June 20, 1944. R. GUYER 2,351,812

PACKAGE

Filed June 25, 1942 2 Sheets-Sheet 1

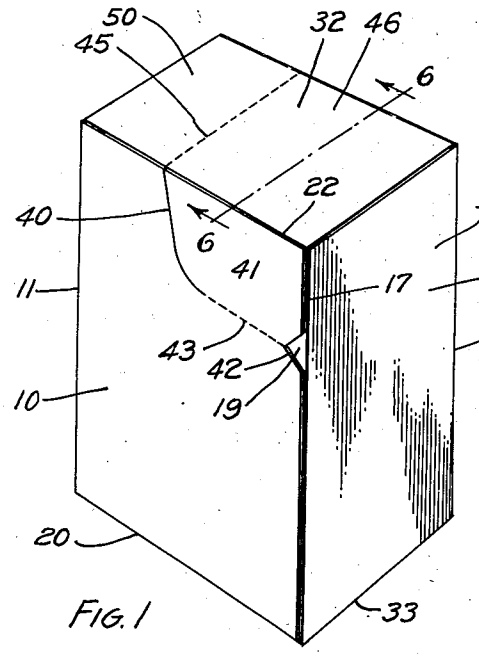


FIG. 1

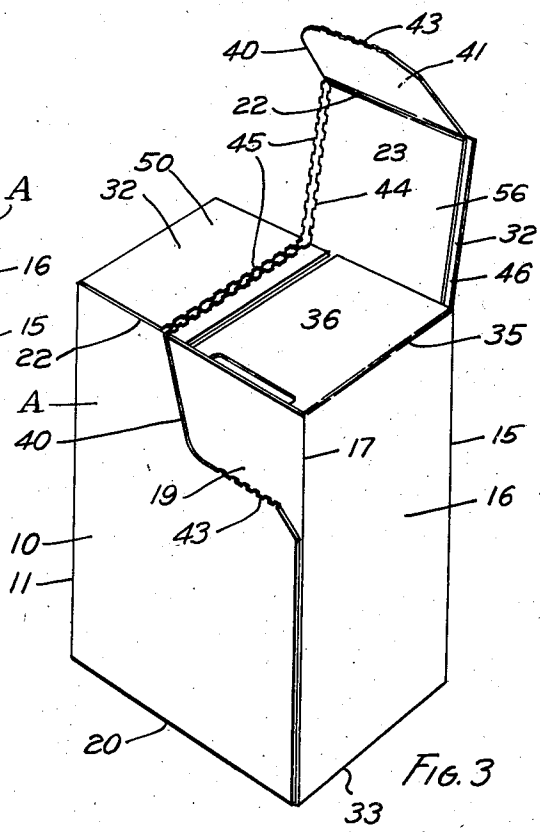


FIG. 3

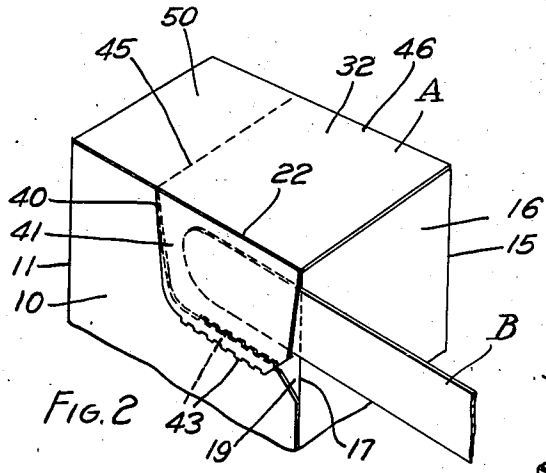


FIG. 2

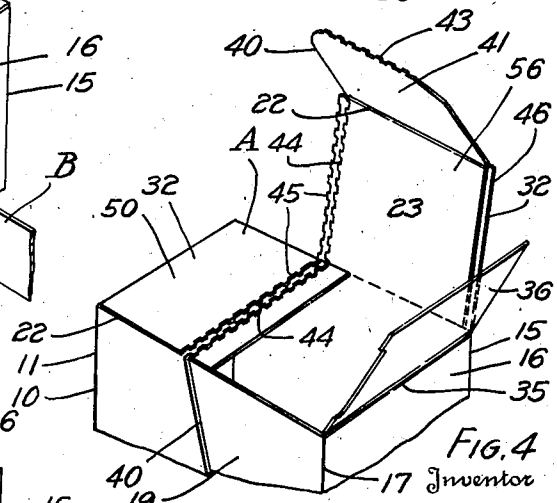


FIG. 4

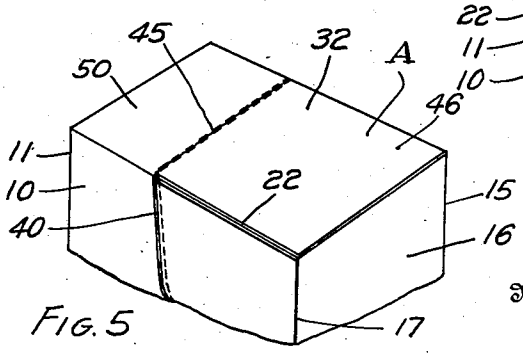


FIG. 5

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PACKAGE

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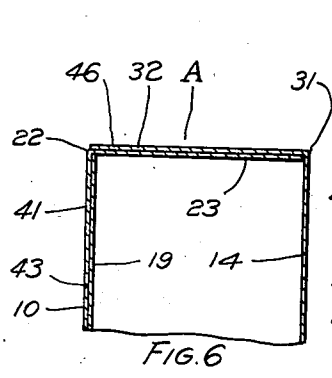


FIG. 6

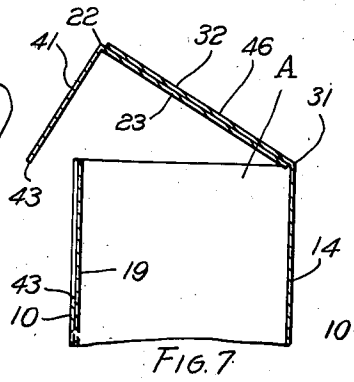


FIG. 7

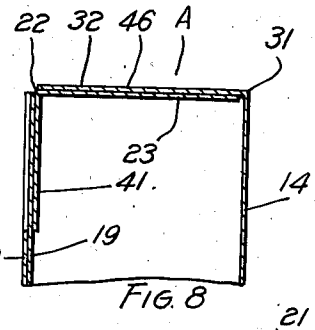


FIG. 8

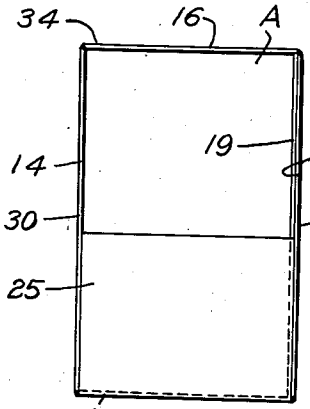


FIG. 9

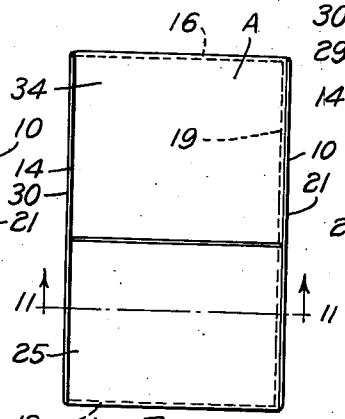


FIG. 10

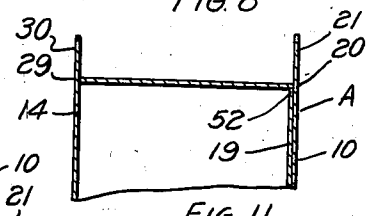


FIG. 11

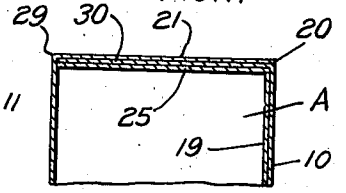


FIG. 12

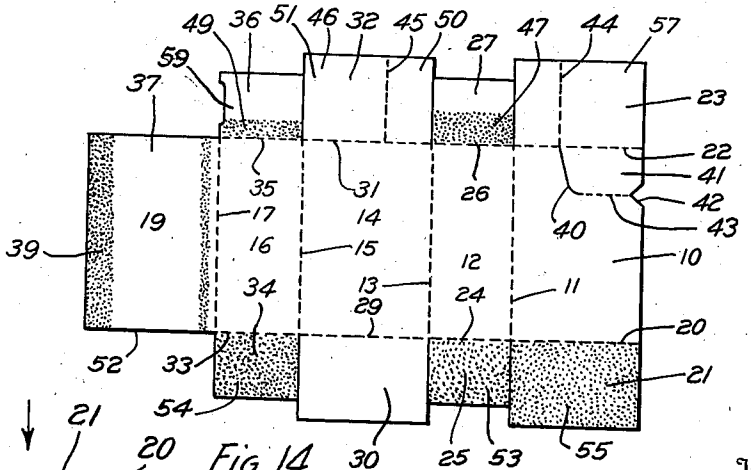


FIG. 14

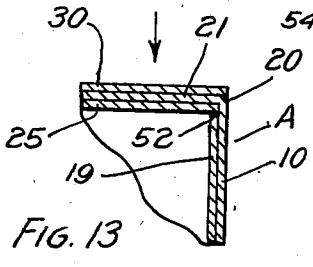


FIG. 13

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Patented June 20, 1944 2,351,812

UNITED STATES PATENT OFFICE

2,351,812

PACKAGE

Reynolds Guyer, St. Paul, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota

Application June 25, 1942, Serial No. 448,363

18 Claims. (Cl. 229—51)

My invention relates to an improvement in package, particularly applicable for use as a container for packaged goods which are to be dispensed at intervals.

The object of the present invention is to provide a package for containing a product such as breakfast food or the like, which may be dispensed from time to time from the package. It is desirable that portions of the contents of such a package may be removed at intervals and between times the package may be effectively sealed to protect the contents thereof.

A feature of the present invention lies in the provision of a package which is effectively sealed when delivered, but which may be easily opened in a manner to uncover a dispensing opening through which a portion of the contents of the package may be dispensed. When the necessary amount of the goods has been dispersed the package may again be closed to provide an effective seal for the protection of the remaining contents.

A feature of the present invention lies in the provision of a package having a double thickness wall portion, and in providing a flap which is originally an integral part of one thickness of this double thickness wall portion of the package. This flap may be separated along perforated lines when the package is originally opened without destroying the effectiveness of the wall. Thus the package is effectively sealed until first opened.

A further feature of the present invention lies in the provision of a closing flap which forms a part of the package wall in the original package and which may be tucked within the wall in order to seal the package after it has once been opened.

A further feature of the present invention lies in the provision of a shoulder within the body of the box which will permit external pressure to be exerted against the closing flaps of the box without additional internal support. In the past, difficulty has been experienced in sealing the closing flaps of packages containing loose or fragile material, as there was no internal support against which the closed flaps could be pressed. In the present construction, however, I provide an internal wall which creates a ledge or shoulder at the end of the box against which the closing flaps may be pressed to seal the same into closed position.

These and other objects and novel features of my invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of my specification:

Figure 1 is a perspective view of a package in sealed condition before the same has been opened.

Figure 2 is a perspective view of the top of the box illustrated in Figure 1, showing the first step in opening the package.

Figure 3 is a perspective view of the package illustrated in Figures 1 and 2, showing the next step in opening the package.

Figure 4 is a perspective view of the top of the package shown in Figures 1 to 3, showing the final step in opening the package.

Figure 5 is a perspective view of the box illustrated in the previous figures, showing the sealing flap tucked into the container to effectively seal the box after it has once been opened.

Figure 6 is a cross-sectional view through the top of the box or package, the position of the section being indicated by the line 6—6 of Figure 1.

Figure 7 is a cross-sectional view similar to Figure 6, but showing the closure flap in partially opened position.

Figure 8 is a view similar to Figures 6 and 7 showing the closing flap tucked into the body of the box.

Figure 9 is a bottom plan view of the box showing the box bottom in partially closed position.

Figure 10 is a view similar to Figure 9 showing two opposed end flaps folded into sealing position.

Figure 11 is a sectional view through the box bottom, the position of the section being indicated by the line 11—11 of Figure 10.

Figure 12 is a sectional view similar to Figure 11 showing all of the closing flaps forming the lower end of the package in proper sealed and folded position.

Figure 13 is an enlarged view through a corner of the container showing the manner in which the end closing flaps rest upon the internal ledge or shoulder provided within the container.

Figure 14 is a diagrammatic view of the package before the same has been folded.

The package A is shown substantially rectangular in general formation and is preferably formed with an outline shape similar to that shown in Figure 14 of the drawings. The package includes an outer front wall 10 which is connected along a fold line 11 to a side wall 12. The

side wall 12 is connected along a fold line 13 to the rear wall 14. The rear wall 14 is connected along a fold line 15 to the side wall 16. This side wall 16 is in turn connected along the fold line 17 to the inner front wall or anchoring panel 19.

The front wall 10 is connected along the fold line 20 to a bottom closing flap 21 and is connected along a fold line 22 to a top closing flap 23. The side wall 12 is connected along a fold line 24 to a bottom closing flap 25 and is also connected along a fold line 26 to a top closing flap 27.

The rear panel 14 is connected along a fold line 29 to the bottom closing flap 30 and along a top fold line 31 to the top closing flap 32. The side panel 16 is connected along the fold line 33 to a bottom closing flap 34 and along a fold line 35 to a top closing flap 36.

The panel 19 is not provided with any closing flaps, but is merely adhered in overlapping relation to the panel 10. A surface of the wall or panel 19 may be gummed or glued by adhesive 39 to the inner surface of the panel 10 in assembled position of the box or package. A section 37 of the panel 19 is left free of glue or adhesive 39 for a purpose which will be later described in detail.

The panel 10 is slotted at 40 to define a substantially rectangular tab 41. A notch 42 is provided in the free edge of the panel 10 and a perforated line 43 connects the slot 40 to the notch 42. A perforated line 44 extends across the closing flap 23 connecting the upper extremity of the slot 40 with a point directly across the closing flap 23. The perforated line 44 extends parallel to the folding lines 11, 13, 15, and 17 in the died-out form of the box illustrated in Figure 14.

A perforated line 45 extends across the closing flap 32 and this perforated line 45 extends parallel to the perforated line 44 in the died-out formation of the container. In folded condition of the container the perforated lines 44 and 45 are virtually superimposed.

A surface of the closing flap 32 is gummed or glued with adhesive 46 and strips of adhesive 47 and 49 are applied to the surfaces of the closing flaps 27 and 36. In forming the box or package A, the package is bent along the fold lines 11, 13, 15 and 17 until a rectangular tube is formed with the panel 19 overlying the panel 10 and being adhered to the surface thereof. The closing flaps 27 and 36 are then folded down until the edges thereof engage against the upper edge of the inner panel 19. The closing flap 23 is then folded down upon the closing flaps 27 and 36 and is adhered thereto. It will be noted that the closing flap 27 is adhered only to the section 50 of the closing flap 32 which lies to the right of the perforated line 45, when viewed as in Figure 14 of the drawings. The closing flap 27 is not adhered to the section 51 of the closing flap 32 which lies to the left of the perforated line 45, as viewed in Figure 14. It should be noted that the flap 36 is provided with a relatively narrow strip of adhesive. This narrow strip of adhesive 49 on the closing flap 36 is sufficient to adhere the closing flap 32 in closed position, but provides a seal which is easily broken.

The closing flap 32 is folded down upon the closing flap 23 and is adhered thereto over the entire surface area. The sealing operation may be assisted by the support beneath the closing flaps 27 and 36 by the marginal edge of the inner panel 19.

The contents of the package may be inserted and the opposite end of the package may then be sealed. In sealing the lower end of the container the closing flaps 27 and 34 may first be folded so as to engage against the marginal edge 52 of the panel 19. The closing flap 20 may then be adhered to the glued surfaces 53 and 54 of the flaps 25 and 34 and the closing flap 30 may be folded down and adhered to the glued or gummed surface 55 of the closing flap 21. In this sealing operation the edges of the flaps 25 and 34 bear against the shoulder provided by the edge 52 of the panel 19, thus providing an internal support against which the pressure of the sealing apparatus may be exerted. Thus, even though the contents of the package may be granular or flaky and not of sufficient body to provide a resistance to external sealing pressure, the shoulder edge 52 provides such support during inward pressure against the sealing flaps.

The manner in which the package is formed has now been described. This package, when sealed as described, will appear as shown in Figures 1 and 6 of the drawings. When it is desired to open the package a thin instrument such as a knife blade B is inserted between the tab 41 and the outer surface of the inner panel 19. By slightly twisting the blade B the panel 10 is broken along the perforated line 43, separating the tab 41 from the remainder of the panel 10. The next step in opening the container is to grasp the tab 41 and pull the same upwardly, tearing the closing flaps 23 and 32 along the perforated lines 44 and 45 respectively. In Figure 3 of the drawings the package is shown after this operation has taken place. The closure formed, and indicated in general by the numeral 56, is still hingedly connected to the remainder of the package along the fold line 31. The closure 56 includes the section 51 of the closure flap 32, a section 57 of the closure panel 23, which section lies to the right of the perforated line 54 in Figure 14 of the drawings, together with the tab 41 hingedly connected thereto along the fold line 22.

In order to remove a portion of the contents of the package, it is then only necessary to fold the flap 36 upwardly into the position shown in Figure 4 of the drawings, whereupon the contents may be poured from the package. When it is desired to close the package the closing flap 36 is again folded down as illustrated in Figure 3 of the drawings and the tab 41 of the closure 56 is inserted between the edge of the closure flap 36 and the inner face of the panel 19. To make this insertion easily possible, a recess 59 may be provided in the edge of the closing flap 36, into which the tab 41 may be easily inserted.

Figure 6 of the drawings illustrates sectionally the top of the package A, while the same is sealed, as shown in Figure 1 of the drawings. Figure 7 of the drawings illustrates the top after the closure has been broken away therefrom, as shown in Figure 3 of the drawings. Figure 8 illustrates the tab 41 reinserted into the container, as in Figure 5 of the drawings.

Figures 9 through 13 show the manner in which the bottom of the box is closed. Figure 9 shows one of the side flaps 34 folded into closed position, while the remaining flaps 21, 25, and 30 extend upwardly. Figure 10 is a similar view showing both of the side flaps 25 and 34 in folded position, while the remaining flaps 21 and 30

project upwardly. Figure 11 shows the arrangement of the elements after the flaps 25 and 34 have been folded down and prior to the folding of the flaps 21 and 30. Figure 12 shows all of the flaps 21, 25, 30, and 34 in folded position. Figure 13 is a somewhat enlarged view showing the manner in which the flaps 34 and 25 fold against the shoulder edge 52 of the panel 19 and are supported thereby during the sealing operation.

I have described the package as comprising certain closure flaps and have described a specific order in which these flaps are folded. Obviously others of the flaps may first be folded and the particular sequence of folding the closure flaps may be varied to some extent without changing the operation or the features of the invention.

In accordance with the patent statutes, I have described the principles of construction and operation of my package, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A package formed of a blank of sheet material comprising four substantially rectangularly arranged side walls, one of said side walls including a portion of double thickness, closing flaps on said side walls folding together to close an end of the package, a tab formed in the outer thickness of said double thickness wall at one extreme end of said blank and adjacent the associated closing flap, a portion of the free edge of the blank defining an edge of the tab, and a separable line of connection extending across said associated closing flap terminating at an end of said tab.

2. A package comprising four rectangularly arranged side walls connected along substantially parallel fold lines, an anchor flap overlapping one of said side walls and secured thereto, a closing flap foldably arranged on said one side wall, a second closing flap foldably arranged on the opposite side wall, said closing flaps being folded into overlapping relation and sealed together, and a tab formed in said one side wall adjacent said closing flap and extending substantially to one of said parallel fold lines, said closing flaps including weakened lines of separation extending across the same, said lines of separation communicating with an end of said tab.

3. A package comprising four rectangularly arranged side walls, an anchor flap overlapping one of said side walls and secured to underlie the same, a closing flap foldably marginally connected to said one side wall and a cooperating closing flap foldably marginally connected to the opposite side wall, said closing flaps being folded in to overlapping relation to close the package end and being sealed together, a tab formed in said one side wall outwardly of said anchor flap and adjacent one end of said associated closing flap, and weakened lines of separation across said closing flaps from an end of said tab to said opposite side wall, said lines of separation dividing said one end of said associated closing flap, and the overlapping closing flap portion from the remaining closing flap portions.

4. A package comprising five panels connected along substantially parallel fold lines, one end panel overlying the other end panel and being secured thereto to provide a substantially rectangular box body having one double thickness wall, a closing flap foldably marginally connected to said one end panel, a second closing flap foldably marginally connected to the opposite panel, said closing flaps being folded into overlapping relation and secured together, a tab formed in said one panel along the free edge thereof and adjacent the associated closing flap, and a weakened line of separation extending across said closing flaps communicating with the end of the tab.

5. A package comprising four rectangularly arranged side walls, one of said walls including a portion of two ply thickness, closing flaps foldably marginally secured to said one side wall and to the opposed side wall, said closing flaps foldable into superimposed relation and secured together, a tab formed adjacent said closing flap in the outer ply of said two ply thickness wall portion connected to the remainder of said wall along a weakened line of separation, said tab being partially defined by a free edge beneath which a flat tool may be readily inserted, and weakened lines of separation extending across said superimposed closing flap communicating with the first named weakened line of separation.

6. A package comprising five panels connected along substantially parallel fold lines, one end panel overlying the other end panel and being secured thereto to provide a substantially rectangular box body having one double thickness wall, a closing flap foldably marginally connected to said one end panel, a second closing flap foldably marginally connected to the opposite panel, said closing flaps being folded into overlapping relation and secured together, a tab formed in said one panel along an edge thereof and adjacent the associated closing flap connected to the remainder of said panel along a weakened line of separation, and a weakened line of separation extending across said closing flaps communicating with the end of the tab.

7. A package comprising four rectangularly arranged side walls, one of said walls including a portion of double thickness, closing flaps marginally connected to said one wall, and to the wall opposite said one wall, along fold lines, said closing flaps being folded into overlapping relation and secured together; said closing flaps being divided into two sections by weakened lines of separation extending from one said fold line to the other, one of said sections extending from said weakened lines of separation to an edge of said closing flaps, and a tab formed in the outer thickness of said double thickness wall portion, said tab being adjacent the corresponding fold line and being defined by a weakened line of separation communicating with said first named lines of separation, said tab and one section of each closing flap forming a foldable package closure when said lines of separation have been separated.

8. A package comprising five panels connected along substantially parallel fold lines, one end panel overlying the other end panel and being secured thereto to provide a substantially rectangular box body having one double thickness wall, a closing flap foldably marginally connected to said one end panel, a second closing flap foldably marginally connected to the opposite panel, said closing flaps being folded into overlapping relation and secured together, the entire area of said closing flaps being divided into two sections by a weakened line of separation, a tab formed in said one panel adjacent its closing flap and defined by a weakened line of separation which communicates with said first named weakened

line of separation, said tab and one section of said closing flaps forming a foldable closure for said package when said weakened lines of separation have been separated.

9. A package comprising four substantially rectangularly arranged side walls, one of said side walls including a portion of two ply thickness, closing flaps on said side walls to each side of said one side wall foldable into right angular relation with said side walls, closing flaps on said one side wall and on the opposite side wall foldable into overlapping relation and secured together, a tab formed in the outer ply of said two ply thickness portion of said one side wall adjacent the connected closing flap, said tab being partially defined by a free edge beneath which a flat tool may be readily inserted, and weakened lines of separation extending from the end of said tab across said closing flaps; said tab being engageable between said one wall and one of said first named closing flaps after said weakened lines of separation have been separated.

10. A package comprising four substantially rectangularly arranged side walls, one of said side walls including a portion of double thickness, closing flaps on said side walls to each side of said one side wall foldable into right angular relation with said side walls, closing flaps on said one side wall and on the opposite side wall foldable into overlapping relation and secured together, a tab formed in the outer thickness of said double thickness portion of said one side wall adjacent the connected closing flap, and weakened lines of separation extending from the end of said tab across said closing flaps; said tab being engageable between said one wall and one of said first named closing flaps after said weakened lines of separation have been separated, said one of said first named closing flaps having a nitch therein in the side thereof adjacent said one wall to relieve the frictional engagement with said tab.

11. A reclosable carton having a top and a tubular body including a wall portion of two-ply thickness formed by overlapping wall portions of the carton blank, a tab formed in the outer ply of said two ply wall portion bounded by a portion of the exposed overlapping carton blank edge, by a weakened line of separation, and by a fold line connecting said wall portion to the carton top, said top including a hingeable section connected to said tab along said fold line.

12. A reclosable carton having a top and a tubular body including a wall portion of two ply thickness formed by overlapping wall portions of the carton blank, a tab formed in the outer ply of said two ply wall portion bounded by a portion of the exposed overlapping carton blank edge, by a weakened line of separation, by a fold line connecting said wall portion to the carton top, said top including a weakened line of separation providing a hingeable section connected to said tab along said fold line.

13. A reclosable carton having a top and a tubular body including a wall portion of two ply thickness, the outer ply thereof being foldably connected to said top along a fold line, a tab formed in said outer ply bounded by a free edge of said outer ply, a weakened line of separation between said tab and the remainder of said outer ply and at least a portion of said fold line.

14. A reclosable carton having a top and a tubular body including a wall portion of two ply thickness, the outer ply thereof being foldably connected to said top along a fold line; a tab formed in said outer ply bounded by a free edge of said outer ply, a weakened line of separation between said tab and the remainder of said outer ply, and at least a portion of said fold line; adhesive between the laminations of said double thickness wall portions, at least the major portion of said tab area being free of adhesive between said plies.

15. A reclosable carton having a top and a tubular body including a wall portion of two ply thickness, the outer ply thereof being foldably connected to the top along a fold line; a tab formed in said outer ply at one edge thereof to permit an instrument to be inserted from one edge of the tab between said tab and the inner ply of said wall portion, a weakened line of separation connecting said tab with the remainder of said outer ply, and said tab being connected to said top along a fold line.

16. A reclosable carton having a tubular body and closing flaps articulated thereupon to form a closure for said tubular body, a two ply wall portion in said tubular body having a tab formed in the outer ply thereof extending along a free edge of said outer ply to permit insertion of a flat instrument between the plies from said free edge, said outer ply being foldably connected to one of said closing flaps, and parallel weakened lines of separation through said one closing flap and through an opposed closing flap communicating with an edge of said tab.

17. A reclosable carton having rectangularly arranged side walls and flaps articulated thereupon folded to form an end closure, an anchor panel underlying one of said side walls to form a side wall portion of two ply thickness, a tab formed in said one side wall along the free edge thereof to enable a flat instrument to be inserted between said tab and said anchor panel from the free edge of said one wall, the flaps on said one side wall and and the opposite wall being foldable over the flaps of the remaining walls and including weakened lines of separation extending from the edge of the tab opposite the free edge to the wall opposite said other wall, and a relatively small area of adhesive between the flaps containing said weakened lines of separation and the flaps on one of said remaining walls to permit separation therebtween as said tab and the connecting portions of the closure flaps are pivoted about the fold line connecting the wall opposite said one wall to its closure flap.

18. A reclosable carton having a top and a tubular body, said tubular body having a wall portion of two ply thickness, the outer ply thereof being connected to the inner ply thereof by means of two substantially parallel strips of adhesive, a tab formed in the outer ply of said two ply wall portion bounded by a portion of the exposed overlapping carton blank edge, a weakened line of separation and a fold line connecting said wall portion to the carton top, said top including a hingable section connected to said tab along said fold line, one of said strips of adhesive insecurely attaching said tab to the inner ply of said two ply portion, and the other line of adhesive being spaced laterally from said tab.

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