Aug. 25, 1959 B. J. TAMARIN 2,901,097

CONTAINER

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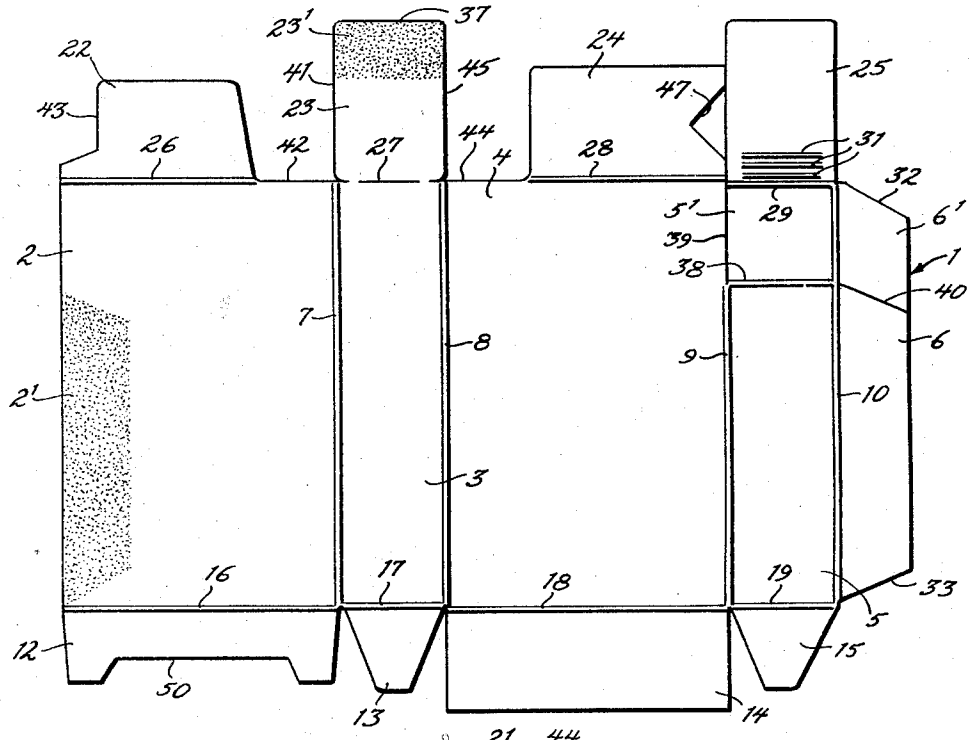

Fig. 1.

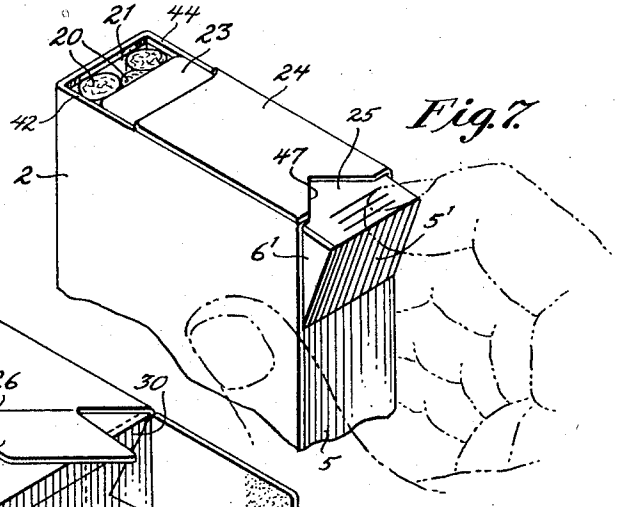

Fig. 7.

Fig. 2.

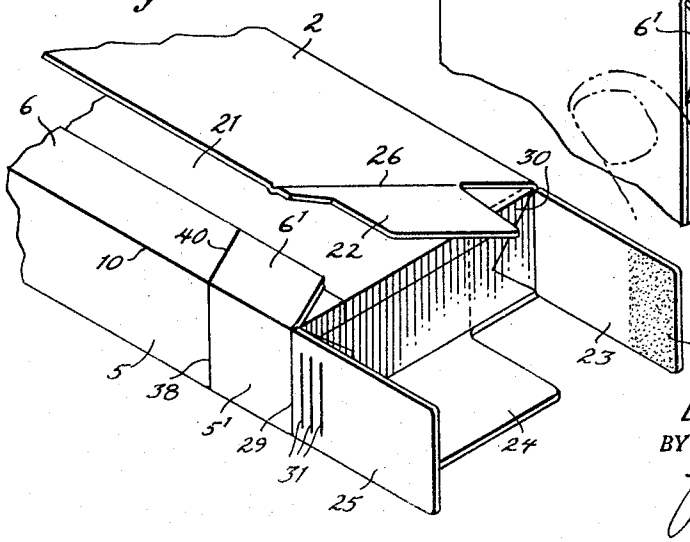

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Fig. 3.

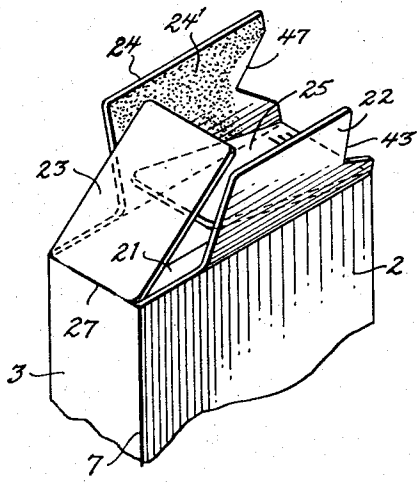


Fig. 4.

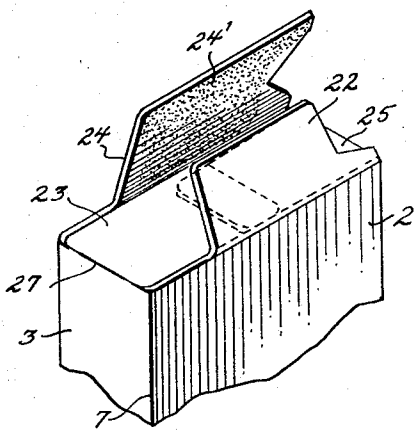


Fig. 6.

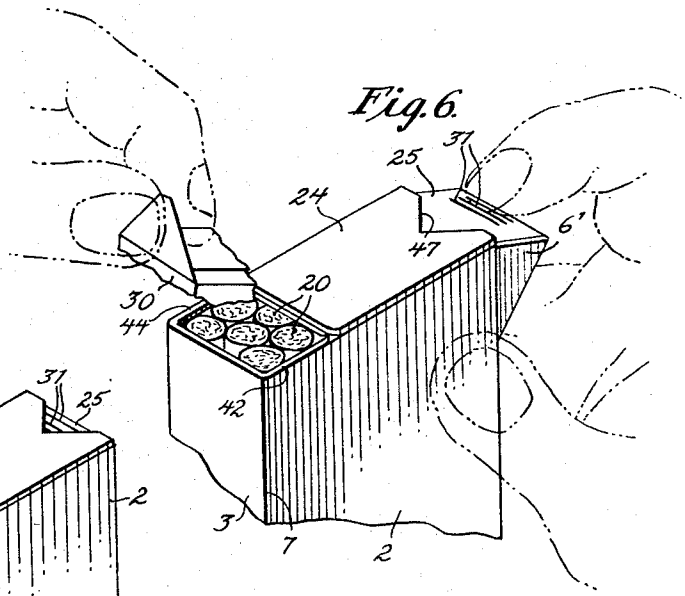
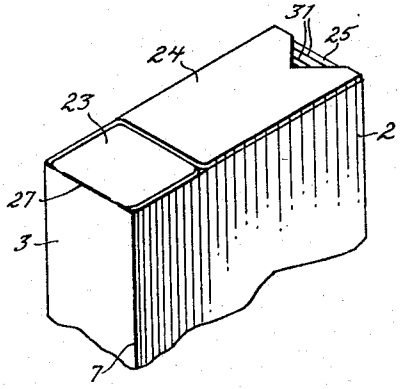


Fig. 5.



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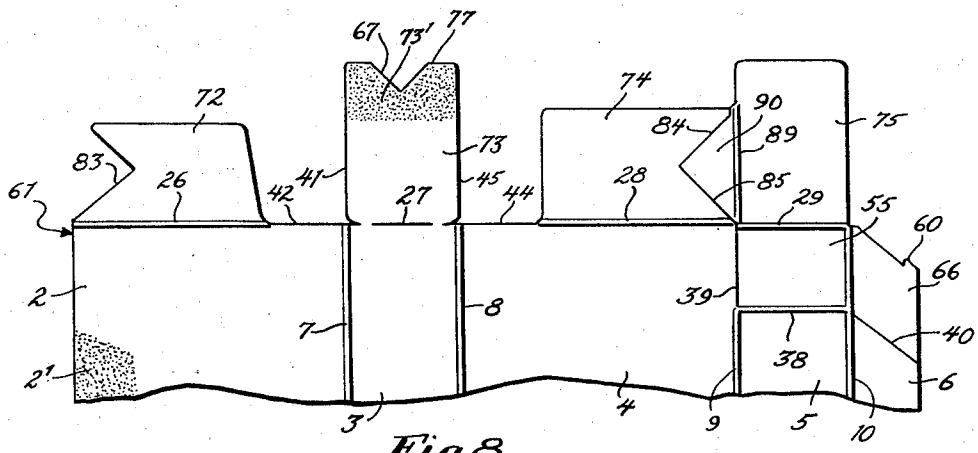

Fig. 8.

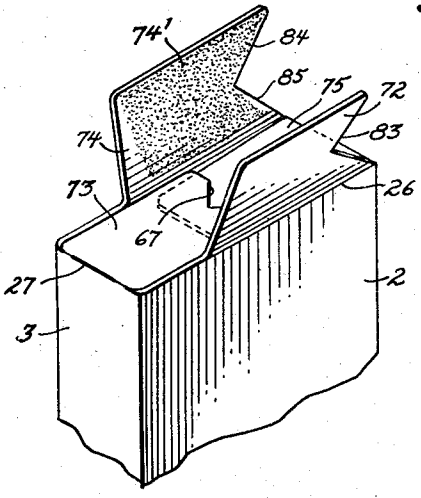

Fig. 9.

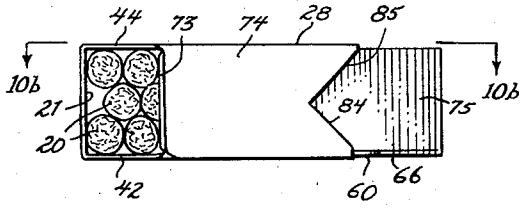

Fig. 10a.

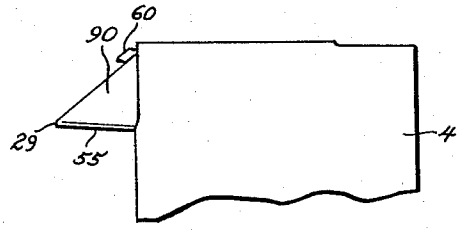

Fig. 10b.

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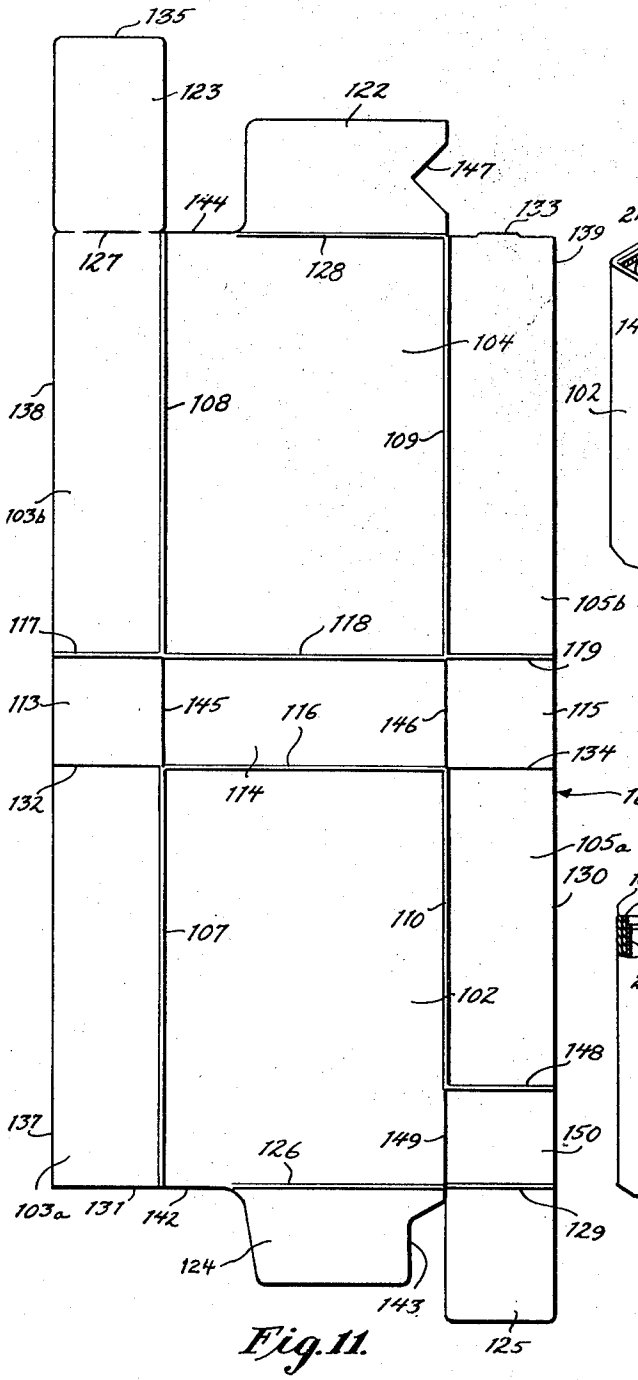

Fig. 11.

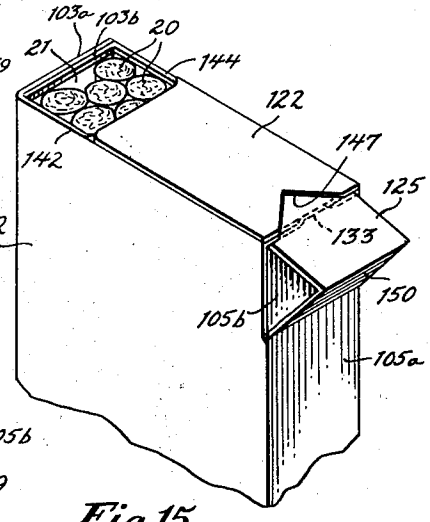

Fig. 15.

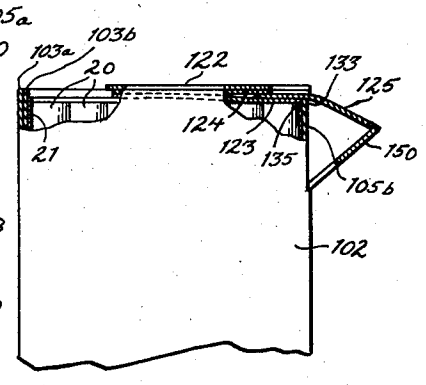

Fig. 16.

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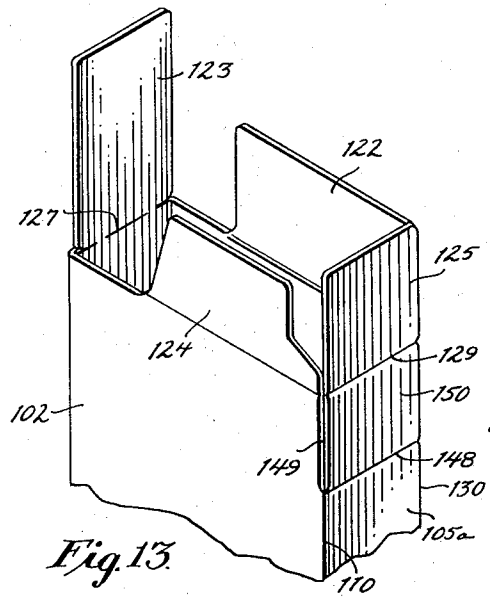
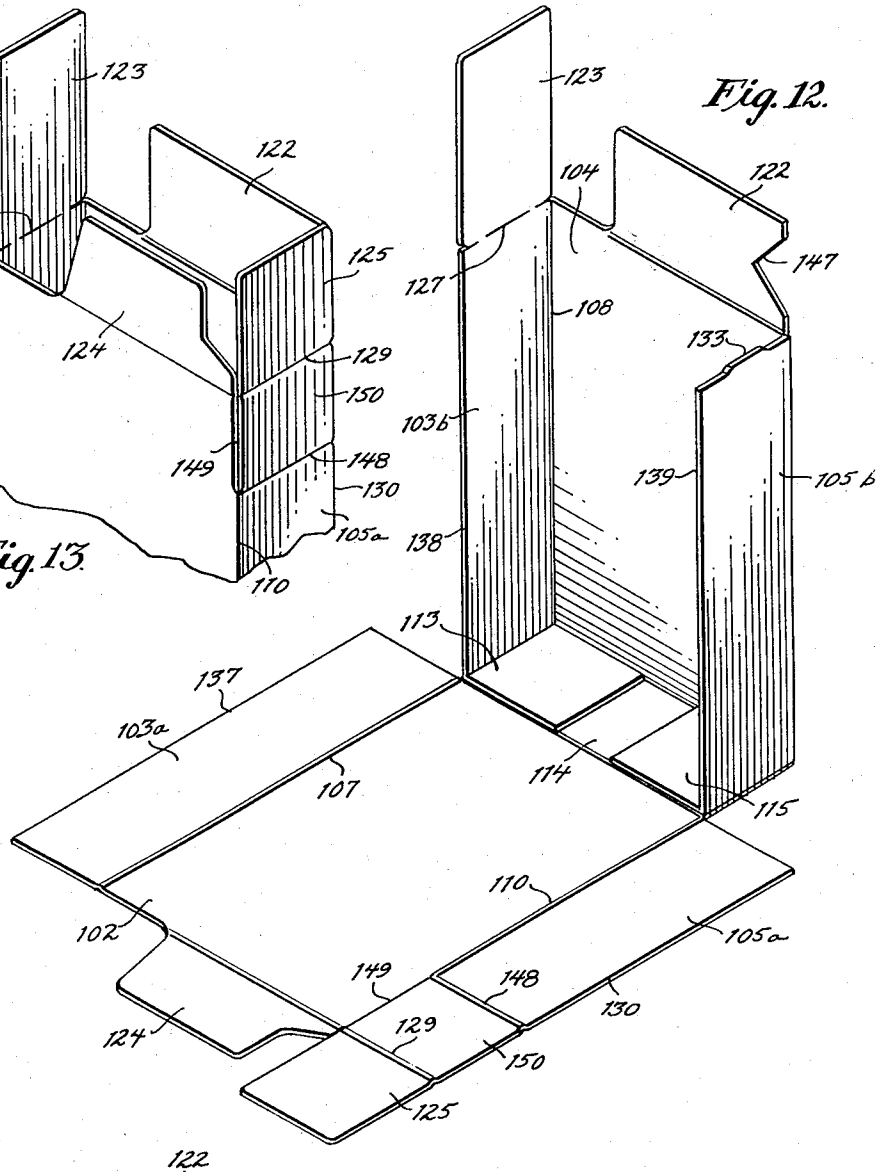


Fig. 13.

Fig. 12.



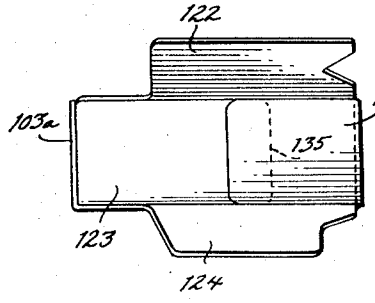


Fig. 14.

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United States Patent Office 2,901,097 Patented Aug. 25, 1959

2,901,097

CONTAINER

Bernard J. Tamarin, Whitemarsh, Pa.

Application June 19, 1958, Serial No. 743,127

8 Claims. (Cl. 206—41.2)

This invention relates to packaging of small articles (as, for example, cigarettes), concerning especially provision of improved closure features in a portable container therefor derived from a unitary blank foldable into container form.

A well-known kind of package for cigarettes or the like is composed of relatively flexible sheet materials, such as cellophane, metal foil, and paper; this "soft" type of container presents a considerable likelihood of damage to the contents by crushing, especially when partly empty. On the other hand, existing containers made of paper or cardboard stiff enough to be considered moderately crushproof or "hard" are difficult to open and close and are unduly expensive to manufacture, ship, and store.

A primary object of the present invention is provision of a substantially rigid case or container of customary pocket size, formed from a component one-piece blank of uniform thickness, with improved closure means. An object is improved construction and operation of a sliding end closure of a portable container. A particular object is construction of a simple crushproof package adapted to be formed and packed by conventional cigarette-packaging machinery. Other objects of this invention, together with means and methods for attaining the various objects, will be apparent from the following description and the accompanying diagrams.

Fig. 1 is a plan of a foldable blank of this invention in sheet form before conversion into container or package form, and Fig. 2 is a perspective view of the upper part of the blank of Fig. 1 at a stage in enfolding about an inner wrapper in package form.

Fig. 3 is a perspective view of the top end portion of the forming container of Fig. 2 at the beginning of folding to form the top closure; Fig. 4 is a similar view of the same portion of the container at an intermediate stage in the formation of the top closure; Fig. 5 is a perspective of the closed top end of the container of the preceding views; Fig. 6 is a similar view of the top of the container opened to reveal part of the contents; and Fig. 7 is a perspective of the same container with the closure slide in an intermediate or partly opened (or partly closed) position.

Fig. 8 is a plan of the upper part of a foldable blank of this invention modified somewhat from that of Fig. 1; Fig. 9 is a perspective of the top portion of a container being formed from the blank of Fig. 8; Fig. 10*a* is a plan of the top of a container formed from the foldable blank of Fig. 8 and shown with the closure slide in the fully open position; and Fig. 10*b* is a rear elevation of the top portion of the fully open container of Fig. 10*a*.

Fig. 11 is a plan of another modification of packaging blank according to this invention; Fig. 12 is a perspective of the blank of Fig. 11 being folded into container form; Fig. 13 is a perspective of the top portion of the forming container before formation of the top closure thereof; Fig. 14 is a plan of the forming container at an intermediate stage in formation of the top closure; Fig. 15 is a perspective of the top portion of the completed container shown fully open; and Fig. 16 is a side elevation, partly cut away, of the fully open top portion of the container of the immediately preceding view.

In general, the objects of the present invention are accomplished by providing a packaging blank having a generally rectangular body portion foldable into a container having two pairs of wall panels and having a dispensing opening in one end and a captive closure slide for the dispensing opening, with the slide being attached to a hinged portion of one of the wall panels adapted to swing outward from the body of the container upon movement of the closure slide to uncover the dispensing opening. This invention contemplates that either or both the closure slide and the hinged wall portion preferably will have attached thereto a plane member or strip adapted to underlie an adjacent wall panel when the dispensing opening is covered by the closure slide and adapted to move out from under such adjacent wall panel to maintain surface continuity between the edge thereof and the hinged wall portion when the dispensing opening is uncovered by the closure slide. In particular, this invention contemplates providing, for an end closure of rectangular plan in a cigarette package having a substantially crushproof outer shell, a captive closure slide extending substantially the width of the end and adapted to move lengthwise thereof to uncover a portion of the end, the slide being composed of two strips lapping and adhering to one another at one end of each, at least one of the strips being secured to a portion of the shell while remaining free to slide in the lengthwise direction, and at least one of the strips optionally having at least one portion thereof adapted to cooperate with a portion of the shell wall to limit the lengthwise travel of the slide.

Fig. 1 shows packaging blank **1** viewed in plan from the surface that is folded toward the inside in subsequent views. The generally rectangular body of the blank has wall panels **2** to **6**, inclusive, defined by parallel fold lines **7** to **10**, inclusive, extending transversely (vertically in this view) from one longitudinal edge of the blank toward the other on corresponding welts (indicated by double lines) produced by scoring of the opposite side of the blank to facilitate folding. Wide panels **2** and **4** are equal to one another in width, as are narrow panels **3** and **5**; lap panel **6** is narrower than the other narrow panels.

At the bottom edge of the blank, panel **2** has irregularly shaped (generally rectangular) flap **12** extending from it over essentially the entire width of the panel, with scored fold line **16** separating flap and panel; the free long edge of the flap has generally rectangular indentation **50** in it. Panel **4** has somewhat larger rectangular flap **14** extending from it over the entire width of the panel, with scored fold line **18** intervening; the short dimension of flap **14** closely approximates the width of one of the narrow panels in the pair. Panels **3** and **5** have at the bottom substantially trapezoidal tabs **13** and **15**, respectively, joined to the body of the blank at their bases along aligned respective scored fold lines **17** and **19** (slightly offset from scored fold lines **16** and **18** for the flaps and from one another to compensate for the thickness of the blank when folded).

At the top edge of the blank, panels **3** and **5** have a substantially identical pair of tabs (one each) rectangular in outline and extending therefrom over substantially the panel width. Junction **29** of tab **25** with the top edge of portion **5'** of panel **5** is defined by a scored fold line or welt, while the corners of tab **23** near the ends of welts **7** and **8** round smoothly into perforated junction **27** of that tab with the top edge of intervening panel **3**. The

smooth surface of fixedly attached tab **25** is interrupted by several welts **31** extending transversely thereof near and parallel to its junction with the supporting panel. Minor outer portion **23'** of detachable tab **23** is coated with adhesive (indicated by stippling), between top **37** and side edges **41**, **45**.

Supporting panel portion **5'** for tab **25** is joined to major portion **5** of that narrow wall panel by scored fold line or welt **38**, which extends the width of the panel parallel to junction **29**. Adjacent wide panel **4** is separated from minor portion **5'** of the narrow panel by intervening slit **39**, which is aligned with welt **9**. Slit **40** crosses the adjacent narrow lap panel obliquely and paralleling mitered top edge **32** of minor top portion **6'**, which is separated thereby from the rest of lap panel **6**, and terminates at the end of welt **38**.

Generally rectangular flap **24** joined to the top of wide panel **4** extends from free edge portion **44** of the panel to the edge of tab **25**, a distance approximating two-thirds the width of the wide panel, along junction welt **28**. The width (vertical dimension) of the flap corresponds closely to the width (horizontal dimension) of each of narrow panels **3** and **5**. Triangular notch **47** is centered in the edge of the flap adjacent tab **25**.

Flap **22**, whose width over most of its length closely approximates that of the other flap (and the narrow panels) extends from free top edge **42** of supporting wide panel **2** for approximately two-thirds of the wide panel width along junction welt **26** at the top of that wide panel. The flap narrows at its outermost edge, as a result of a sloping of the edge closest to tab **23**, and indentation **43** of the opposite edge.

Fig. 2 shows in perspective a closed end portion of inner wrapper **21** juxtaposed to blank **1** and partly enfolded by it. Side walls of the wrapper are coincident with narrow wall panel **5** (with portion **5'**) and (not visible) narrow wall panel **3** and wide wall panel **4** of the folded outer blank. The lap panel (with minor end portion **6'**) of the blank is folded toward the inner wrapper. Wide panel **2** is partly folded toward the wrapper, and adhesively coated portion **2'** (visible in Fig. 1) thereof is about to overlie major portion **6** of the lap panel. The tabs and flaps remain aligned with their respective supporting wall panels in this view. Visible at one end of the inner wrapper is removable end portion **30** thereof, defined by broken lines (indicating a perforated or crush-cut boundary line) and including a triangular flap portion of the wrapper.

While in Fig. 2 the forming package appears lying on its side, in the succeeding sequential views of Figs. 3 to 7 it is shown upright. Like Fig. 2, Figs. 3 to 7, inclusive, omit in the interest of clarity all showing of the bottom of the container being formed.

Fig. 3 shows in perspective the forming package of Fig. 2 with the sides of the inner wrapper completely enfolded and the top tabs of the outer shell folded part of the way over the end. Tab **23** partly overlaps tab **25** at the free extremities of the two tabs. The upstanding flaps are shown spread slightly apart at the top to facilitate entrance of the tabs between them. Fig. 4 shows both tabs folded down against the top of the inner wrapper with the detachable tab partly overlying the other tab and with the flaps partly folded down over them. The upper surface of flap **22**, which is folded down further, is in position to be contacted by adhesive lower surface **24'** of triangularly notched flap **24**.

Fig. 5 shows the top completely closed, with flap **24** folded down against the underlying flap (and adherent thereto). The flaps overlie the lapped end portions (not visible) of the tabs, while the opposite ends of both tabs are still attached to the supporting wall panels. The perforated junction of the detachable tab must be broken before the closure member formed by the tabs can slide to uncover the dispensing opening. This essential step can be performed mechanically at a relatively late stage in the enfolding of the container itself—which customarily is accomplished by machine, rather than by hand—or it may be done manually.

Fig. 6 shows the slide formed by the tabs detached at the near edge of the top and slid back to uncover the dispensing opening in that end of the container. Pressure of the forefinger in non-slipping contact with the portion of the slide crossed by parallel score lines **31** (corresponding to the welts visible near the base of tab **25** in Fig. 1) permits the slide to be withdrawn readily enough. Withdrawal of the slide swings the hinged top portion of the attached narrow wall panel (not visible in this view) outward, revealing attached top portion **6'** of the adjacent narrow lap panel, and brings the detached tab wholly underneath the overlying flaps to reveal the dispensing opening, which is bounded by the top edge of narrow wall panel **3** and free edge portions **42** and **44** of wall panels **2** and **4** plus the near edge of the flaps.

The top of the inner wrapper is shown being opened in this view by removal of end portion **30** thereof, as may be accomplished most simply by placing thumb and forefinger of the other hand on opposite sides of the previously mentioned flap portion, grasping it lightly but firmly, and pulling it off to reveal part of the contents (here, cigarettes **20**). In the fully open container, after removal of the detachable part of the inner wrapper, the top ends of five cigarettes are fully exposed, the fixed top closure portion formed by the overlapping flaps just clearing the second one in each outer row of the conventional **7—6—7** arrangement. One or more of the cigarettes may be ejected readily by tapping the top of the package.

After manual removal of the desired cigarettes (or other contents) through the dispensing opening provided by withdrawal of the closure slide, the slide may be returned to its original position to close the end of the package. The package can be held, and the slide manipulated, by one hand, if desired, as suggested in Figs. 6 and 7. When the slide is in the fully closed position, hinged portion **5'** of the narrow wall panel (visible in Fig. 7) returns to its original position of alignment with the rest of that wall panel. Complete closure is positive and secure, preventing accidental opening under ordinary conditions, especially until all the cigarettes are removed. Emptying of the package, which usually occurs after from about ten to twenty openings and closings when used for cigarettes, leaves it in good condition for subsequent use as a container for buttons, tacks, screws, or similar household articles.

Fig. 7 shows the slide in an intermediate position, between the fully open and fully closed positions. Such an intermediate position may be employed to hold one or more cigarettes partly ejected, as is convenient when offering them to someone else from a partly empty package. It is apparent that withdrawal of the closure slide to the fully or partly open position provides a protruding partial enclosure (open to the far side of the container). This enclosure is bounded by hinged portion **5'** of the visible narrow wall panel, the visible part of minor portion **6'** of the lap panel, and the adjacent portion of tab **25**, along with the narrow side wall of the inner wrapper (not visible here). If desired, a used cigarette may be snuffed out by inserting the burning end momentarily in this enclosure. Thus, this first illustrated embodiment of the invention also provides a ready means for eliminating the fire hazard attendant upon disposal of lighted cigarettes. The intermediate or partly closed position is most effective in excluding air from the burning end of the cigarette to extinguish it in this fashion.

The component materials of this package are readily available, and the invention permits reduction in the amounts required, reducing the cost accordingly. The blank used for the shell itself (Fig. 1) may be made

most conveniently from relatively stiff paper, such as that used for tags or playing cards. A high quality of paper stock can be used advantageously because of the economy afforded by adequacy of a single thickness (without added rigid paper backing or interliner) in the present construction and by the minimum of waste (at most several percent) in the die-cutting of the blank. The suggested inner wrapper may be composed of thin paper, metal foil, or a combination of the two, as is customary. If desired, either or both inner wrapper and outer shell may be made from plastic sheet material—relatively thin and flexible for the former and relatively rigid but foldable for the latter. The entire container may be covered in conventional manner by transparent plastic, such as cellophane, for example. Unlike the hard shell of certain existing cigarette containers, the present one is free (in the closed position) from protrusions designed to aid manipulation of the closure slide; consequently, it is not subject to distortion, as are those others, by reason of the tight fit assumed by an outer cover of cellophane or the like.

Scoring and slitting of the blank to facilitate subsequent folding can be accomplished readily during (or after) a die-cutting of the blank outline, as can perforation of the junction of the detachable tab to the rest of the blank. Although for simplicity of the showing only single scoring of the fold lines has been indicated, double or multiple scoring is useful in producing more rounded folds, sharp edges being generally undesirable in a rigid package.

Cigarette manufacturers, who package their own product and have a tremendous investment in existing machinery, can produce the above described hard-shell container conveniently on existing soft-package machinery (notably the AMF 3–79 model made by American Machine and Foundry Company) with only very slight modification. The sequential views of the folding of the scored outer blank will suggest to anyone familiar with the industry the ready adaptation of the standard packaging machinery to it; the formation of the outer shell partakes of the sequence of steps normally employed in surrounding the usual foil wrapper with a soft paper label, as well as those involved in shaping and closing the inner wrapper itself.

The blank and the container made from it may be modified somewhat without departing from the present inventive concept. Among the permissible design variations are those illustrated in Figs. 8 to 10*b*, inclusive. Fig. 8 shows in plan the upper part of blank **61**, including top tabs and flaps. Other unchanged (from Fig. 1) portions of the blank are omitted from this view in the interest of simplicity. Reference numerals remain the same except where they designate a modified feature of the blank.

Flaps **72** and **74** are unchanged from previous flaps **22** and **24** except at the indentations in their edges. The left edge of flap **72**, whose lower edge adjoins wall panel **2** along fold line **26**, has triangular indentation **83** in it. Somewhat similarly, the right edge of flap **74**, whose lower edge adjoins wall panel **4** along fold line **28**, has in it a triangular indentation defined by oblique edge portions **84** and **85**. In each instance the indentation extends substantially from corner to corner in the indented edge of the flap.

Tab **73** of blank **61** is similar to tab **23** of the previous blank, being detachable along perforated junction **27**; however, the rectangular outline of this tab is interrupted by indentation **67** in outer edge **77**. Tab **75** is fixedly attached along scored fold line or welt **29** to top narrow panel portion **55**, which is appreciably smaller in vertical extent than was portion **5'** of Fig. 1, corresponding to the length of edge portion **85** of the nearby flap indentation. Attached to the left edge of otherwise rectangular tab **75**, along junction welt **89**, is triangular portion **90**, which fits into the triangular indentation of adjacent flap **74**, being separated by slits from edge portions **84** and **85** of the flap.

Top minor portion **66** of the lap panel, which is hinged to the major portion of the panel along scored fold line or welt **38** and separated from the adjacent narrow wall panel by slit **39** (as was somewhat larger portion **6'** in the previous blank) is provided with ear **60** extending from the top edge alongside that slit.

Fig. 9 shows in perspective the top of a cigarette container being formed from the blank of Fig. 8, already folded to form the sides of the container. The flaps are slightly spread apart from one another, and the tabs are shown folded down between the flaps, detachable tab **73** partly overlapping fixedly attached tab **75**. In this view, the triangular portion of the fixedly attached tab is out of sight, having been folded down to a position along the inside face of wide side wall **4** (not visible in this view). Completion of the top closure by a folding down of flap **72** and then flap **74** (plus adherence of strippled portion **74'** on the under surface of the latter to the outer surface of the former) will be readily apparent by analogy with the corresponding procedure for the previous blank.

After completion of the container formation, tab **73** may be detached along its perforated junction line. Upon detachment of this tab the closure slide can be withdrawn to uncover the dispensing opening. As the slide is withdrawn, attached movable portion **66** of the lap panel slides out from behind wide wall panel **2**, thereby maintaining surface continuity between the edge of that wide wall panel and the hinged wall portion. The fully open position is shown in plan in Fig. 10*a* and in rear elevation (top portion only) in Fig. 10*b*.

It is apparent from Fig. 10*b* that movement of the slide to the fully open position rotates hinged top wall portion **55**, along with the immediately adjacent portions of elements attached to (or part of) it, through nearly ninety degrees of arc (about junction line **38**, shown previously). It is obvious from related views (e.g., Figs. 6 and 7) of the previous embodiment that the attached top portion of the lap panel rotates accordingly upon withdrawal of the slide. In this modified embodiment the originally vertical side edge of portion **66** (not visible in this view) becomes substantially horizontal, as the slide reaches the fully open position, and abuts the under side of inner flap **24** (also not visible) to act as a stop, preventing further withdrawal or overshooting of the slide.

In the fully open position, protruding ear **60** on the movable portion of the lap panel becomes exposed at the top right corner of the front wall. Pressure of the ear against the edge of the overlying flaps tends to maintain the open position of the slide, preventing it from creeping or springing partly closed as it may tend to do (because of the elasticity of the material from which the outer shell is made) but readily permitting the slide to be closed by intentional manipulation. At the opposite limit of travel of the slide, i.e., in the fully closed position, the top edge of narrow wall panel **3** is contacted by the previously attached edge of tab **73**.

Also exposed in Fig. 10*b* is most of triangular portion **90** of the fixedly attached tab. Like top panel portion **66** at the front, this triangular tab portion lies against the inside of one of the wide wall panels, providing additional friction to maintain the desired position of the slide, especially in the closed and partly open positions. Thus, in this modification, the protruding portion of the container in the fully open position of the slide is completely enclosed on all four exterior planes (top, side, front, and rear). This not only presents a neater, more finished appearance but also further improves the rigidity of the slide. Incidentally, the necessity (present in the previous embodiment) of removing or stripping out the mentioned triangular portion when it is severed from the rest of the blank is eliminated.

It will be apparent that each of the principal added features of the modification illustrated in Figs. 8 to 10*b*

may be used separately from the other. Also, they may be incorporated not only in the embodiment first illustrated and described above but also in the following.

Fig. 11 and the succeeding views illustrate another modification of packaging blank similarly useful according to this invention. This blank differs from those previously shown in that it is designed to fold end over end, i.e., about an axis oriented perpendicular to the vertical folding axis previously employed. One consequence of this variation is distribution of the tabs and flaps for the top closure along opposite edges of the blank. For simplicity of the showing, no adhesively coated areas are denoted in the views of this additional embodiment of this invention; appropriate provision for adhesive or other sealing means will be apparent to one skilled in the art, especially in the light of the above teaching.

Blank **101**, shown in plan in Fig. 11, has wide wall panels **102** and **104** adjoining opposite edges of intervening bottom panel **114** along junctions denoted by scored fold lines or welts **116** and **118**, respectively. Each wide wall panel is flanked by a pair of narrow wall panels extending for the full length of the wide wall panel. Thus, wide wall panel **102** has narrow wall panels **103***a* and **105***a* adjoining it along respective scored fold lines or welts **107** and **110**, while wide wall panel **104** has similar narrow wall panels adjoining it along similar lines **108** and **109**, respectively. Bottom panel **114** is flanked by bottom tabs **113** and **115** separated from it by respective slits **145** and **146**.

Narrow wall panel **103***a* is a simple rectangle bounded by short edge **131**, slit **132** opposite the short edge, and long edge **137**, in addition to junction line **107** opposite the long edge. Narrow wall panel **103***b* has long edge **138** opposite junction line **108** but is bounded at its top edge by perforated junction line **127**, which separates it from detachable rectangular tab **123**; bottom tab **113** adjoins this narrow wall panel along scored fold line or welt **117**. Narrow wall panel **105***b* has long edge **139** opposite junction line **109** and is bounded at the top by edge **133**, which protrudes upward slightly in the center, and at the bottom by bottom tab **115**, which adjoins the panel along scored fold line **119**. Narrow wall panel **105***a* is bounded in part by slit **134**, which separates it from the last mentioned bottom tab, and by long edge **130**, which extends opposite junction line **110**. Hinged portion **150** completes this narrow wall panel, being joined to the rest of the panel along scored fold line or welt **148**, which crosses from long edge **130** to the connection of fold line **110** with slit **149** aligned with that fold line. Joined to the hinged portion along scored fold line **129** is fixedly attached rectangular tab **123**.

Free edge **144** of wide wall panel **104** extends from fold line **108**, at the left edge, for nearly one-third the width of the panel to scored fold line or welt **128** marking the junction of the wall panel with flap **122**, which continues along the panel to fold line **109** at the opposite side edge thereof. Flap **122** is generally rectangular but has triangular notch **147** centered in its right edge. Wide wall panel **102** has free edge **142** extending for about one-third its width from fold line **107** at the left edge, to scored fold line or welt **126** marking the junction of flap **124**, which continues to fold line **110** at the opposite side edge of the panel. Flap **124**, whose outer edge is parallel to junction line **126**, has an oblique edge at the left and indentation **143** in the opposite edge, further narrowing the parallel outer edge.

Fig. 12 shows the blank of Fig. 11 in perspective at an early stage of being folded into container form. Narrow wall panels **103***b* and **105***b* are folded inwardly (i.e., toward the viewer) along their respective junctions with supporting wide wall panel **104** so as to face one another perpendicular to that wide wall panel. Bottom tabs **113** and **115** are folded toward one another along their junctions with the respective supporting narrow wall panels at right angles to both of those narrow wall panels and the intervening wide wall panel. Bottom panel **114**, wide wall panel **102**, and narrow wall panels **103***a* and **105***a* also are swung inwardly in a common plane perpendicular to wide wall panel **104**, with the bottom panel in contact with the undersides of the bottom tabs.

Fig. 13 shows a subsequent stage in the formation of this container, in which wide wall panel **102** has been swung up into parallelism with the other wide wall panel, and narrow wall panels **103***a* and **105***a* have been folded back against the outer surface of narrow wall panels **103***b* and **105***b*, respectively. This places long free edges **138** and **139** (visible in previous views) of the respective narrow wall panels of the inner pair at the inside of the front vertically extending edge formed by the folding of the outer pair along lines **107** and **110**, respectively. Free long edges **137** and **130** of the outer pair of narrow wall panels lie exposed at the rear vertically extending edge formed by the folding of the inner pair along lines **108** and **109**. The resulting open-ended pouch configuration can be closed, as shown in the subsequent views, by folding down the top tabs and flaps, which in this view are still aligned with their respective supporting wall panels.

Fig. 14 shows in plan the appearance of the top of the container with the tabs folded down to close it. Detachable tab **123** is partly overlapped by the free end portion of fixedly attached tab **125**, which adheres to the overlapped portion. Flaps **122** and **124** are shown folded back (apart) slightly to facilitate entrance of the tabs between them. Immediately after the stage represented in this view, flaps **124** and **122** are folded down in that order to adhere to one another and thereby complete the top closure, as may be visualized from the previous account and illustration of the form first shown.

Upon detachment of detachable tab **123** from narrow wall panel **103***b*, the slide composed of tabs **123** and **125** may be withdrawn from the closed position in like manner to withdrawal of the slide of the embodiment first disclosed above. Withdrawal of the slide permits extraction of the contents (here, cigarettes **20**) through the dispensing opening previously covered by the portion of originally attached tab **123** not covered by the flaps when attached or in the closed position.

Fig. 15 shows the resulting open top of the container in perspective, and Fig. 16 is a corresponding view of the top portion of the wholly open container in side elevation. Part of the near wide wall panel is cut away in Fig. 16 to show the relative positions of interior elements of the container when the slide is withdrawn to open the dispensing opening completely. In this position, overlapped leading edge **135** of the detachable tab (itself detached at its opposite end from the side wall but now adherent to fixedly attached tab **125**) abuts the side of top edge **133** of narrow wall panel **105***b*, the coaction of these elements providing a stop to inhibit overshooting of the slide in the opening direction. It is clear that the slide may be slid back to close the container, and the reclosed position is not illustrated.

As with the embodiments previously disclosed, the blank and container last described may be modified somewhat in design and construction without involving a departure from the present inventive concept. The location and shape of the tabs and flaps may be varied while maintaining the essential features of the characteristic closure arrangement. While machinery for forming this last blank into such a container necessarily will vary from that suitable for folding the blanks previously shown and described, suitable steps are apparent from the above teaching, and appropriate design of equipment to accomplish the desired result will come readily to the mind of one skilled in the art.

I claim:

1. In a container formed from a unitary packaging blank and having a pair of wide wall panels spaced oppo-

site and parallel to one another, a pair of narrow wall panels spaced opposite and parallel to one another and perpendicular to and joining the wide wall panels, with a dispensing opening in one end and a captive closure slide for the dispensing opening, the improvement comprising a hinged portion of one of the wall panels attached to the closure slide and adapted to swing outward from the body of the container, upon movement of the closure slide to uncover the dispensing opening, and a plane member attached to the hinged wall portion and adapted to underlie one of the adjacent wall panels when the dispensing opening is covered by the closure slide and to move out from under that adjacent wall panel to maintain surface continuity between the edge of that adjacent wall panel and the hinged wall portion when the dispensing opening is uncovered by the closure slide.

2. In a container formed from a unitary packaging blank and having a pair of wide wall panels spaced opposite and parallel to one another, a pair of narrow wall panels spaced opposite and parallel to one another and perpendicular to and joining the wide wall panels, with a dispensing opening in one end and a captive closure slide for the dispensing opening, the improvement comprising a hinged portion of one of the wall panels attached to the closure slide and adapted to swing outward from the body of the container, upon movement of the closure slide to uncover the dispensing opening, and a plane member attached to the closure slide and adapted to underlie one of the adjacent wall panels when the dispensing opening is covered by the closure slide and to move out from under that adjacent wall panel to maintain surface continuity between the edge of that adjacent wall panel and the hinged wall portion when the dispensing opening is uncovered by the closure slide.

3. In a container formed from a unitary packaging blank and having a pair of wide wall panels spaced opposite and parallel to one another, a pair of narrow wall panels spaced opposite and parallel to one another and perpendicular to and joining the wide wall panels, with a dispensing opening in one end and a captive closure slide for the dispensing opening, the improvement comprising a hinged portion of one of the wall panels attached to the closure slide and adapted to swing outward from the body of the container, upon movement of the closure slide to uncover the dispensing opening, a first plane member attached to the hinged wall portion and adapted to underlie one of the adjacent wall panels when the dispensing opening is covered by the closure slide and to move out from under that adjacent wall panel to maintain surface continuity between the edge of that adjacent wall panel and the hinged wall portion when the dispensing opening is uncovered by the closure slide, and a second plane member attached to the closure slide and adapted to underlie one of the adjacent wall panels when the dispensing opening is covered by the closure slide and to move out from under that adjacent wall panel to maintain surface continuity between the edge of that adjacent wall panel and the hinged wall portion when the dispensing opening is uncovered by the closure slide.

4. In a substantially crushproof container useful for packaging cigaretts, formed from a unitary folding blank and having a dispensing opening in a plane surface thereof and a closure slide movable along the surface to open or uncover the dispensing opening and to close or cover the opening, the improvement comprising a composite structure for the closure slide including two component strips connected to one another, one of the strips being adapted to cover the dispensing opening when the slide is in the closed position and the other strip having an exposed expanse thereof connected at one end to another portion of the container and adapted to be engaged manually to move the slide, and means integral with the closure slide and cooperable with an adjacent portion of the container along which the slide rides upon moving between the open and the closed positions, the cooperating portion of the container being located to intercept the means integral with the slide upon movement of the slide to the fully open position thereof, whereby the slide is inhibited from overshooting that position upon movement in the opening direction.

5. Foldable packaging blank adapted to form a substantially crush-proof container for packaging cigarettes, the container having a dispensing opening in a plane surface thereof and a closure slide movable along the surface to open or uncover the dispensing opening and to close or cover the opening, with a composite structure for the closure slide including two component strips connected to one another, one of the strips being adapted to cover the dispensing opening when the slide is in the closed position and the other strip having an exposed expanse thereof connected at one end to another portion of the container and adapted to be engaged manually to move the slide, the blank comprising a generally rectangular body portion including a pair of wide wall panels adapted to be spaced opposite and parallel to one another, a pair of narrow wall panels adapted to be spaced opposite and parallel to one another and perpendicular to and joining the wide wall panels, and along an edge of the body portion a narrow lap panel adapted to be positioned parallel to the wide wall panels and to lap part of one of the wide wall panels and to be secured thereto over part of the extent of the lap panel, a tab detachably adjoined to an edge of one of the pair of narrow panels and adapted upon detachment therefrom to constitute the first of the component strips of the closure slide, a tab fixedly adjoined to an edge of the opposite narrow wall panel and adapted to constitute the second strip of the closure slide, the two tabs being adapted to be attached to one another at one end of each upon folding of the blank into container form, and a flap extending from an edge of one of the wide wall panels and adapted to overlie the attached end portions of the component strips of the closure slide and to remain clear of the dispensing opening and of at least a portion of the other end of the component strip constituted by the fixedly adjoined tab.

6. The article of claim 5 folded into container form, in which the portion of the narrow wall panel fixedly adjoining the second component strip of the closure slide is hinged to the rest of that narrow wall panel on a transverse fold line spaced from the end of the strip and extending the width of the panel and is adapted thereby to be swung out of the plane of that wall panel upon movement of the closure slide; the junction between that narrow wall panel and the wide wall panel spaced opposite the narrow lap panel is slit from the end adjacent the adjoining tab to one end of the transverse fold line, the portion of the lap panel intervening between the slit and the adjacent component strip of the closure slide being left unsecured to the lapping wide wall panel; and the narrow lap panel is divided by a slit extending across it and terminating at the confluence of the transverse line and the junction between the narrow wall panel and the lap panel, whereby movement of the closure slide from the closed to the open position is accompanied by a swinging outward of the hinged portion of the narrow wall panel and the intervening portion of the narrow lap panel from the body of the container.

7. Foldable packaging blank adapted to form a crush-proof container for packaging cigarettes, the container having a dispensing opening in a plane surface thereof and a closure slide movable along the surface to open or uncover the dispensing opening and to close or cover the opening, with a composite structure for the closure slide including two component strips connected to one another, one of the strips being adapted to cover the dispensing opening when the slide is in the closed position and the other strip having an exposed expanse thereof connected at one end to another portion of the container and adapted to be engaged manually to move the slide, the blank comprising a generally rectangular body portion including a

pair of wide wall panels adapted to be spaced opposite and parallel to one another, a first pair of narrow wall panels flanking one of the wide wall panels and adapted to be spaced opposite and parallel to one another and perpendicular to the wide wall panels, a second pair of narrow wall panels flanking the other of the wide wall panels and respectively adapted to be spaced opposite and parallel to one another and to lap and be secured to the respective narrow wall panels of the first pair, a tab detachably adjoined to an edge of a narrow wall panel of the first pair and adapted upon detachment therefrom to constitute the first of the component strips of the closure slide, a tab fixedly adjoined to the edge of the narrow wall panel of the second pair spaced furthest from the junction of the detachable tab and adapted to constitute the second component strip of the closure slide, the two tabs being adapted to be attached to one another at one end of each upon folding of the blank into container form, and a flap extending from an edge of one of the wide wall panels and adapted to overlie the attached end portions of the component strips of the closure slide and to remain clear of the dispensing opening and of at least a portion of the other end of the component strip constituted by the fixedly adjoined tab.

8. The article of claim 7 folded into container form, in which the narrow wall panel fixedly adjoining the second component strip of the closure slide is located along the exterior of the container; a portion of that panel is hinged to the rest of that panel on a transverse fold line spaced from the end of the strip and extending the width of that panel; and the junction between that narrow wall panel and the adjoining wide wall panel is slit from the end adjacent the tab to the transverse fold line, whereby the hinged portion of the narrow wall panel is adapted to swing outward from the body of the container upon movement of the closure slide from the closed to the open position.

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