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J. ZIMMERMAN

3,521,809

DISPENSING OPENING FOR CARION

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FIG. 1

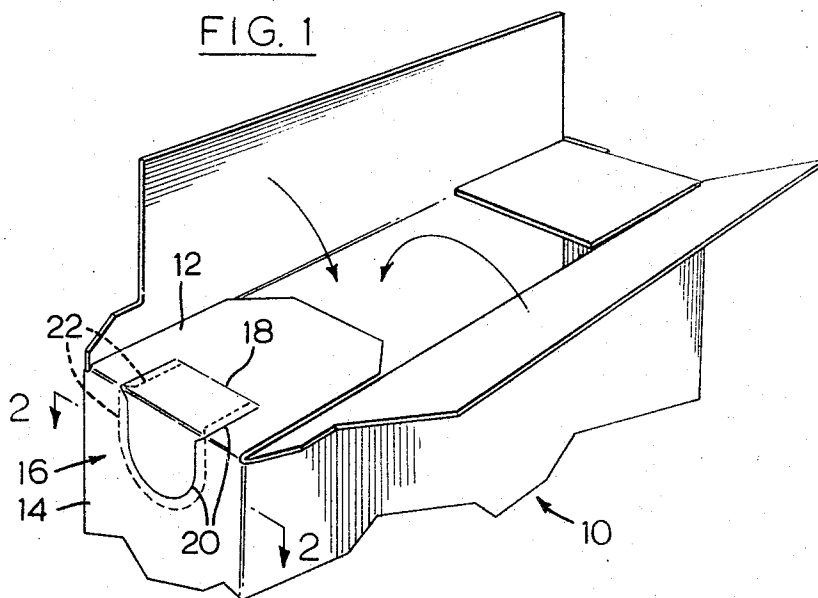


FIG. 2

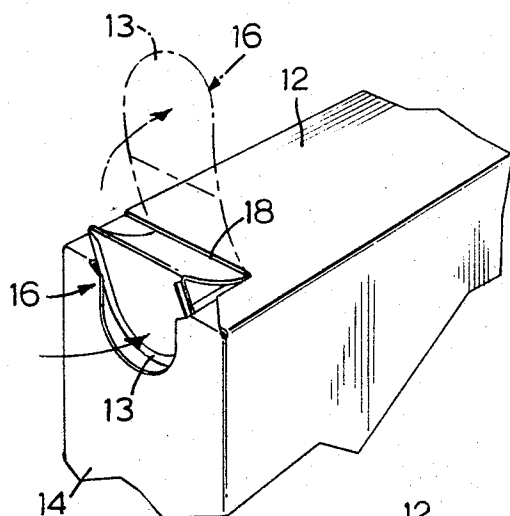
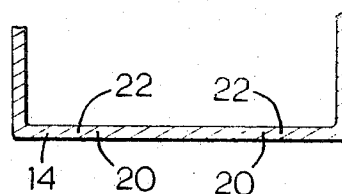


FIG. 3

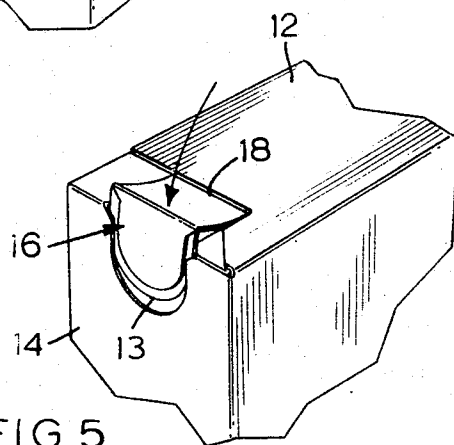
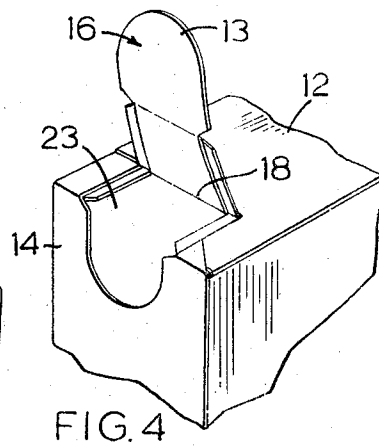


FIG. 5



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DISPENSING OPENING FOR CARTON

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2 Claims

ABSTRACT OF THE DISCLOSURE

The invention relates to a closure tab for a paperboard carton that is especially suited for location at the junction of two of the carton walls. The closure is a sealed one when the carton is new and can be opened by depressing the closure inwardly of one wall and then lifting it with respect to the other wall. The closure is defined by spaced apart edge cuts on each side of the carton walls that extend only partially through the walls so that when the seal is broken and the closure opened, there is a line of cleavage between the two marginal edge cuts that define the opening. A complementary line of cleavage exists on the carton so that the closure can be relocated on the carton to form a tight re-closure as required.

This invention relates generally to paperboard cartons. More particularly, it relates to dispensing openings and closure tabs for such cartons.

Paperboard cartons are commonly used to package granular, powdered and even liquid materials. In most cases it is desirable to provide a dispensing opening and a cover therefor that can be manually opened so that the contents can be conveniently poured from the carton as required. The closure should be of a type that can be reclosed to give a secure closure to protect the contents from spillage and/or sifting in the case of powdered materials and undue exposure to air and moisture of the atmosphere. Complex closures, many of them involving metallic parts that are added to the paperboard container, have been used in the past with some success. These structures, however, usually add undesirable cost to the carton. Dispensing openings are also formed in the paperboard of the carton, but this type of closure is either very complex or lacks the quality of being re-closable to give a neat, secure closure.

It is, therefore, an object of this invention to provide a paperboard carton having a dispensing opening and closure tab construction that is formed from the paperboard of the carton and that can be manually opened and then simply reclosed to give a neat, secure closure.

It is a further object of the invention to provide a paperboard carton having a dispensing opening and a closure that is economical to manufacture and simple to use.

With these and other objects in view, a dispensing paperboard carton according to this invention has a dispensing opening and a closure tab therefor, said closure tab being formed from portions of two adjacent walls of the carton, said closure tab being defined by a hinge line that joins it with the first one of said two adjacent walls of said carton and correlated edge cuts and marginal cuts in the inner and outer surface of said two adjacent walls of said carton, said edge cuts and said marginal cuts extending partially through the paperboard of said carton from opposite sides to a plane of cleavage about which paperboard can be fractured by manual pressure, said edge cuts and marginal cuts extending along the first one of said two adjacent walls of said carton from

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each end of said hinge line to the fold line between said two adjacent walls of said carton and then beyond said fold line between said two adjacent walls of said carton to delineate the free end portion of said tab, said edge cuts being in the outer surface in the portion of said tab that extends from each end of said hinge line so that above said hinge line, said edge cuts being on the inner said line of cleavage can be fractured by lifting said tab surface of the free end portion of said tab so that said line of cleavage can be manually fractured by inward pressure as said free end portion of said tab is hinged about the line between said two adjacent walls of said carton.

The invention will be clearly understood after reference to the following detailed specification read in conjunction with the drawings.

In the drawings,

FIG. 1 is a view of the top portion of a paperboard carton with a closure according to the invention and with the top flaps that form the top wall about to be closed;

FIG. 2 is a partial section along the line 2—2 of FIG. 1;

FIG. 3 is a perspective view showing the tab closure of the invention as it is being opened;

FIG. 4 shows the tab closure in an open position, and

FIG. 5 illustrates the tab closure being re-located to reclose the opening.

Referring to the drawings, the numeral 10 generally refers to a paperboard carton having four side walls, top and bottom (not shown). The carton is formed with a dispensing opening and a closure tab therefor at the junction of the top wall 12 and the side wall 14. The closure tab, generally indicated by the numeral 16, is stricken from portions of the top wall 12 and the side wall 14. It is defined by a hinge line 18 in wall 12 and correlated edge cuts 20 and marginal cuts 22 in the inner and the outer surfaces of the paperboard from which the walls 12 and 14 are made.

It will be noted that the flaps that form the top wall 12 are cut away so that at the corner portion where the tab 16 is formed, the wall is of a single thickness only. The correlated edge cuts 20 and marginal cuts 22 extend partially through the paperboard from opposite sides so that they define a plane of cleavage between the inner extremities of the two cuts about which the paperboard can be fractured by manual pressure.

The correlated edge cuts and marginal cuts are also formed so that the free end portion 13 of the tab 16 in wall 14 can first be manually pressed inwardly, as indicated in FIG. 3, to fracture the tab from the paperboard about the line of cleavage. The correlated edge cuts and marginal cuts in the wall 12 are formed so that the tab can then be swung upwardly about the hinge line 18 to fracture the line of cleavage in the wall 12 and form the opening.

In the foregoing connection, it will be noted that the edge cuts 20 are formed in the outer surface of the carton in the portion of the tab that extends from each end of the hinge line 18 to the line of juncture between the wall 12 and line 14. The edge cut is on the inner surface in the portion of the tab that forms the free end in panel 14, so that the line of cleavage can be fractured by an inward manual pressure on the tab as referred to above.

It will be noted that the marginal cuts 22 in the free end portion of the closure tab 16 extend towards and merge with the edge cuts 22 at the line of juncture between the walls 12 and 14. On the inside of the carton the margin cuts 22 similarly extend towards and merge with the edge cuts 20 at the line of juncture between the walls 12 and 14 to facilitate opening of the tab in a way that it can be reclosed to form a good seal.

It will be apparent that because neither the edge cut

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nor the marginal cut that delineates the tab extends right through the paperboard, the sealing qualities of the paperboard are not affected prior to the breaking of the tab from the carton. Therefore, at the time of packing in a package according to this invention, there is a complete seal for the contents.

When it is desired to dispense the contents of the carton, one merely exerts a thumb pressure on the free end portion of the tab to depress it inwardly and hinge it about the hinge line joining panels 12 and 14. Once the free end portion of the tab is freed, it is possible to exert an upward pressure to swing the tab as a whole about the line 18 to the position shown in dotted lines in FIG. 3, and in solid lines in FIG. 4, to form the opening 23.

When it is desired to reclose the opening, one merely threads the free end portion of the tab behind the closure flange that is left by the severance of the tab along the line of cleavage, as illustrated in FIG. 5, and presses the tab down to its original position. The flange in wall 14 formed by the severance of the tab and defined by the correlated marginal line and edge line of the tab holds the tab in place and provides a secure closure that gives reasonable protection from exposure to atmospheric conditions.

It will be apparent that the closure described achieves the objects of the invention. In the beginning the seal is complete; once broken, the closure tab can be reset in place to give quite reasonable protection against atmospheric conditions. The cost of the tab is relatively low and it does not involve any added mechanical parts to the paperboard of the carton.

Embodiments of the invention other than the one illustrated will be apparent to those skilled in the art.

What I claim as my invention is:

1. In a dispensing paperboard carton having walls formed from panels that connect with each other at fold lines, the improvement of a dispensing opening and a closure tab therefor, said closure tab being formed from portions of two adjacent walls of said carton, said closure tab being defined by a hinge line that joins it with the first one of said two adjacent walls of said carton and by correlated edge cuts and marginal cuts in the inner and outer surface of said carton, said edge cuts and said marginal

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cuts extending partially through the paperboard of said carton from opposite sides to a plane of cleavage about which the paperboard can be fractured by manual pressure, said edge cuts and said marginal cuts extending along the first one of said two adjacent walls of said carton from each end of said hinge line to the fold line between said two adjacent walls of said carton and then beyond said fold line to delineate the free end portion of the said closure tab, said edge cuts being in the outer surface of said carton in the portion that extends from each end of said hinge line to said fold line so that the paperboard can be severed about said line of cleavage by lifting said tab about said hinge line, said edge cuts being on the inner surface of said carton in the portion that delineates the free end portion of said closure tab so that said paperboard can be fractured about said line of cleavage by inward pressure on the free end portion of said tab.

2. In a dispensing paperboard carton having walls formed from panels that connect with each other at fold lines, the improvement of a dispensing opening as claimed in claim 1 in which the marginal cuts that define the free end portion of said closure tab extend towards their correlated edge cuts at said fold line between said adjacent walls of said carton.

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DAVIS T. MOORHEAD, Primary Examiner.

U.S. Cl. X.R.

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