This invention relates to cartons, containers, or equivalent devices, generally. More particularly, the invention has reference to a container having a novel wall and lid construction, with the invention comprising the formation of wall-forming flaps in a particular, novel manner designed to improve the construction of the container, over that of other containers, the manufacture of which involves a cost as high as or higher than that of the present invention.

Another object is to provide, in the particular formation of the flaps, an arrangement wherein the blank when folded and interlaced, will provide a highly attractive, inexpensive, yet strong carton or package.

Another object of importance is to incorporate, in the construction of the flaps, means defining a flip-top lid improved over lids previously devised for the same or a similar purpose as the present invention.

Other objects will appear from the following description, the claims appended thereto, and from the annexed drawing, in which reference characters designate like parts throughout the several views, and wherein:

Figure 1 is a perspective view of a container according to the present invention, with the lid closed;

Figure 2 is a view like Figure 1 in which the lid has been flipped to an open position;

Figure 3 is a longitudinal sectional view through the container, substantially on line 3—3 of Figure 1;

Figure 4 is an enlarged transverse sectional view substantially on line 4—4 of Figure 3;

Figure 5 is a plan view of a blank used in forming the invention;

Figure 6 is a plan view of a blank used in a modified construction; and

Figure 7 is a plan view of a liner used in either of the forms shown in Figures 5 and 6.

Referring to the drawing in detail, the invention is illustrated applied to a crush-proof cigarette package and when it is so applied is designed to produce particularly easy operation in that the lid can be flipped open with one hand with maximum ease, simply by holding the package in the right or left hand and using the forefinger to lift the lid for exposing the cigarettes. However, it will be understood that the invention can be applied to any of various containers, both small and large, and could be used in containers holding various cereals, granular soaps or detergents, etc. Accordingly, it is intended that so far as permitted by the scope of the appended claims, the invention is to be considered to be applicable to containers for any of a large variety of products, and is not to be limited by the illustration thereof, wherein it is applied purely by way of example to a cigarette package.

In any event, the container includes two pieces of foldable material, such as cardboard or stiff paper. A main piece has been shown in blank in Figure 5 and constitutes the outer or body portion of the container. In Figure 7 there is shown a liner, which constitutes the second piece of material, and which may be made of a thinner material if desired. Of course, although no foil lining insert is shown in the illustrated cigarette package, it is to be understood that such an insert may or may not be used, according to the desires of the particular manufacturer.

In the illustrated example, the main piece in blank includes a rectangular, relatively narrow bottom panel 12 integral along opposite side edges thereof with upper side panels 14, 16 separated from bottom panel 12 by fold lines 18, 20. Also integral with panels 14, 16, along the back edges thereof are back flaps 22, 24 respectively connected to their associated panels along fold lines 26, 28. A small back flap or ear 30 is connected to the back edge of bottom panel 12 along a fold line 32 and is wholly separated from flaps 22, 24 by slits 36 extending at opposite sides of the ear 30.

Integral with the panels 14, 16, along the forward edges thereof, are front flaps 38, 40 connected to the respective side panels along lines 42, 44. A front ear or flap 46 is similarly connected to the forward edge of bottom wall 12, along a fold line 48, and is separated from the flaps 38, 40 by slits 49.

Integraly connected to the side panels 14, 16 are top flaps 50, 52 connected to the panels 14, 16 respectively along fold lines 54, 56. A back flap 58 is connected to the top flap 52, along a fold line 60 and is separated from flap 24 by a slit 62.

Integraly connected to the forward edge of top flap 50 is an ear 64, connected to flap 50 along a transverse fold line 66. Parallel to line 66 is a second fold line 68 dividing ear 64 into two portions 69, 71.

Extending downwardly from the fold lines 54, 56, in panels 14, 16 are small, vertical slits. The slot 70 of panel 14 merges into a forwardly declining extension slit 72 which is inclined slightly from the vertical, and which, at the fold line 42, merges into a transverse slit 74 closely spaced from a slit 76 that divides ears 64 from flap 38 and that defines a laterally extending tongue 78 at the upper end of the flap 38. A slit 80 perpendicular to line 56 is similarly formed in the panel 16, merging into a forwardly declining slit 82 which in turn merges into a transverse slit 84, thus defining a lateral tongue 86 extending oppositely to the tongue 78.

This completes the construction of the main piece of the container. Referring now to Figure 7, the auxiliary piece or liner 88 is substantially smaller and comprises merely identical rectangular panels 90 at opposite sides of a front panel 92 of narrow width, the panels 90 being separated from the panel 92 by fold lines 94.

At the upper end of the panel 92, there is formed a deep recess 96 which is exposed when the lid is flipped upwardly, as clearly shown in Figure 2.

In assembly of the container it will be understood that adhesive is applied to all portions that are in face-to-face contact and that are to remain permanently connected. This is considered sufficiently obvious as not to require special illustration.

Thus, in forming the body of the container, panels 14, 16 are folded upwardly along lines 18, 20. Back flaps 22, 24 are folded along lines 26, 28 into overlapping relation, with ear 30 being folded upwardly inside the container (Figure 3). Flaps 22, 24, 30 are adhesively connected.

Top flaps 50, 52 are folded into overlapping relation along lines 54, 56 and are adhesively secured. Flap 52 underlies flap 50, with ear 58 being bent downwardly as shown in Figure 3 and adhesively secured to the flap 22. Flaps 38, 40 are folded into overlapping relation with flap 40 being faced to the outside. Ear 46 is folded upwardly and the ear 46 and the flaps 38, 40 are adhesively connected.

A lid is now formed, and is constituted of the forward end portions of the flaps 50, 52, the tongues 78, 86 and...
the folded ear 64. One folds the tongue 86 along a fold line 87, so that it extends across the front of the container. Now, one folds tongue 78 along a fold line 79 corresponding to the fold line 87 so that tongues 78, 86, are in superposed or overlapping relation.

One now folds the ear 64 into embracing relation to the tongues 78, 86, with the portion 64 being faced outwardly and portion 69 being faced inwardly of the container as shown in Figure 3. The ear 64 is adhesively connected to the superposed tongues 78, 86.

This defines a flip-top lid generally designated at 98 in Figures 1, 2, 8, and 9. This flips upwardly, being hinged on a fold line 100 extending transversely of the top wall of the container. The lid 98, of course, is defined by the forward edge portions of the flaps 50, 52, that is, the portions of these flaps disposed forwardly of the slits 70, 80. The lid is further defined by the tongues 78, 86, the portions of material of the side panels 14, 16 disposed immediately above the inclined extension slits 72, 82, the tongues 78, 86 and the folded ear 64.

The liner, of course, is folded into the cross-sectional shape shown to particular advantage in Figure 4 along lines 110 and 120 disposed within the container. The upper portion of the liner is thus partially exposed when the lid is open, providing full protection for the cigarettes or other articles. The deep recess 96, is, of course, an important feature, in that it permits the user to remove the first few cigarettes with ease. Thereafter, as the cigarettes become looser in the package, the remaining cigarettes can of course be removed without difficulty.

In Figure 6 there is shown a modified construction for the main piece, generally designated at 102. This differs from the Figure 5 construction in that it is for a package designed to be filled from the bottom or side. The construction of the main piece shown in Figure 5, on the other hand, is designed to be filled from the top or side.

The basic principles of the invention remain, of course, unchanged, and both forms have particular advantages that may be preferred by a manufacturer. The form shown in Figure 6 is believed more or less self-explanatory, and the components analogous to corresponding components of the Figure 5 construction have been given the same reference numeral, with the addition of an identifying reference letter "a." In this arrangement, the bottom wall is defined by the flaps 50a, 52a, rather than the top wall, with the top wall 12a thus being of single thickness rather than of double thickness as in the first form of the invention.

This construction has the advantage that the bottom wall is of double thickness, being composed of the flaps 50a, 52a, it being understood that the side panels 14a, 16a would be folded downwardly from the top wall 12a, along the fold lines 13a, 20a.

So far as the lid 98a is concerned, this is identical in all respects to the lid of the first form, in that it flips upwardly along the line 100a, and has overlapping tongues 78a, 86a, embraced by and adhesively secured to the folded portions 69a, 71a of an ear 64a.

In both forms of the invention, there is the common characteristic of the invention wherein the flip-top lid is strengthened particularly along its front. It is at this particular point at which the pressure is exerted by the user, as he presses upon the lid with the thumb for the purpose of swinging the same upwardly. Accordingly, it is highly desirable that strong reinforcement be here provided. This is achieved in the present invention, even though a relatively thin, inexpensive material is employed. Further, the lid is swiftly and easily formed by folding the blank along the lines indicated.

In the first form of the invention, the entire top wall, including the lid-defining portion thereof, is of double thickness, the front part of the lid is of quadruple thickness, of course, providing strong reinforcement at the critical location. The second form of the invention would be easier to fill and it would have a double thickness of material at its bottom.

Still further, the container is of highly simplified design, as compared to containers previously devised to be folded from blanks in a somewhat similar manner to that shown.

In addition, the container is particularly designed to permit the same to be filled by the use of container-filling machines, without requiring modification or redesign of said machinery.

It is to be further noted that the particular cut or slit at each side of the lid locates the side walls of the lid in contact with the outer surfaces of the liner even when the lid is open, at locations designated at 104 in Figure 2. Therefore, this provides a guide that causes the lid to slide over the inner liner for better closing, and in addition provides more friction to hold the lid closed.

It is believed apparent that the invention is not necessarily confined to the specific use or uses of the container, as the cigarettes become looser in the package, the remaining cigarettes can of course be removed without difficulty.

What is claimed is:

1. In a carton of the folded blank type, a hollow, rectangular body portion that includes a pair of end panels forming a top and bottom, respectively, of the container, a pair of side panels integrally connected to and extending between opposite side edges of the end panels, and front and back panels integrally connected to the side panels and extending between the front and back edges, respectively, of the end panels, the front panel comprising a pair of superposed flaps having transverse slits extending the full distance thereacross adjacent one of the end panels, the material of each flap that lies between its slit and said one end panel comprising a tongue, the tongues being in registered, superposed relation with both tongues extending the full distance across the front panel, said side panels being formed with slits that constitute rearwardly extending continuations of the respective first-named slits, the respective second-named slits having inner ends terminating at the respective, opposite side edges of said one end panel intermediate the front and back panels, the material of the side panels bounded by the second slits, the front panel, and by said one end panel being integral with the respective tongues and comprising side cover portions, said one end panel having a fold line extending thereacross between said inner ends of the second slits, the material of said one end panel between the fold line and the front panel constituting a main cover portion integral with said cover cover portions, said main cover portion including an integral, forwardly projecting ear extending the full distance thereacross and folded upon itself in embracing relation to the superposed tongues.

2. In a carton of the folded blank type, a construction as in claim 1 wherein said ear is of rectangular configuration and is bisected by a fold line extending transversely thereof, the ear being folded along said line thereafter of said embracing relation to the tongues, the fold line of the ear dividing the same into side-by-side fold portions each of which is identical in area and configuration to and is registered with the superposed tongues.

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