

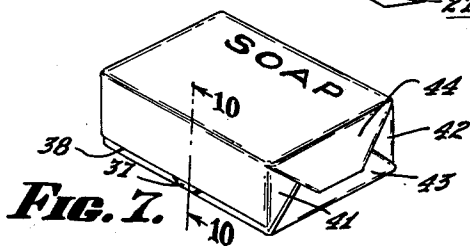
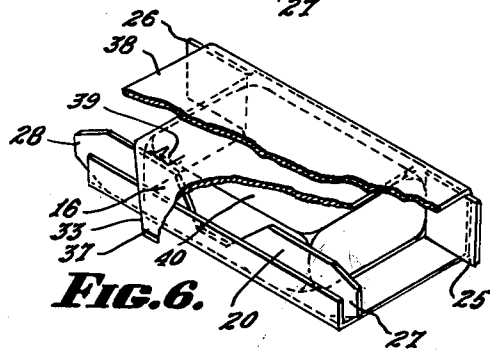
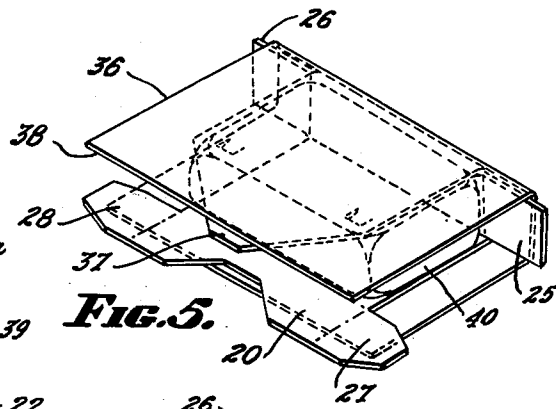
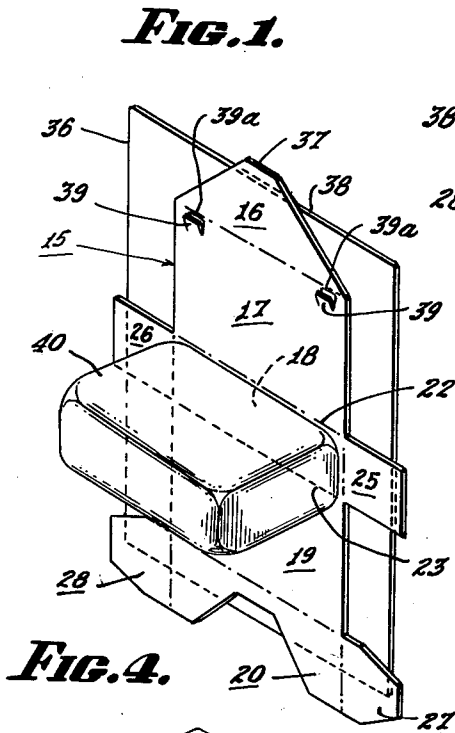
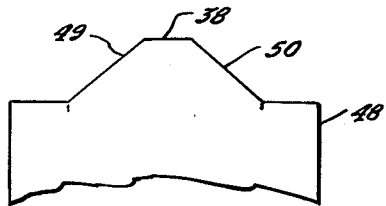
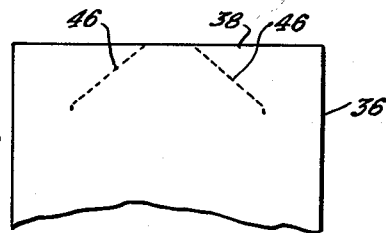
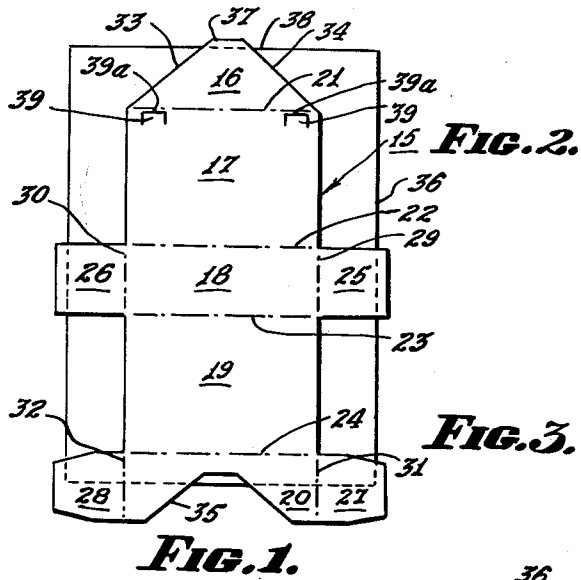
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R. V. BURT
PACKAGE STRUCTURE

3,073,436

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3 Sheets-Sheet 1



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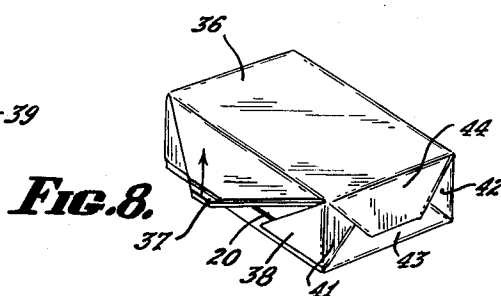
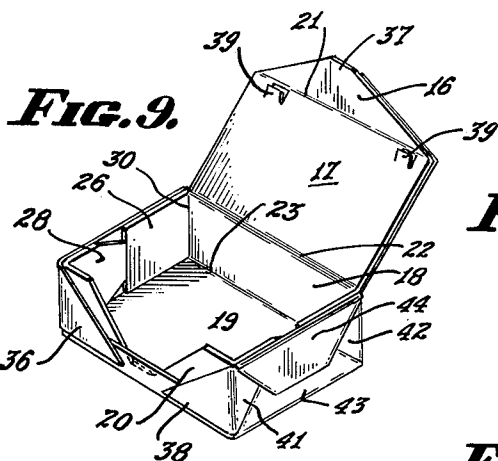


FIG. 10.

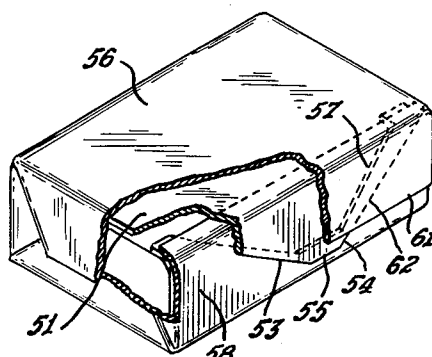
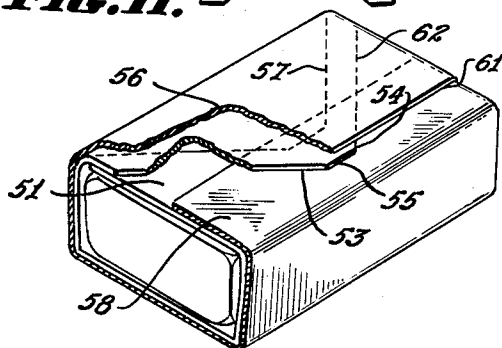
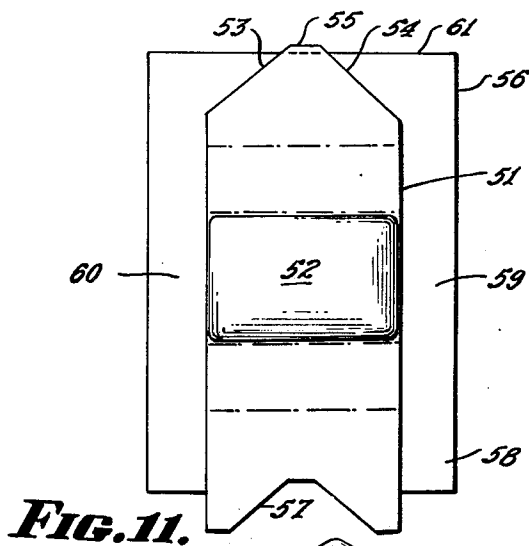
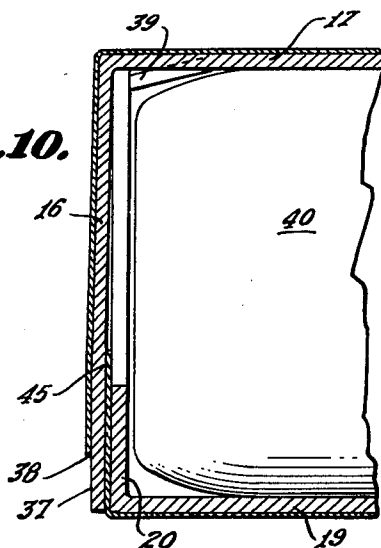


FIG. 13.

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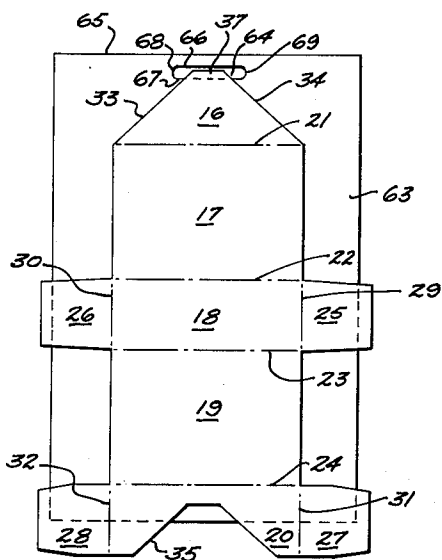


FIG. 14.

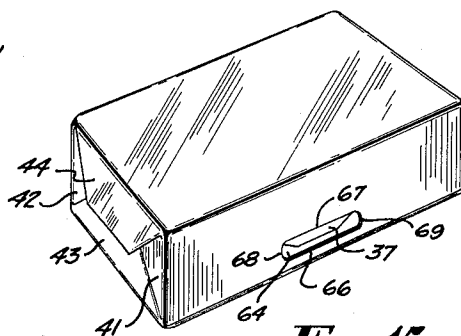


FIG. 15.

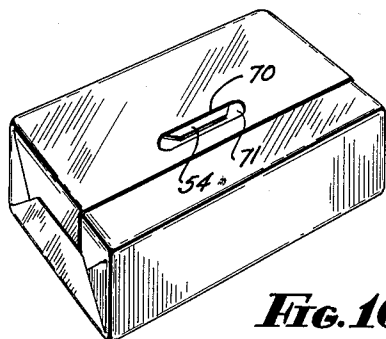


FIG. 16.

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PACKAGE STRUCTURE

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4 Claims. (Cl. 206—46)

This invention relates to an improvement in packaging and more particularly to an improved liner-type package structure. This is a continuation-in-part of applicant's co-pending application, Serial No. 798,736, filed March 11, 1959, now abandoned.

It is, of course, well known that many commercial articles such as bars of soap and the like are wrapped in packages consisting of a superposed liner and outer wrapper. Usually, the combined liner and wrapper are wrapped around the article in one direction in order to form a substantially tubular structure and the end projections of the wrapper are then tucked, folded and sealed to complete the package. Packages of this character, while well known and in widespread commercial use, are difficult to open. It is frequently necessary to completely dismember the outer wrapper and liner in order to remove the article and this is even more so nowadays since present methods of sealing packages do not lend themselves to easy separation at the seams. This problem has been overcome to a limited extent by the use of a separate tear tape or tear string. While the problem is partially overcome in this way, the use of a tear tape or tear string adds an additional element to the package making it more difficult to form the package and, of course, raising its cost. In addition to that, consumer surveys show that most people are inclined to ignore the protruding tab of conventional tear tapes either because they are rather small and obscure or because the consumer is not accustomed to opening certain types of packages with a tear tape.

Accordingly, it is a principal object of this invention to provide a new and improved liner-type package which is so constructed as to be easily opened for removal of the article within the package.

Another object of this invention is to form a package of this character which displays the entire contents of the package when opened.

Still another object of this invention is the provision of integral holding tabs in a liner-type package to facilitate the formation of the package and to assist in maintaining the shape of the package after its formation.

A further object of this invention is to form an improved package which uses no additional materials and is, therefore, no more expensive than conventional packages now in commercial use.

Still a further object of this invention is the provision of a new and improved package structure which has all of the above mentioned attributes and is, in addition, susceptible to formation on high speed automatic packaging machinery.

While the several package embodiments of this invention are well suited for packaging any article regardless of its shape, it will be described herein as applied to bar soap packaging since the invention has been found to have particular utility in that field. It is to be understood, however, that this in no way forms a limitation on the scope of the invention.

The manner of accomplishing these and other objects of the invention will be set forth hereinafter or will be apparent to one skilled in the art upon reading the specification and claims. The objects are accomplished by that construction and arrangement of parts which shall now be described in certain exemplary embodiments. Reference is made to the accompanying drawings wherein:

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FIGURE 1 is a plan view of the liner blank and outer wrapper blank for forming a box wrap type package; and

FIGURE 2 is a fragmentary plan view of one end of a modified form of outer wrapper blank; and

FIGURE 3 is a fragmentary plan view of one end of another modified form of outer wrapper blank; and

FIGURE 4 is a perspective view of the liner and outer wrapper of FIGURE 1 showing the position of a bar of soap just prior to being wrapped; and

FIGURE 5 is a perspective view of the liner and outer wrapper of FIGURE 4 after making the first folds to enclose the bar of soap on three sides; and

FIGURE 6 is a perspective view, partly in cross-section, showing the liner and outer wrapper after the front panel has been folded upwardly; and

FIGURE 7 is a perspective view of the finished package; and

FIGURE 8 is a perspective view of a package that has been partially opened; and

FIGURE 9 is a perspective view of a package that has been completely opened and the bar of soap removed; and

FIGURE 10 is an elevation view, in cross-section, taken along the line 10—10 of FIGURE 7; and

FIGURE 11 is a plan view of a modified liner and outer wrapper showing a bar of soap in position just before wrapping; and

FIGURE 12 is a perspective view, partly in cross-section, showing the finished package formed from the modified liner and wrapper shown in FIG. 11; and

FIGURE 13 is a perspective view, partly in cross-section, showing a finished package similar to the embodiment of FIGURE 12 except that the opening tab has been re-located to a side surface of the package; and

FIGURE 14 is a plan view of an inner liner blank superposed on a modified outer wrapper blank prior to forming a modified form of the box wrap package; and

FIGURE 15 is a perspective view of a modified form of the box wrap package made from the liner and outer wrapper shown in FIGURE 14; and

FIGURE 16 is a perspective view of a finished package similar to the package of FIGURE 12 using a modified outer wrapper similar to that disclosed in FIGURE 14.

Briefly stated, in accordance with one aspect of the invention, the package comprises a liner and an outer wrapper; the outer wrapper is formed from thin, flexible sheet-like material to provide an outer covering for the finished package; and the liner is formed from a stiffer material such as paperboard, for example, which serves as a satisfactory lining for the package. The outer wrapper and liner are superposed so that one end of the liner is exposed beyond an edge or through an opening of the outer wrapper to form an opening tab. The bar of soap is wrapped by the superposed liner and outer wrapper so that the opening tab is interposed between opposite ends of the outer wrapper making it protrude beyond the exposed longitudinal edge of the outer wrapper or through an opening in the outer wrapper when the package is completed. To open the package, the opening tab is pulled upwardly and torn back. This action severs or tears the outer wrapper along the paths lying over the edges of the liner and completely exposes the bar of soap making it very easy to remove the bar from the package.

Referring now to the drawings and particularly to FIGURE 1, there is shown a liner blank 15 which may be formed from cardboard, paperboard or similar materials having a reasonable amount of stiffness. The liner blank 15 is divided into a tear tab panel 16, a top panel 17, a back panel 18, a bottom panel 19 and a front panel 20 by means of the score lines 21, 22, 23 and 24. Pairs of end tabs 25, 26 and 27, 28 extend from either side of the liner blank 15 and are foldable about the score

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lines 29, 30 and 31, 32 said score lines being substantially coextensive with the edges of the main body of the liner blank. The tear tab panel 16 has beveled edges 33 and 34 which are parallel to the sides of the notch 35 in the front panel 20. This allows a substantial portion of the panel 16 to nest in the notch 35 whereby individual liner blanks 15 can be cut in end-to-end abutting relation from a continuous web of material.

The outer wrapper blank 36 may be formed from any commercially available thin, flexible film such as cellophane, metal foil, paper lined foil of heat sealing character, paper and the like. It is preferred that the outer wrapper 36 be heat sealable although this is not essential to the invention. In one embodiment the outer wrapper blank 36 is of rectangular configuration. It is superposed on the liner blank 15 so that the opening tab 37 extends beyond the edge 38 of the wrapper blank 36. Wherever the opening tab 37 is referred to herein, it will be understood to include that portion of the tear tab panel 16 which extends beyond the edge 38 of the outer wrapper blank 36 or is otherwise exposed.

A pair of holding tabs 39 may be struck from the top panel 17. The holding tabs are preferably positioned at opposite edges of the blank although any number of tabs could be used depending on the size of the package. They are cut so that one edge 39a is parallel to the score 21. The edge 39a is preferably spaced from the score 21 at a distance about equal to the thickness of the liner blank 15. The purpose of these tabs 39 will become evident as the description of the invention proceeds.

In packaging a bar of soap, for example, the liner blank 15 and outer wrapper 36 are first superposed, as shown in FIGS. 1 and 4, so that the opening tab 37 extends beyond the edge 38 as heretofore described. A bar of soap 40 is held so that one of its lateral edges abuts the back panel 18. Then, as shown in FIG. 5, the outer wrapper 36 and the liner 15 are folded along the score lines 22 and 23. After this step, and as shown in FIG. 6, the front panel 20 together with end tabs 27, 28 and the wrapper blank portion superposed thereon, is folded upwardly on the score line 24. In order to obtain a rigid box-like structure when forming the package, the edge of the front panel 20 engages the inwardly struck holding tabs 39 when the front panel is folded into place (see FIG. 10). This prevents the front panel 20 from being articulated inwardly beyond its normal position and assures a relatively rigid rectangular frame structure when the package has reached this stage of its formation.

Next, the tear tab panel 16 is folded downwardly along the score line 21. The package is then completed, as shown in FIG. 7, by making the end tucks 41 and 42 and the end folds 43 and 44. In making the tucks and folds, the end tabs 25, 26 and 27, 28 are pivoted inwardly on score lines 29, 30 and 31, 32 so that the finished structure is formed into a substantially rigid box. In the art, such packages are frequently referred to as box wraps.

The finished package has the opening tab 37 protruding beyond the edge 38 of outer wrapper 36. As best seen in FIG. 10, by the tear tab panel 16 is interposed between an inner strata 45 of the wrapper blank 36 and the outside portion which terminates at the edge 38.

Referring to FIGS. 8 and 9, it will be seen that on pulling and lifting the opening tab 37, the outer wrapper will first be severed where it overlies the edges 33 and 34 of the panel 16. As the liner is pulled back the outer wrapper is torn to the score line 21. Pulling the liner further causes the outer wrapper to tear along the opposite edges of the top panel 17. When the liner 15 is pulled back to the line of articulation at the score line 22, the package will be opened as in FIG. 9. This fully exposes the contents of the package and permits removal thereof with no difficulty. In addition, the package when opened shows off the bar of soap which tends to add to its attractive appearance.

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FIGURE 2 shows the upper portion of a modified form of outer wrapper blank 36 that may be employed. In this modification, the upper portion of the blank 36 is provided with perforations 46 which overlie the edges 33 and 34 of the liner when the liner 15 and wrapper blank 36 as superposed. The purpose of the perforations 46 is to reduce the force necessary to initiate tearing of the outer wrapper when the package is opened. It is, of course, obvious that the use of perforations 46 is not essential to the successful practice of the invention.

FIGURE 3 shows another modified form of outer wrapper blank 48. In this modification, the end of the outer wrapper 48 is cut along the lines 49 and 50 so that it substantially conforms to the edges 33 and 34 of the liner blank. The edges 49 and 50 overlap the edges 33 and 34 of the liner blank and are heat sealed against the underlying portion of the outer wrapper although the opening tab 37 extends beyond the edge 38 as in the previous embodiments. On pulling the opening tab 37 the heat seal along the edges 49 and 50 is pulled apart to initiate opening of the package. Thereafter, the edges of the liner tend to tear the outer wrapper in a similar manner to the previous embodiments to complete the opening sequence.

The package can be modified in a number of other ways while still retaining the essential features of the invention. For example, the length of the panels 17, 18, 19 and 20 can be interchanged, i.e. the panels 17 and 19 would be short and of approximately the same length as the panels 18 and 20 as now shown on FIGURE 1 of the drawing. Simultaneously, the panels 18 and 20 would be lengthened to approximately the length of the panels 17 and 19 as now shown on FIGURE 1 of the drawing. This will result in a finished package in which the opening tab 37 will lie on one of the broad faces of the package rather than on a side face as shown on the drawings. It would be more convenient in such a case to extend the end tabs 25, 26, and 27, 28 from the shorter panels 17 and 19 although this would be a matter of choice as hereinafter more fully explained. In his modification, as in the other embodiments, it is also possible to shorten the panels 16 and 20 so that they do not overlap in the finished package. In fact, the panels 16 and 20 can be shortened so that the edges 33 and 34 will be aligned with the edge of the notch 35 in order to reduce the amount of material needed for the liner blank 15. When modified in this fashion, the bar of soap or other solid article inside the package will help to maintain its rigidity.

It is not necessary in all cases to provide the pairs of end tabs 25, 26 and 27, 28. A liner blank using a single end tab extending on either side can be employed. For example, an end tab articulated on both edges of the bottom panel 19 will produce a satisfactory box-like structure when folded into a finished package. In some cases it is possible to completely eliminate the end tabs. In such an instance the box-like character of the finished package can be retained. The liner without end tabs forms a rectangular tube similar to FIG. 6 and the shape of the structure is maintained when the end tucks 41, 42 and the end folds 43, 44 are formed and sealed.

A somewhat different package which employs the opening device of this invention is shown in FIGS. 11 and 12. A liner blank 51 of substantially the same width as a bar of soap 52 is provided with the diagonally cut edges 53 and 54 and an opening tab 55 extending beyond the outer wrapper 56 in much the same manner as the embodiment of FIG. 1. Here again the liner blank has a notch 57 formed by cutting an adjoining liner from a web of liner material. In this case the liner is formed from relatively soft, foldable paperboard material which, while reasonably stiff, is still capable of use without the provision of score lines on the liner. The liner and outer wrapper are superposed so that when the bar is wrapped, the opening tab 55 overlies the lower end 58 of the outer

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wrapper 56. The projecting edges 59 and 60 of the outer wrapper 56 are tucked, folded and sealed in conventional fashion to complete the package. When completed, the package takes the form of FIG. 12 and the opening tab 55 protrudes beyond the edge 61 of the outer wrapper 56. Perforations 62 may be provided on the outer wrapper to overlie the edges 53 and 54 for facilitating opening although, as previously explained, these are not essential to the successful practice of the invention.

In opening the package, the opening tab 55 is lifted and pulled to sever the outer wrapper along lines overlying the edges 53 and 54 and thence along the side edges of the liner blank 51 until the bar of soap is completely exposed. The soap is then very easily removed from the opened package.

While the liner blank 51 is shown in FIGURE 11 as being of sufficient length to encircle the bar of soap 52, it will be understood that this is not a requirement of the invention although it is usually a preferred construction. The liner 52 can be shortened so that, for example, it encircles only two or three surfaces of the bar of soap 52. In extreme cases, a liner covering only one surface of the bar 52 could be used. In these latter cases the alignment of the opening tab 55 with the edge 61 can be maintained by adhesively securing the outer wrapper 56 and the liner blank 51 prior to wrapping the bar 52. In any such modified form the essential characteristic of the invention, namely, the opening tab and the use of the liner for tearing open the wrapper would be employed.

The embodiment of FIG. 13 is similar to that of FIG. 12 except that the liner blank 51 and outer wrapper 56 are wrapped around the bar in such fashion that the opening tab 55 is on a side surface of the bar rather than on the top surface. The advantage of this latter construction is that the entire top surface may be used for identification, decorative or advertising purposes. The structure and opening of the package is otherwise very similar to the FIGURE 12 embodiment.

Another modified form of the package illustrated in FIGURE 7 is shown in FIGURE 15. This package is formed from the superposed liner blank and outer wrapper blank as illustrated in FIGURE 14. Referring to FIGURE 14, the liner blank 15 is substantially the same as the liner blank shown in FIGURE 1 and therefore the reference numerals used in connection with the description of the liner blank 15 of FIGURE 1 are employed to describe similar parts of the liner blank 15 shown in FIGURE 14. For convenience of illustration, the opening tabs 39 shown in FIGURE 1 are not shown in FIGURE 14 although they could be added if desired.

The outer wrapper blank 63 is substantially similar to the outer wrapper blank 36 of FIGURE 1 except that it has a slot 64 at its upper end near the edge 65. The slot 64 is composed of two substantially straight edges 66 and 67 and has rounded ends as at 68 and 69. The portion of the tear tab panel 16 extending beyond the edge 67 of the slot 64 comprises the opening tab 37.

The package can be formed in much the same way as previously described in connection with the formation of the package shown in FIGURE 7. The liner blank 15 and the outer wrapper blank 63 are superposed so that the opening tab 37 extends beyond the edge 67 of the slot 64. The formation of the package can then be accomplished in the same fashion as previously described in connection with the formation of the box wrap package shown in FIGURE 7. The finished package then takes the form illustrated in FIGURE 15. The opening tab 37 is exposed beyond the edge 67 of the slot 64 and may be grasped to tear open the package in substantially the same way as illustrated in FIGURES 8 and 9.

FIGURE 16 illustrates a package of the same nature as the package of FIGURE 12. However, as in the case of the package of FIGURE 15, the opening tab 54 extends beyond an edge 70 of the slot 71 so that the opening tab 54 is exposed to permit easy opening of the package. The

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slot 71 in FIGURE 16 is substantially similar to the slot 64 described in connection with FIGURE 14.

While a substantially elongated slot with rounded ends has been described in connection with the disclosure of FIGURES 14 through 16, it is to be understood that the slot opening illustrated can be varied in a number of ways to accomplish substantially the same result. For instance, instead of an elongated slot, a circular opening or a triangular opening or an opening of some other configuration can be used so long as the opening tab is exposed beyond an edge of the opening to permit access by the consumer for the purpose of easily opening the package to remove its contents.

While particular embodiments of the invention have been illustrated and described, it will be obvious to those skilled in the art that various changes and modifications can be made without departing from the spirit and scope of the invention, and it is intended to cover in the appended claims all such changes and modifications that are within the scope of this invention.

What is claimed as new is:

1. A package enclosing an article, said package comprising a liner and a superposed outer wrapper, said liner being cut and scored to form a plurality of panels including a tear tab panel, a top panel, a front panel and at least one end tab protruding from either side of said liner, at least one holding tab struck from said top panel so that one edge of each holding tab is set back from the score line separating the top panel and the tear tab panel by a distance approximately equal to the thickness of the liner material, said outer wrapper being formed from thin flexible material and being superposed with said liner so that an opening tab on said tear tab panel protrudes beyond an edge of said outer wrapper, the liner being articulated and folded along its score lines so that the front panel rests against the said one edge of each holding tab to form the liner into a rigid box-like structure around the article, the outer wrapper being wrapped about said liner so that the tear tab panel is interposed between two ends of the outer wrapper and the opening tab is exposed and protrudes beyond an edge of the outer wrapper, the opening of the package and removal of the article being accomplished by lifting and pulling said opening tab thereby tearing the outer wrapper along the edges of the liner to expose the article for removal.

2. A package enclosing an article, said package comprising a liner and a superposed outer wrapper, said liner being cut and scored to form a plurality of panels including a top panel, a back panel, a bottom panel and a front panel, at least one holding tab struck from said top panel so that one edge of the holding tab is set back from the edge of the top panel opposite the score line joining the top and back panels by a distance approximately equal to the thickness of the liner material, the liner being articulated and folded along its score lines so that the inside surface of said front panel rests against the said one edge of the holding tabs to form the liner into a rectangular tube, said outer wrapper being wrapped about said liner to form said tube, the projecting edges of said outer wrapper being tucked and folded to form a rigid box-like package.

3. A package enclosing an article, said package comprising a liner and a superposed outer wrapper, said liner being cut and scored to form at least four panels, at least one holding tab struck from one of the panels so that one edge of the holding tab is set back from the edge of the panel by a distance substantially equal to the thickness of the liner material, the liner being articulated and folded along its score lines so that the inside surface of the third panel from the panel having holding tabs struck therefrom rests against the said one edge of the holding tabs to form the liner into a rectangular tube, said outer wrapper being wrapped about said liner to form said tube, the projecting edges of said outer wrapper being tucked and folded to form a rigid box-like package.

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4. A package enclosing an article, said package comprising a liner and a superposed outer wrapper, said liner comprising a cut and scored paperboard member divided into a plurality of side-by-side panels including successively a tear tab panel and four wall-forming panels including a top panel, a back panel, a bottom panel and a front panel, a pair of end tabs extending from both sides of at least one of said wall-forming panels, each of said wall-forming panels being positioned at right angles with respect to each adjoining wall-forming panel thereby forming a rectangular tube around the article; said outer wrapper being substantially rectangular and having side portions which extend beyond the edges of the wall-forming panels, said outer wrapper being folded around said liner member so that one end of the outer wrapper covers at least a portion of the said front panel of the said liner, the other end of the outer wrapper being superposed with the tear tab panel so that the opening tab portion of the tear tab panel is exposed at said other end of the outer wrapper, said tear tab panel and the superposed other end

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portion of the outer wrapper being folded into superposed position with the front panel and said one end of said outer wrapper, the said ends of the outer wrapper being adhered to hold the exposed tear tab against the wall formed by the front panel, the said end tabs of the liner being infolded and positioned at substantially right angles to the said wall-forming panels, and the extending side portions of the outer wrapper being tucked and folded to complete the end surfaces of the package.

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