Aug. 29, 1967 M. DONOVAN 3,338,469

CONTAINERS AND PACKAGES FOR FACIAL TISSUES AND THE LIKE

Filed March 16, 1965 2 Sheets-Sheet 1

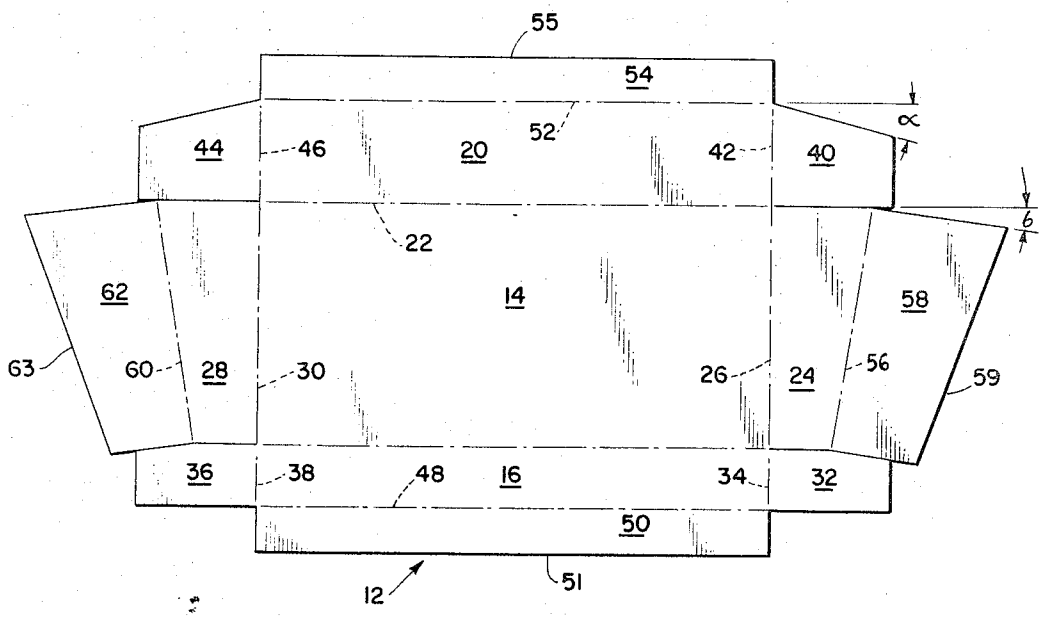

FIG. 2

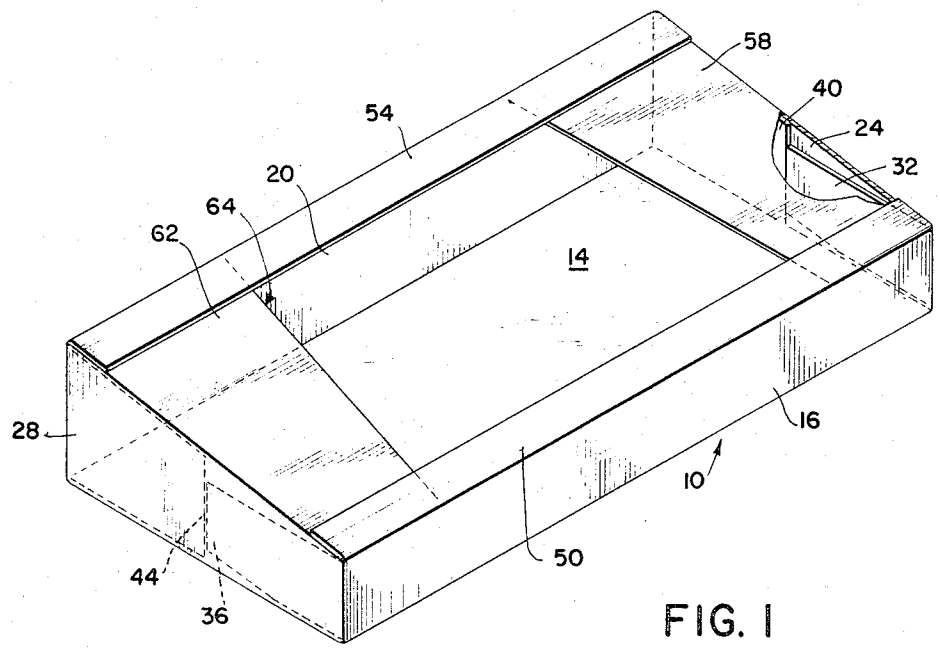

FIG. 1

Aug. 29, 1967 M. DONOVAN 3,338,469

CONTAINERS AND PACKAGES FOR FACIAL TISSUES AND THE LIKE

Filed March 16, 1965 2 Sheets-Sheet 2

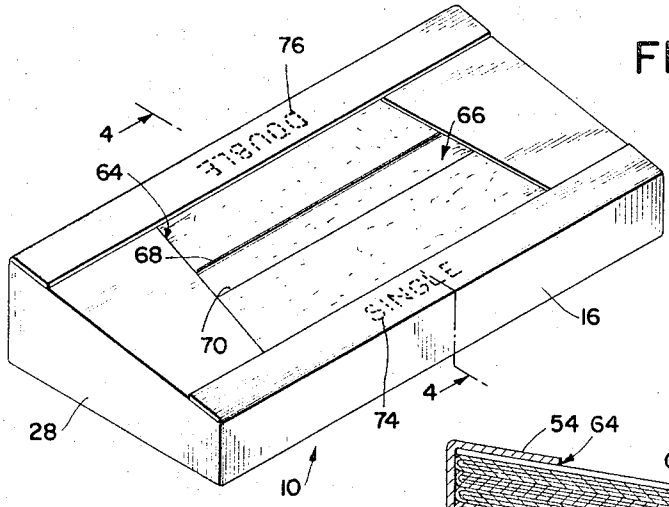

FIG. 3

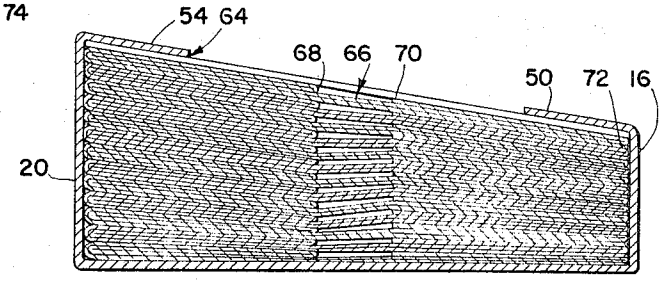

FIG. 4

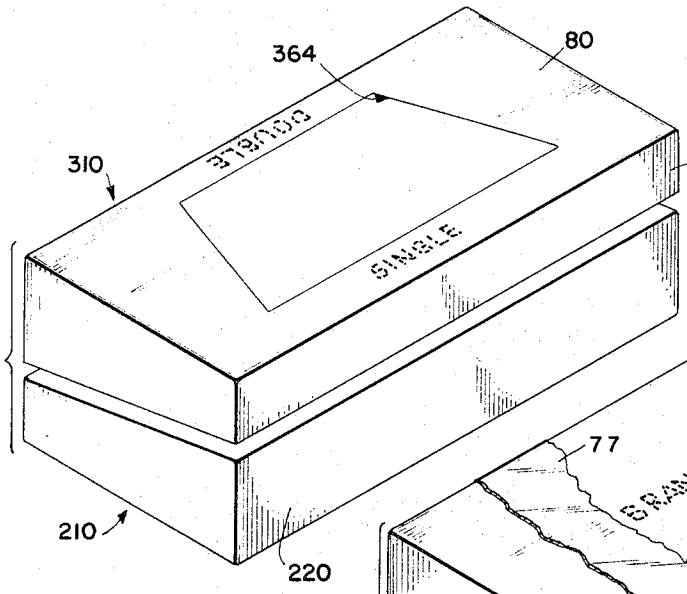

FIG. 6

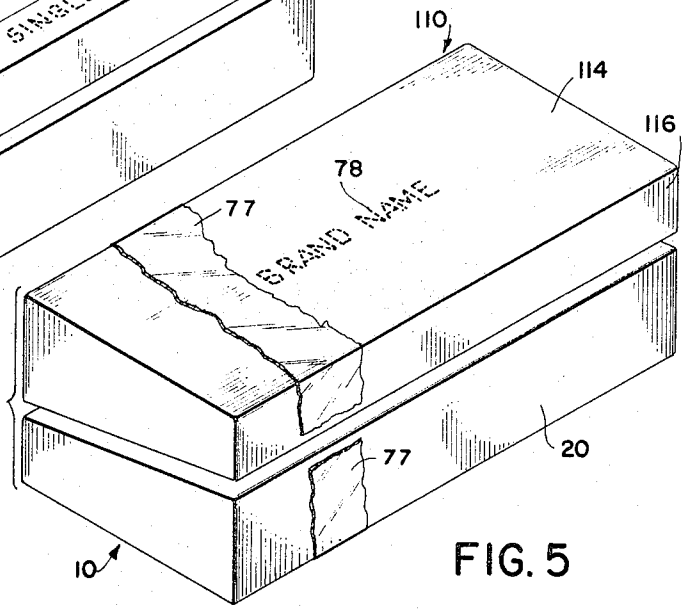

FIG. 5

United States Patent Office 3,338,469 Patented Aug. 29, 1967

3,338,469

CONTAINERS AND PACKAGES FOR FACIAL TISSUES AND THE LIKE

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Filed Mar. 16, 1965, Ser. No. 440,213
2 Claims. (Cl. 221—47)

This invention relates to containers for facial tissues and similar articles which comprise folded structures made of a sheet material such as paper, non-woven fabric and the like. Articles of this type include, in addition to facial tissues, such items as towels and industrial wipers. However, for the purposes of the present specification such items will be referred to as "tissues."

This invention constitutes an improvement in containers and in packages embodying such containers intended especially for use with tissues which become of the particular manner in which they are folded or assembled tend to form a stack which is taller along one edge portion than along the opposite parallel edge portion. For example, the present invention is particularly well adapted for use as a container for, and in the production of packages containing, tissues of the type disclosed in my U.S. Patent 3,007,605, granted Nov. 6, 1961. It will be understood however, that the present invention is by no means limited to the specific tissue construction therein disclosed but rather is adapted for use in connection with any tissue which, like that shown in my said patent, is thicker along one marginal edge portion than it is along the opposite parallel edge portion.

Tissues of the type shown in my patent aforesaid have two grasping tabs lying upon the upper surface of the body of each tissue, one of which is of a two-ply thickness and the other of which is of one-ply thickness. Since it is desired to have all of the single-ply tabs available along one edge of the opening in the top of the container and all of the two-ply tabs available along the other edge, it is not practicable to alternate the positioning of the tissues so as to form a stack of triangular shape. Therefore when a quantity of such tissues are stacked vertically as shown in my patent aforesaid, the edge portion of such stack which corresponds with the positioning of the two-ply tabs will be taller than the edge portion which corresponds with the positioning of the single-ply tabs. When a two-ply facial tissue is folded as shown in my patent aforesaid, one longitudinal marginal portion thereof will be four plys in thickness whereas the opposite marginal portion will be three plys in thickness. Such a stack of tissues does not fit with uniform firmness in the conventional rectangular container and may become disarranged during the course of shipment to the consumer.

It is an object of the present invention to provide a container which not only is shaped to substantially conform to the shape of the stack of tissues to be positioned therein, but which also provides a number of additional advantages for the manufacturer in the formation of packages for shipping and sale as well as advantages in convenience, economy, attractive appearance and source identification for the consumer. This object is achieved by the provision of a container which is trapezoidal in cross section in the transverse vertical plane to correspond substantially with the cross-sectional shape of a stack of tissues of the types discussed above and which is rectangular in cross section in the longitudinal vertical plane and in the horizontal plane whereby two such containers may be superimposed in reversed positions to form a twin package unit which is rectangular in all three planes. The twin package units may be packed in conventional shipping containers and, when unpacked, may be easily stacked on the retailers' shelves. They may be sold at an economical price related to the double quantity of tissues

while the consumer enjoys the benefit of two half-size packages which remain neater in appearance while in use and which may be put into simultaneous use in different portions of the home. Furthermore, if so desired, the manufacturer's name or trademark and other pertinent information may be permanently imprinted on the individual containers so as to be displayed for sales purposes but concealed with the separate elements of the package are in use. Also, the manufacturer may provide permanent access openings in the sloping walls of the individual containers which are concealed to protect the contents when the package is displayed and sold but which are available to the user without the need for tearing out a perforated area or the like, as is so frequently required with tissue packages heretofore available.

Other and further objects and advantages of the present invention will become apparent from a consideration of the following detailed description of preferred, but not necessarily the only, forms of the invention, taken in connection with the drawings forming a part of their specification.

In the drawings:

FIG. 1 is a perspective view of an erected container made in accordance with the present invention;

FIG. 2 is a plan view of a blank from which the container shown in FIG. 1 is erected;

FIG. 3 is a perspective view of a package comprising a container such as that shown in FIG. 1 having a stack of folded sheets therein;

FIG. 4 is an enlarged vertical sectional view taken along the line 4—4 in FIG. 3;

FIG. 5 is a perspective exploded view of a rectangular sales or shipping package comprising two individual packages such as that shown in FIG. 3 arranged in nested relation; and

FIG. 6 is a view similar to FIG. 5 showing a modification of the present invention.

Referring to FIGS. 1 and 2 of the drawings, the container **10** shown in FIG. 1 is erected from a blank **12** shown in FIG. 2. The blank **12** may be formed from any suitable sheet material, for example cardboard, by any customary cutting, scoring, and creasing and it may be printed if so desired. The blank **12** includes a bottom panel **14**, a side panel **16** which is hinged to the the bottom panel **14** along a score line **18** and an opposite side panel **20** hinged to the bottom panel **14** along a score line **22**. The blank **12** also includes end panels **24** and **28** hinged respectively to the bottom panel **14** along score lines **26** and **30**.

The side panel **16** has hinged at the opposite ends thereof, glue flaps **32** and **36** which are hinged along score lines **34** and **38** respectively. The side panel **20** has at the opposite ends thereof glue flaps **40** and **44** hinged along score lines **42** and **46** respectively. Desirably but not necessarily the combined lengths of the glue flaps **32** and **40** at one end of the blank **12** as well as the combined lengths of the glue flaps **36** and **44** at the other end of the blank are approximately equal, respectively, to the length of the score lines **26** and **30** along which the end panels **24** and **28** are hinged to the bottom panel **14**. Thus, preferably, when the bank **12** is erected and the glue flaps aforesaid are positioned in contact with the inner surface of the end panels **24** and **28** the ends of such glue flaps will fall into approximately abutting relation as shown in FIG. 1. The preferred construction just described serves in well known manner to provide relatively stiff, reinforced end walls for the container which are made up of the end panels **24** and **28** with the glue flaps **32**, **40** and **36**, **44** respectively adhesively secured thereto.

The blank **12** is also provided with four top panels which are to be adhesively united to form a top wall for

he container and to provide an opening of appropriately restricted area in such top wall for access to the contents of the container. Thus, the side wall **16** has hinged thereto along a score line **48**, a top panel **50** while the side panel **20** has hinged thereto along a score line **52**, a top panel **54**. The end panel **24** has hinged thereto along a score line **56**, a top panel while the end panel **28** has hinged thereto along a score line **60**, a top panel **62**. When the container is erected by first adhesively uniting the end walls **24** and **28** with their respective glue flaps **32**, **40** and **36**, **44**, the contents of the package, for example a stack of folded sheets, is inserted with the bottom of the stack resting upon the bottom panel **14**. Thereafter the top panels **58** and **62** are folded inwardly over the contents and lastly the top panels **50** and **54** are folded inwardly over and adhesively secured to the top panels **58** and **62**.

Referring now to FIG. 3 a package comprising a container **10** like that shown in FIG. 1 and a stack **66** of folded sheet material is illustrated. The stack **66** of sheet material may consist of a stack of facial tissues, paper towels, industrial wipers or the like folded in some manner such that one longitudinal extending side of the stack tends to become taller than the other. For example the folded sheet material may be folded in the manner illustrated in my U.S. Patent 3,007,605, granted Nov. 6, 1961. As disclosed in said patent each facial tissue or similar product is made up of one or more relatively large sheets of paper or the like which are first folded along a line which is removed from but parallel with a center line of the sheet or sheets so as to form essentially a two-ply structure. A second fold is made along a line parallel with and reasonably adjacent to the first fold line to form a two-ply tab which lies upon the upper surface of the main body of the structure. The structure is next folded along a line parallel with and reasonably adjacent to the edge of a single-ply portion of the structure so as to form a single-ply tab lying upon the upper surface of the main body of the structure. Preferably the last-mentioned fold is made in the upper ply so that the single-ply tab aforesaid lies upon itself and on the same upper surface of the structure as the double-ply tab first mentioned. Also preferably the last-mentioned fold line is reasonably closely aligned vertically with the terminal edge of the lower ply. As a result of the folding of each tissue in the manner just described it will be apparent that one longitudinal marginal edge portion of the completed tissue will be four plys in thickness whereas the opposite longitudinal marginal edge portion will be three plys in thickness. Obviously when a stack of a few hundred such tissues is formed, the height of the stack along one longitudinal edge portion will tend to be greater than the other by a ratio of 4 to 3.

In FIG. 4 of the drawings there is illustrated a stack of tissues of the type just described positioned within a container such as that shown in FIG. 1. The double-ply tabs **68** are positioned along one marginal edge portion of the stack of tissues while the single-ply tabs **70** are positioned along the opposite marginal edge portion thereof. It will be noted in FIG. 4 that the terminal edge of the lower ply of each tissue is indicated by the reference numeral **72**.

By referring to FIG. 1 and FIG. 3 it will be observed that the inner edges **51**, **55**, **59** and **63** of the top panels **50**, **54**, **58** and **60** respectively serve to define an opening which is generally referred to by reference numeral **64**. As shown in FIG. 3 the opening **64** is so proportioned and positioned as to afford access to both of the tabs **68** and **70** which lie upon the upper surface of the uppermost tissue in the stack **66**. As disclosed in my Patent 3,007,605 the purpose of providing the optionally available single-ply and double-ply tabs **68** and **70**, both exposed for grasping through the opening **64**, is that when the double-ply tab **68** is grasped the folded tissue may be extracted through opening **64** in a two-ply configuration

whereas when the tissue is grasped by the single-ply tab **70** and withdrawn through the opening **64** the tissue will automatically unfold into a single-ply configuration. When the tissues positioned in the package of the present invention are of the construction and for the purpose just described it may be desired to print suitable indicia on the container in such position as to indicate which tabs should be grasped for the purpose of obtaining the tissue in the respectively available configurations. Thus as shown in FIG. 3 indicia which may consist of the word "single" may be imprinted adjacent the edge of the opening **64** which lies closest to the single-ply tabs **70** of the tissues within the container and indicia **76** which may comprise the word "double" may be similarly imprinted adjacent the edge of the opening **64** which lies closest to the double-ply tabs **68**.

While the present container is particularly suitable for the packaging of folded tissues such as those just described it will be appreciated that it has equal applicability for use with stacks of folded sheet material of any configuration such that they end to build stacks of unequal height along opposed marginal edges. Paper towels and paper napkins, for example, are frequently so folded as to provide on either or both the upper and lower surfaces one or more tabs which are so related to the folded body that irrespective of the manner or direction in which or from which they are grasped the towel or napkin nevertheless will be delivered in exactly the same configuration. In such cases the towels or napkins may be stacked in any direction within a container with the assurance that one or more tabs will be available at a dispensing opening and with the further assurance that the folded article will be delivered in the specifically desired configuration. It has been observed that a number of towels or napkins folded as just described have differing numbers of plys adjacent opposed marginal edges and the container of the present invention may be adapted to form new and useful packages for such articles.

The container of the present invention is provided with opposed side walls formed respectively from the panels **16** and **20** which are of differing vertical height (as viewed in FIG. 1) the difference in height being proportional, or approximately so, to the differing thickness of the opposed marginal edge portions of the product to be packaged. Thus, in the illustrated example shown in FIGS. 3 and 4 the tissues have a four-ply thickness along one edge and a three-ply thickness along the opposed edge. In such a case the ratio between the height of the walls formed from the panels **16** and **20**, respectively, is preferably approximately 4 to 3. Thus the blank shown in FIG. 2 illustratively provides panels **16** and **20** having such ratio and the glue flaps, end walls and top panels are respectively so shaped and proportioned as to cooperate in the formation of a box having a sloping top and a cross-sectional shape suitable for the packaging of a stack of tissues of the type just mentioned.

From a consideration of FIG. 4 it will be apparent that the stack of tissues **66** may be fitted with approximately uniform snugness within the container **10**. This is in contrast with the fitting of such a stack in a container having a rectangular cross section in which case the tissues must be either so snugly fitted vertically in the zone of the two-ply tabs **68** as to be difficult to remove one at a time or must be so loosely fitted in the zone of the one-ply tabs **70** as to present the risk of disarrangement in shipment.

It will be understood that the specific proportion between parts of container **10** will be determined by the form of the stack of tissues to be placed therein. In laying out the blank shown in FIG. 2 it will be necessary only to properly relate the relative heights of the panels **16** and **20** with the angles alpha and beta to provide a container in which the edges and fold lines will fall into registry as required for reliable operation in conventional automatic setting-up machines.

As shown in FIG. 5 a container **10** as just described

may be nested with an identical container **110** in a position such that high wall **20** of the container **10** is in vertical alignment with the low wall **116** of the container **110**. When thus nested the two containers will form a twin package which is rectangular in all vertical and horizontal planes. While the two containers are shown in exploded relation in FIG. 5 it will be understood that the sloping top walls of both will be brought into face-to-face contact whereby the access openings, such as the opening **64** in container **10**, will be concealed and closed off. The two containers **10** and **110** may be secured in nested position by any suitable means such as a band, tube or wrapper indicated generally at **77**. Preferably such securing means is made of transparent sheet material, such as regenerated cellulose, polyethylene or the like. Also, preferably the securing means **77** is so constructed as to be readily removable from the enclosed containers **10** and **110** without disfiguring the surfaces of the containers. A simple tubular sleeve of transparent sheet material which may be readily formed upon or slipped endwise over the nested containers **10** and **110** is believed to be the most practical and economical form of securing means **77**.

The manufacturer's name or a trademark as well as other indicia may be printed, as shown at **78**, upon the bottom panels of each of the containers **10** and **110** where it will be readily visible through the transparent securing means **77** for purposes of display. Nothing need be printed upon any of the other walls of the containers, except, if so desired, the functional indicia **74** and **76** (FIG. 3). In such a case the separated containers **10** and **110** may be free of any advertizing or identifying indicia on the walls which are visible when the separated packages are in normal use. However, the printed indicia **78** may be referred to at any time by simply inverting the container. This is in contrast with packages which provide identifying indicia only upon a removable overwrap which is discarded when the package is put into use, leaving nothing to serve as a guide to the purchaser at the time a new package is needed.

A modified form of the invention is shown in FIG. 6 wherein an access opening is provided or defined in the horizontal rather than in the sloping wall of the container. Thus, an opening **364** is shown in a wall **80** in a container **310**. The wall **80** may correspond generally with the wall **14** in a blank similar to the blank shown in FIG. 2 in which event the opening **364** may be cut out of the blank or may be defined by lines of perforations as may be desired. Also, in such a case the flaps **50**, **54**, **58** and **62** may be so shaped as to meet or overlap to form a closed bottom for the container. However it is preferred to make the container **310** from a blank very similar to that shown in FIG. 2 but which provides an opening **364** defined by the edges of flaps which are brought together to form a sloping wall, rather than the horizontal wall formed by the flaps shown in FIG. 2. The alterations required for that purpose will be apparent to those skilled in the art.

The package made up, as shown in FIG. 6 from two containers **210** and **310** may be secured by a band, wrapper or sleeve (not shown) as described above in connection with FIG. 5. When such securing means is made of transparent material it will permit inspection of the contents when the package is on display and at the same time it will protect the contents from contamination. If inspection is not deemed necessary, the securing means may be made from opaque material or the access opening **364** may be merely defined by lines of perforations to be ruptured by the user when required.

The containers **210** and **310** afford an unusual and striking appearance when in use inasmuch as the corners thereof are made up of fold lines which slant rather than extend vertically from the surface upon which the container rests when the access opening **364** is exposed. As in the case of the containers shown in FIG. 5, the containers shown in FIG. 6 may be provided with functional indicia on the exposed panels and with identifying indicia (not shown) on the wall which it concealed when the separated containers are in use. However, in this case it may be advisable for the manufacturer also to provide identifying indicia, trademarks and the like upon the band, wrapper or sleeve which serves to hold the twin package in rectangular form during shipment and display.

I claim:

1. A package for facial tissues and the like comprising two separate containers each having a stack of folded sheet material such as tissues positioned therein, each of the tissues within each of said stacks being folded into rectangular planar form in such manner as to have a greater number of superimposed layers in an area adjacent one edge than in an area adjacent the opposite edge and the areas of said tissues having the greater number of layers being in vertical registry in each stack whereby each stack is taller along one vertical side than it is along the opposite side, each of said containers having rectangular top and bottom walls and rectangular side walls extending vertically from said bottom wall, one of said side walls projecting from said bottom wall for a distance coinciding with the height of the taller portion of the stack of tissues positioned in said container and the other of said side walls projecting from said botom wall for a distance coinciding with the height of the shorter portion of the stack of tissues in said container, said top wall of each of said containers extending from the upper edge of the taller of said side walls to the upper edge of the shorter of said side walls to lie in a plane which is inclined with respect to the plane of the bottom wall of said container, and each of said containers having end walls extending vertically from opposite ends of said bottom wall to opposite ends of said inclined top wall, each of said inclined top walls of said containers being made up of flaps secured together and the inner edges of which define an opening affording access to the tissues within the associated container, and means for securing said containers together with the inclined top walls thereof in face-to-face relation and with the taller and shorter side walls of one of said containers in vertical registry respectively with the shorter and taller walls of the other of said containers whereby to form a package in which said access openings are unexposed and which is rectangular in cross section in all three axial planes thereof.

2. A package in accordance with claim **1** wherein said means for securing said containers together comprises a disposable wrapper of sheet material encircling the two containers in at least one plane perpendicular to the bottom walls of said containers.

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ROBERT B. REEVES, *Examiner.*

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,338,469 Dated August 29, 1967

Inventor(s) Marion Donovan

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Col. 1, line 18	"become"	should be	--because--
Col. 1, line 40	"triangular"	should be	--rectangular--
Col. 2, line 8	"with"	should be	--when--

Signed and sealed this 2nd day of May 1972.

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

ROBERT GOTTSCHALK
Commissioner of Patents

FORM PO-1050 (10-69)

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