprising 60% to 72% by weight of polyvinyl butyral, 10% to 23% by weight of ½" nitrocellulose, and approximately 5% by weight of dibutyl sebacate is particularly satisfactory for this purpose. When the foregoing composition is employed for the coating **16** over the marginal portions **46**, **56** and **66**, the material for the coating **18** which covers the area **48** of each blank **40** may consist of ethyl cellulose or of a mixture of ethyl cellulose and paraffin, the mixture comprising at least 50% by weight of ethyl cellulose.

As hereinbefore pointed out, the container contents have a predetermined minimum viscosity and are thickened, if necessary, to impart thereto this predetermined viscosity which cooperates with the seal and structure of the container to give a uniform and complete opening of the long seal during use of the container and thereby insure a spread directly from the container over an area as wide as the length of the liquid-containing cavity of the container. This minimum viscosity should be of the order of at least 1000 centipoises at a temperature of 24° C. Such a viscosity provides adequate allowance for such variations in viscosity as may take place when the container is used in an environment where the temperatures are much higher than 24° C. The range of temperatures for which the operation of the container is intended is the range of ambient temperatures which would be encountered in various locations under varied climatic conditions, i. e., temperatures not exceeding 45° C.

The desired viscosity may be obtained in the liquid content of the container by dissolving in the liquid a suitable high molecular weight polymer which will not decompose or otherwise lose its thickening properties due to reaction with the liquid or the reagents therein. For example, where the liquid composition in the container has water as its solvent, suitable plastics for increasing the viscosity of the liquid composition are the water-soluble cellulosic plastics such as hydroxyethyl cellulose and sodium carboxymethyl cellulose.

In one preferred form of the container for spreading a liquid reagent to a thickness of approximately .003 inch over an area approximately three inches by four inches, a container three and one-half inches long and having a maximum thickness of one-sixteenth of an inch can be used. The overall width of such a container will be approximately three quarters of an inch and the width of the seals at the marginal portions **46**, **56** and **66** will be approximately three-sixteenths of an inch, while the seal at the leading edge of the container will be approximately one-sixteenth of an inch. The overall thickness of the sheet material from which the container walls are formed may be approximately .0040 inch, with layer **12** approximately .0015 inch thick, layer **14** approximately .0015 inch thick, coating **16** approximately .0008 inch thick, and with coating **18** having a thickness of the order of .0002 inch or less.

As a result of the foregoing structure, the container in its filled and sealed condition is relatively deformable and it becomes possible to mount the container on a suitable base **60** (Fig. 6) of a sheet material such as paper and to wind the paper with the container mounted thereon into a roll having a radius as small as the width of the container. In this way it becomes possible to package a plurality of the containers in relatively compact and conveniently accessible form.

The use of the novel container structure of the invention is illustrated in Fig. 7 wherein the container contents are applied to an area **72** of a sheet material **74** for adhering said area to a corresponding area of a second sheet material **76**. The container **50** is located adjacent area **72** with the long seal at marginal portion **56** thereof contiguous to said area, and with said container between sheet materials **74** and **76**. This arrangement of elements may be positioned on a plate **78**, and a hand-operated squeegee roller **80** may be advanced over the assembly, beginning its travel at the folded edge **45** of the container. The downward pressure applied by roller **80** will determine the thickness of the film that is obtained when the contents of the container are squeezed from the container. During the early stage of the advance of the roller from the leading edge **45**, widthwise of the container, there is created a hydraulic pressure in the container contents which is uniformly distributed along the entire length of the seal between the marginal portion **56** and the overlying marginal portion which is adhered thereto. Continued advancement of roller **80** increases this pressure to the point where the seal is ruptured, the rupture uniformly peeling apart the walls of the seal to provide a discharge passage for the container contents substantially equal to the length of the container. The contents may thereafter be spread in a desired thickness over the area **72** by continued movement of said roller **80**, the construction of the container insuring an immediate spread wide enough to cover said area.

It is to be understood that the container **50** may be adhesively or otherwise secured to the sheet **74** over which its contents are to be spread, said sheet providing a spreading area adjacent the mouth or lip along marginal portion **56** of the container, which area is of a width at least as great as said dispensing lip is long and is of a length many times the width of said container. Sheet **74** may merely serve as a liquid-spreading layer or surface for effecting a uniform distribution of the liquid content of the container for processing an area of another element adapted to be superposed on said sheet.

The container structure is particularly suited for carrying highly alkaline solutions, such as solutions of photographic developing agents whose pH may be as high as 14.

The terms "coat," "coating" and "layer" are used synonomously herein and in their accepted sense with reference to the thermoplastic materials indicated at **16** and **18**

of the multi-ply product and as meaning coverings whereby a layer of one substance covers another or serves as a cover therefor. In this regard, it will be obvious that the layers or coatings **16** and **18** may comprise preformed sheetings which are superposed on and which are laminated to the layer **14** of metal foil and to each other, and that these layers or coatings are not restricted to formation and application from solutions by the roll coating and printing practices heretofore described.

Since certain changes may be made in the above product without departing from the scope of the invention herein involved, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. As a new product, continuous material adapted to be cut into a plurality of individual blanks each of which is formable into a single, disposable container for a viscous liquid, said material comprising a continuous deformable sheet which is substantially impervious to liquid adapted to be retained within containers formed therefrom and which is also substantially impervious to vapor from said liquid, and coatings, each of a thermoplastic material, overlying the surface of said sheet adapted to provide the inner side of containers formed from said sheet, said coatings having exposed surface portions which together provide the inner face for containers formed from said sheet, the exposed surface portion of one of said coatings being located over an area of said sheet which comprises enlarged portions spaced apart longitudinally of said sheet between the edges thereof and strip portions positioned between and joined to adjacent enlarged portions, the exposed surface portions of a second coating overlying the area of said sheet uncovered by said first-mentioned coating whereby to surround the said first-mentioned area at least intermediate of the ends of said continuous material, said second-mentioned coating of thermoplastic material having a greater affinity for itself than for said first-mentioned coating of thermoplastic material whereby said second-mentioned thermoplastic material may be bonded to itself with a stronger bond than a bond between said second-mentioned thermoplastic material and said first-mentioned thermoplastic material.

2. A new product of the character defined in claim 1 wherein said enlarged portions and strip portions covered by said first-mentioned thermoplastic material are, respectively, similar and are symmetrically positioned intermediately of the edges of said sheet.

3. The product of claim 1 wherein said enlarged portions and strip portions covered by said first-mentioned thermoplastic material are, respectively, similar and are positioned symmetrically with respect to the longitudinal center line of said sheet whereby the center line passes substantially through the center of each said portion.

4. A new product of the character defined in claim 1 wherein said sheet comprises a layer of paper and a layer of metal foil, said metal foil being superposed on said paper, and wherein said coatings of thermoplastic materials cover the exposed surface of said metal foil.

5. The product of claim 1 wherein said coating of said second-mentioned thermoplastic material is substantially coextensive with said inner side of said sheet, and wherein said coating of said first-mentioned thermoplastic material overlies said second-mentioned coating in superposed relation thereon.

6. A product of the character set forth in claim 1 wherein said sheet comprises a layer of paper, a layer of metal foil superposed on one surface of said paper, said second-mentioned coating substantially covering said metal foil and said first-mentioned coating covering a part of said second-mentioned coating, said first-mentioned coating covering an area of said second-mentioned coating comprising said enlarged portions and joining strip portions with said enlarged portions and strip portions being of rectangular shape and located on said second coating to have their long sides symmetrical with respect to the longitudinal center line of said sheet.

7. A product of the character set forth in claim 1 wherein said continuous sheet is adapted to be divided into a plurality of sections which have longitudinal and transverse dimensions of a magnitude sufficient to provide material for two container blanks and which extend successively from end to end of said sheet, each section being defined longitudinally of said sheet by that part of the coating of said first-mentioned thermoplastic material which covers said sheet over an enlarged portion and one-half of the length of each strip portion extending from said enlarged portion.

8. As a new product, a blank for forming a container for viscous liquid, said blank comprising a sheet material which is deformable and which is substantially impervious to liquid adapted to be retained within a container formable from said blank and to vapor from said liquid, a coating of a thermoplastic material having an exposed surface covering an enlarged portion on the surface of said blank adapted to provide the inner side of a container formable from said blank, said enlarged portion being located between the edges of said blank except for an elongated marginal portion over which said coating extends whereby said enlarged portion is in part surrounded by marginal portions uncovered by said thermoplastic material, and a coating of a second thermoplastic material having an exposed surface covering marginal portions of said blank uncovered by said first-mentioned thermoplastic material, said second-mentioned coating of thermoplastic material having a greater affinity for itself than for said first-mentioned coating of thermoplastic material whereby said second-mentioned thermoplastic material may be bonded to itself with a stronger bond than a bond between said second-mentioned thermoplastic material and said first-mentioned thermoplastic material.

9. As a new product, the blank of claim 8 wherein the sheet providing said blank comprises a layer of paper and a layer of metal foil, said metal foil being superposed on said paper and said thermoplastic materials covering the exposed surface of said metal foil.

10. A new product of the character defined in claim 8 wherein the coating of said first-mentioned thermoplastic material covers an enlarged rectangularly shaped area located between the edges of said blank and joined by a marginal portion also covered by said first-mentioned thermoplastic material and extending adjacent a long side of said rectangle and beyond each end of said long side.

11. The product of claim 8 wherein said second-mentioned thermoplastic material is substantially coextensive with the surface of said sheet which provides the inner side of said blank, and wherein said first-mentioned thermoplastic material overlies said second-mentioned thermoplastic material in superposed relation thereon.

12. The blank of claim 8 wherein the marginal portion of said blank, which is covered by said first-mentioned thermoplastic material, is substantially parallel to a marginal portion of said blank which is covered by said second-mentioned thermoplastic material.

13. A product of the character set forth in claim 8 wherein said blank is of a rectangular shape and wherein the marginal portion covered by said first-mentioned thermoplastic material is substantially continuous with a long side of the blank and the marginal portions covered by said second-mentioned thermoplastic material are substantially continuous with the other long side of said blank and also with the parts of the marginal portions along the short sides of said blank uncoated by said first-mentioned thermoplastic material.

14. As a new product, a single use, disposable container having a liquid-containing cavity extending substantially the length thereof and holding a viscous liquid for spreading directly from said container in a thin layer over an area substantially as wide as said cavity, said

container having a sealed liquid-releasing passage along one edge thereof at least coextensive in length with said cavity, said passage comprising longitudinal marginal portions on the inner side of the container walls bonded together in flat, face-to-face relation by adhesive means comprising coatings of different thermoplastic materials overlying said marginal portions, a first one of said thermoplastic materials having a lesser affinity for the second thermoplastic material than the second-mentioned thermoplastic material has for itself, the coating provided by said first-mentioned thermoplastic material also extending over a relatively large portion of the inner side of said walls and being located between and adjoining said longitudinal marginal portions.

15. A container of the character defined in claim 14 wherein said second-mentioned thermoplastic material provides a coating which overlies transverse marginal portions on the inner side of the walls of said container located between said longitudinal marginal portions thereof, and wherein said first-mentioned thermoplastic material also extends and overlies an area on the inner side of the walls of said container which is located between said longitudinal marginal portions and said transverse marginal portions.

16. A container of the character set forth in claim 14 wherein said container comprises sheet material which is deformable and which is substantially impervious to said viscous liquid contained therein and to vapor from said liquid.

17. A container of the character set forth in claim 14 wherein said container comprises sheet material which is deformable and which is substantially impervious to said viscous liquid contained therein and to vapor from said liquid, and wherein said second-mentioned thermoplastic material is substantially coextensive with the inner side of the walls of said container and wherein said first-mentioned thermoplastic material overlies parts of said second-mentioned thermoplastic material.

18. In a container of the character defined in claim 14, multilayered sheet material providing the walls of said container, said sheet material being deformable and substantially impervious to viscous liquid retained within the container and to vapor from said liquid and being folded upon itself in a single fold which is substantially parallel to said passage, said sealed passage being the weakest liquid-retaining portion of said container.

19. In a container of the character defined in claim 14, walls for said container comprising multilayered sheet material which is deformable and which is substantially impervious to viscous liquid adapted to be retained within the container and to vapor from said liquid, said thermoplastic material having the greater affinity for itself overlying transverse marginal portions on the inner sides of the wall of said container located between said longitudinal marginal portions thereof and the thermoplastic material having the lesser affinity for itself overlying an area on the inner side of the walls of said container located between said longitudinal marginal portions and said transverse marginal portions, portions of said sheet adjacent said fold being bonded together to provide said container with a flat, relatively thin edge substantially parallel to the edge of said passage and all said marginal portions being bonded together.

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