Aug. 11, 1942. F. D. PALMER 2,292,653

PACKAGE

Filed July 1, 1940 2 Sheets-Sheet 1

Fig. 1

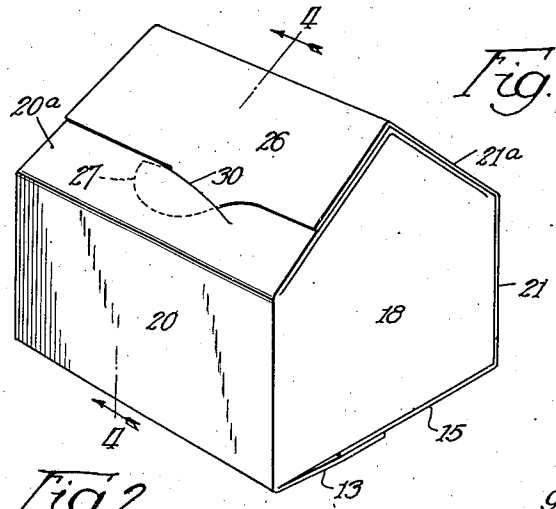


Fig. 2

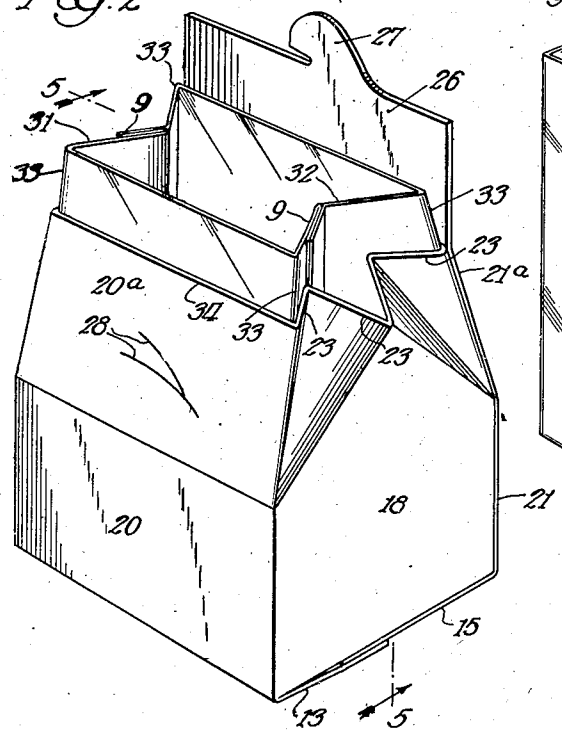
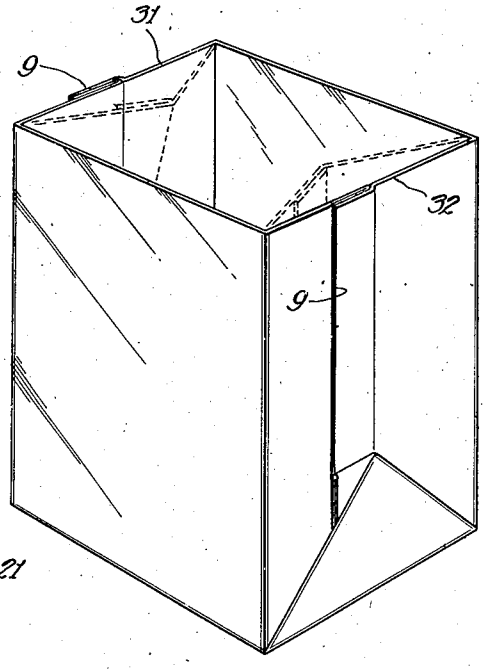


Fig. 3



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Fig. 4

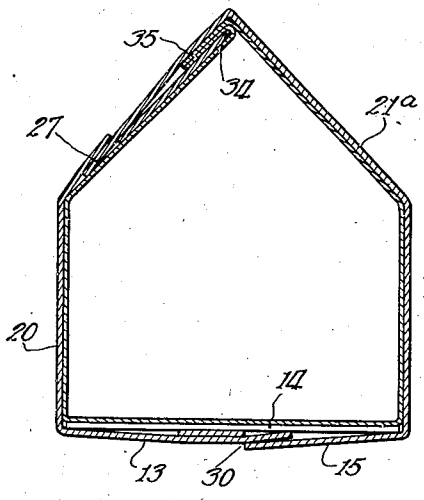


Fig. 5

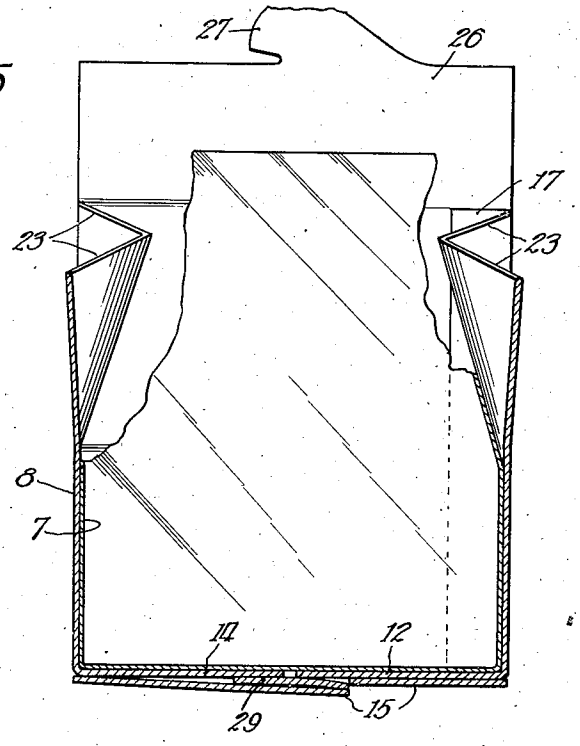
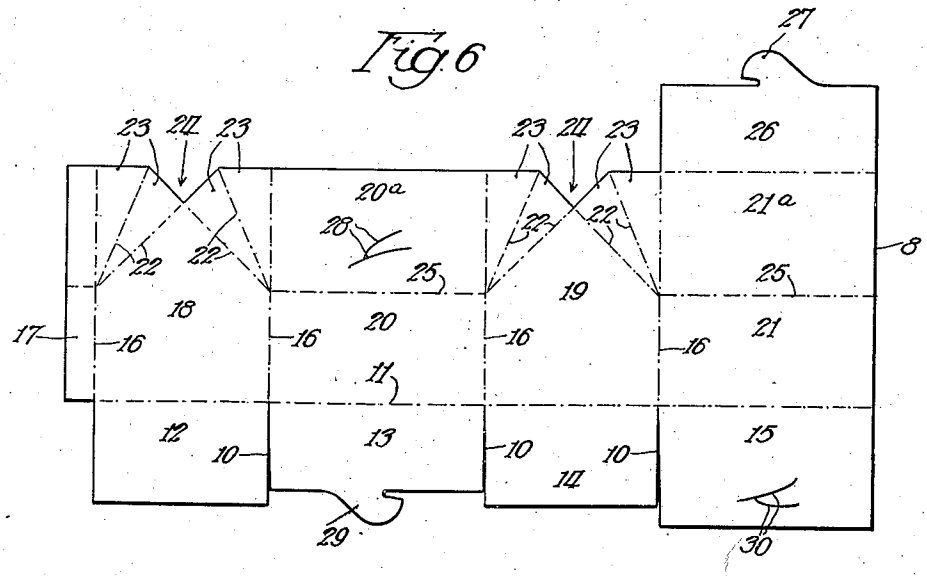


Fig. 6



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Patented Aug. 11, 1942 2,292,653

UNITED STATES PATENT OFFICE

2,292,653

PACKAGE

Frank D. Palmer, Chicago, Ill., assignor to Sealtest, Inc., Baltimore, Md., a corporation of Maryland

Application July 1, 1940, Serial No. 343,384

2 Claims. (Cl. 229—14)

This invention relates to an improvement in packages and more particularly to a package structure embodying inner and outer containers.

The main objects of the invention are to provide a package which may be set up, filled and closed with great facility and with a minimum of expense; to provide a package structure which will present a neat and attractive appearance so as to add to the saleability of the product packaged; to provide a package structure which may include an outer protective container and a hermetically sealed inner container or an inner container which may be effectively closed merely as an incident to the closing of the outer container; to provide a container construction of the character indicated which will afford a wide filling opening and a wide opening for removal of the package content but which opening may be easily and effectively closed; and in general, it is the object of the invention to provide an improved package structure of the character indicated.

Other objects and advantages of the invention will be understood by reference to the following specification and accompanying drawings (2 sheets) wherein there is disclosed a package structure embodying a selected form of the invention.

In the drawings:

Fig. 1 is a perspective showing the completed and closed package;

Fig. 2 is a perspective corresponding to Fig. 1 but showing the package in partially opened condition;

Fig. 3 is a perspective illustrating an inner container or bag in fully open position;

Fig. 4 is a section on the line 4—4 of Fig. 1;

Fig. 5 is a section on the line 5—5 of Fig. 2; and

Fig. 6 is a plan of a blank from which an outer container is formed.

The package structure herein contemplated comprises inner and outer containers 7 and 8, respectively, the outer container being preferably formed of paper board or like material of sufficient thickness to provide the desired protective characteristics for the inner container which is preferably formed of thinner and more flexible sheet material which has less capacity to maintain itself in package form than the outer container.

In the present instance, the inner container as shown in Fig. 3 is formed of suitable flexible sheet material such as Cellophane coated with a thermoplastic coating, for example, a rubber-wax composition. Other kinds of sheet material may of course be employed and suitable coatings to secure the desired properties may be applied, or if not required, the coating may be omitted. When the container is made of material coated as aforesad, it may be made by merely folding a rectangular sheet of the material upon itself and then heat-sealing together the marginal side portions which are represented at 9 in the drawings. It will of course be understood that the thermo-plastic coating on the sheet material is disposed on the inside thereof, so that the united margins have their coatings in face to face engagement whereby the uniting thereof is facilitated through the agency of such coatings.

The outer container 8 is formed from a blank such as illustrated in Figure 6. The blank is provided with slits or cuts indicated at 10 in its lower marginal portion and with a suitable fold line 11 extending lengthwise of the blank so as to form flaps 12, 13, 14 and 15 which are adapted to form a bottom closure for the container. The blank is also provided with additional vertically extending scoring or other suitably formed fold lines indicated at 16 which facilitate bending of the blank to form a tubular container body, a gluing flap 17 being provided at one end for adhesive attachment to the opposite end of the blank as well understood in the art. The fold lines 16 divide the blank into end wall panels 18 and 19 and side wall panels 20 and 21.

The end wall panels 18 and 19 of the blank are each provided with two pairs of angularly disposed fold lines designated 22, the same corresponding with adjacent portions of the fold lines 16 to provide in each end wall 18 and 19 two pairs of triangular areas or gussets 23, having a common fold line 22 between them. The upper ends of the end walls 18 and 19 are provided with V-shaped notches as indicated at 24, so that the bases of the triangular gussets 23 are disposed in the upper edges of the respective end walls 18 and 19.

The triangular gussets 23 are adapted to be folded inwardly in the form of bellows folds, so as to draw together the front and rear upper edge portions of each end wall to thereby produce what might be called a satchel-shape in the package (see Figure 2).

The oppositely disposed side walls 20 and 21 which extend between the end walls 18 and 19 are provided with horizontally extending fold lines 25 which serve to facilitate folding or bending inwardly of the upper portions of the side walls 20 and 21 as an incident to the tucking inwardly of said pairs of gussets 23. When said gussets are tucked inwardly, the upper portions 20a and 21a of the side walls are gathered together or drawn toward each other adjacent their upper ends.

One of the side walls, in this instance the side wall 21, is provided with a cover forming flap 26 which has a locking ear or lip 27 on its upper end

adapted to engage in locking slits indicated at 28 in the oppositely disposed side wall portion 20a.

The outer container blank shown in Figure 6 may be fabricated into a tubular container body and then collapsed to flat condition for storage and transportation purposes. The user of the container may distend it and then fold the bottom forming flaps 12, 13, 14 and 15 into inwardly extending and mutually overlapping relation as indicated in Figures 4 and 5 to close the bottom of the outer container. As indicated, one of the bottom forming flaps is provided with a locking lip or tongue 29 which is adapted to lockingly engage the oppositely disposed bottom flap 15 which is provided with suitable slits indicated at 30 for receiving said tongue.

The inner container or bag in distended condition as shown in Figure 3 may then be inserted in the outer container and filled with the desired quantity of material. Thereafter, the container is ready for closing which may be accomplished by tucking inwardly the gussets 13, thereby incidentally tucking inwardly the end walls 31 and 32 of the inner container, the same buckling inwardly along a centrally disposed line coincident with the inner edge of the united margins 9, and at the folds indicated at 33 at the side edges of the front and rear walls of the container. It being understood that the inner container will ordinarily be filled, say, approximately, one-half full, it will be apparent that the package content will tend to hold the lower portion of the package distended but will nevertheless not prevent collapsing of the end walls of the inner container in the manner explained.

If it is not necessary to hermetically seal the package content, the package may be finally closed merely by folding the cover flap 26 of the outer container around the upper edge 34 of the side wall portion 20a and engaging the locking tongue 27 with the slits 28 in said wall portion 20a. As indicated in Figure 2, the inner container is of such length that incident to the said folding of the cover flap 26, the upper end portion of the bag indicated at 35 will be folded around said upper edge 34, thereby producing a self-closing fold in the upper portion of the inner container which provides an adequate seal for many purposes.

If it is desired to produce a more secure seal in the inner container, the projecting marginal portion thereof may be tightly squeezed together and subjected to an application of heat or pressure or both to effect fusion of the thermoplastic coating on the contacting faces of said marginal portions, thereby to produce in combination with the sealed margins 9, a hermetically sealed container. It is understood of course that sheet material coated with a rubber-wax composition such as mentioned is well known in the art and is known as an effectively impervious sheet which is adapted to the production of impervious containers such as herein referred to. When the upper margin of the inner container has been sealed in the manner explained, the closure flap 26 may be folded over, thereby incidentally folding said marginal portion around the edge 34 of the wall part 28, to complete the package structure in the manner already indicated.

The described construction is especially adapted to the packaging of small quantities of moisture-bearing material, for example, dairy products including cottage cheese and other materials and which may, of course, be employed for the packaging of dry and powdered materials. The package being of satchel shape presents a more or less novel appearance which is attractive and desirable but it is nevertheless of relatively simple construction which may be easily set up without expensive assembling equipment. Similarly, the package may be closed and sealed with little or no mechanical equipment for that purpose.

Changes in the described structure may be made without departing from the spirit of the invention, the scope of which should be determined by reference to the following claims, the same being construed as broadly as possible consistent with the state of the art.

I claim:

1. A package comprising a paper board outer container formed from a blank having fold lines providing pairs of side and end walls foldable to form a tubular body and adapted to be secured in such position, said end walls being provided with fold lines forming wedge-shaped gussets having their bases adjacent the upper edges of said end walls and foldable out of the normal planes thereof so as to draw said side walls into upwardly converging relation to each other, and a bag-like inner container lining said side and end walls and having a mouth portion extending above the top edges of said side walls, the upper portion of said inner container being collapsible to closed condition as an incident to the converging of said side walls, and said outer container having a cover flap extending from the upper edge of one of said side walls, said cover flap being foldable at the end of the side wall from which it extends into face to face, overlapping relation to the other of said converged side walls to thereby close the top of the package, said cover flap being operative as an incident to the folding thereof to closed position, to fold said extended, closed, inner container mouth portion over the upper edge of said other converged side wall, thereby to, in effect, seal the closed mouth of said inner container at said upper edge.

2. A package comprising a paper board outer container formed from a blank having fold lines providing pairs of side and end walls foldable to form a tubular body and adapted to be secured in such position, said end walls being provided with fold lines forming wedge-shaped gussets having their bases adjacent the upper edges of said end walls and foldable to inwardly extending positions relative to the normal planes thereof so as to draw said side walls into upwardly converging relation to each other, and a bag-like inner container lining said side and end walls and having a mouth portion extending above the top edges of said side walls, said end wall lining portions of the inner container being also foldable inwardly as an incident to said inward folding of said gussets whereby the side wall lining portions of the inner container are converged with said side wall portions, and said outer container having a cover flap extending from the upper edge of one of said side walls, said cover flap being foldable at the end of the side wall from which it extends into face to face, overlapping relation to the other of said converged side walls to thereby close the top of the package, said cover flap being operative as an incident to the folding thereof to closed position, to fold said extended, closed, inner container mouth portion over the upper edge of said other converged side wall, thereby to, in effect, seal the closed mouth of said inner container at said upper edge.

FRANK D. PALMER.